CONTRACTOR COST OUTLINE

ENERGY AND ENVIRONMENT CABINET
DIVISION OF WASTE MANAGEMENT
UNDERGROUND STORAGE TANK BRANCH
300 SOWER BLVD, SECOND FLOOR
FRANKFORT, KENTUCKY 40601
502-564-5981

JULY 2011

CONTRACTOR COST OUTLINE

1.0 INTRODUCTION

The Contractor Cost Outline establishes eligible reimbursement to owners or operators of petroleum underground storage tanks for the completion of corrective action 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 rates.

A cost estimate shall be based on the rates established in this outline, as applicable.

The formulated task rates prescribed in this outline 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 or operator more than the formulated task rate specified in this outline for corrective action services performed by an eligible company or partnership, except as provided in 401 KAR 42:250, Section 14.

A fifteen (15) percent total markup above the estimated cost of materials purchased associated with a task for which there is not a formulated unit rate shall be allowed.

An eligible company or partnership that employs a subcontractor, a subsidiary company, or other vendor, that is affiliated with the eligible company or partnership or a principle of the eligible company or partnership shall not receive the fifteen (15) percent mark up for the cost of corrective action.

Reimbursement shall be made in accordance with rates identified within this outline. Refer to 401 KAR 42:250, Section 12 for eligible and ineligible costs.

Refer to 401 KAR 42:330 for unit costs applicable to the Small Owners Tank Removal Account (SOTRA).

2.0 FORMULATED TASK RATES

The following section identifies the formulated task rate allowed per task performed for actions directed by the cabinet for a facility. 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 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 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.	$2.10 per mile
Assumption Vehicle travels an average of 55 miles per hour at 14 miles per gallon. Fuel costs $5.00 per gallon. Calculations $97.20 hourly rate for project manager divided by 55 miles per hour = **$1.76 per mile** 14 miles per gallon at $5.00 per gallon = **$0.35 per mile** Total of bold items above = $2.11 per mile for personnel and fuel cost **$2.11 per mile is adjusted to $2.10 per mile.**	
Mileage allowed per mile for heavy equipment, to include all equipment, trailers and personnel needed to transport equipment.	$5.05 per mile, minimum of $500
Assumption Vehicle travels an average of 50 miles per hour. Calculations $100 per hour for trackhoe and trailer $48.60 hourly rate for equipment operator $100 + $48.60 = $148.60 $148.60 divided by 50 miles per hour = **$2.97 per mile** $55 per hour for backhoe and trailer $48.60 hourly rate for equipment operator $55 + $48.60 = $103.60 $103.60 divided by 50 miles per hour = **$2.07 per mile** Total of bold items above = $5.04 per mile **$5.04 per mile is adjusted to $5.05 per mile.**	

Mobilization and demobilization of drilling equipment and support vehicle, includes drill rig, two (2) man crew, labor for gathering of equipment, tools, travel time, and all steam cleaning.	$5.05 per mile, minimum of $500

Assumption

Vehicle travels an average of 50 miles per hour.

Calculations

$100 per hour for drilling equipment
$48.60 hourly rate for equipment operator
$100 + $48.60 = $148.60
$148.60 divided by 50 miles per hour = $2.97 per mile

$55 per hour for support vehicle
$48.60 hourly rate for equipment operator
$55 + $48.60 = $103.60
$103.60 divided by 50 miles per hour = $2.07 per mile

The combined per mile rate for drilling equipment and support vehicle is $2.97 per mile + $2.07 per mile which equals $5.04 per mile.

$5.04 per mile is adjusted to $5.05 per mile.

2.2 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 partnership's nearest office to the facility. Per diem shall be determined based upon the following:

Drilling – 1 day per diem shall be added by the cabinet per directive for drilling at a facility more than 65 one-way miles from the eligible company or partnership's nearest office, or as determined by the cabinet. Over-excavation – 1 day per diem shall be added by the cabinet per directive per 400 tons (total tonnage expected must exceed 400 tons) based on a facility more than 65 one-way miles from the eligible company or partnership's nearest office, or as determined by the cabinet. 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.	$125 per day

This assumes **$95.00 per night** for hotel (average of rates based on the following areas: Lexington, Louisville, Ashland, Bowling Green).

This includes **$30.00 per day** for meals ($7 – breakfast, $8 – lunch, $15 – dinner).

Total of bold items above = $125 per day

2.3 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.	$150 per day
This includes the use of a PID (**$75 per day**), water level indicator (**$12 per day**), LEL meter (**$35 per day**), multi-meter (**$30 per day**), or other equipment combinations required. Total of the bold items above = $152.00 per day **$152 per day is adjusted to $150 per day.**	
Field Equipment for Vapor Intrusion Assessment: includes field screening equipment necessary during vapor intrusion assessment activities for a facility. This rate includes field equipment costs associated with site investigation and corrective action activities performed in conjunction with the vapor intrusion assessment.	$200 per day
This includes the use of a PID (**$75 per day**), water level indicator (**$12 per day**), LEL meter (**$35 per day**), multi-meter (**$30 per day**), or other equipment combinations required. **$50 per day** for vapor intrusion equipment Total of the bold items above = $202.00 per day **$202.00 per day is adjusted to $200 per day.**	
Tools of the Trade: includes, but is not limited to, camera, film, film development, log books, measuring wheels, personnel protective and safety equipment, cones, barricades, and other tools or devices typically used by environmental contractors. Allowed for each day of fieldwork at the facility.	$50 per day
$50 per day for tools of the trade is consistent with this rate in other states.	

2.4 Asphalt or Concrete Removal and Disposal

The following table lists formulated task rates associated with asphalt or concrete removal, and disposal, including all labor, oversight personnel (one individual), equipment and material needed in order to perform the tasks.

Removal of Asphalt	
Asphalt, for 3 inches of thickness, per square foot.	$0.50 per sq. ft.
Cost of additional thickness per inch.	$0.15 per sq. ft.
This formulated task rate is based on invoices received for asphalt removal.	
Removal of Concrete	
Concrete pad, per square foot.	
4 inches thickness.	$0.50 per sq.ft.
6 inches thickness.	$0.75 per sq.ft
9 inches thickness.	$1.45 per sq.ft.
10 inches or more thickness.	$3.90 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.	
Nearest landfill within 50 one-way miles of the facility.	$62 per ton
Nearest landfill 50 to 100 one-way miles from the facility.	$77 per ton
Nearest landfill over 100 one-way miles from the facility.	$92 per ton
See the cost breakdown under section 2.6.	

2.5 Surface Material Replacement

Eligible reimbursement for the installation of surface materials (with the exception of reseeding) for the purposes of conducting a remedial action or facility restoration (limited to surface material removed during corrective action activities) shall be based upon the costs per square foot (or linear feet for curbing as applicable) established in the lowest bid amount submitted and approved.

The following table lists formulated task rates associated with reseeding for facility restoration, including all labor, oversight personnel (one individual), equipment and material needed in order to perform the tasks.

Reseeding	
Reseeding < 1 acre.	$0.20 per sq.ft.
Reseeding ≥ 1 acre.	$0.10 per sq.ft.
This formulated task rate is based on typical rates allowed in other states that reimburse for UST facilities.	

2.6 Material Removal, Disposal/Treatment, 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.	$5.10 per ton (minimum of $2,300.00)
This includes excavating contaminated material with the use of a tracked excavator, an operator, a laborer and a project manager. <u>Assumption</u> 500 tons can be excavated in an 8 hour day. <u>Calculations</u> $55 per hour for backhoe multiplied by 8 hours = **$440** $48.60 hourly rate for equipment operator multiplied by 8 hours = **$388.80** $43.20 hourly rate for laborer multiplied by 8 hours = **$345.60** $97.20 hourly rate for project manager (for scheduling) multiplied by 2 hours = **$194.40** $97.20 hourly rate for project manager (for oversight) multiplied by 8 hours = **$777.60** $125 for two man crew for per diem = **$250** **$150** for additional traffic control Total of bold items above = $2,546.40. **$2,546.40 divided by 500 tons = $5.09 per ton (with a minimum reimbursement of $2,300.00)** **$5.09 per ton was adjusted to $5.10 per ton.**	

Backfill from borrow area, per ton (based on tonnage of excavated material disposed), includes excavation, loading, weighing, permitting, transportation and restoration of borrowarea.	$7.30 per ton

Assumption
A dump truck can carry 45 tons of material per hour and the borrow area is within 10 miles of the facility.

Calculations
$85 per hour for a dump truck and an operator
$85 per hour divided by 45 tons = $1.89 per ton for loading and transportation
$55 per hour for a backhoe + $48.60 for an equipment operator = $103.60
$103.60 divided by 45 tons = $2.30 per ton
$1.89 per ton for loading and transportation + $2.30 per ton for excavation and loading = **$4.19 per ton**
$3.00 per ton to restore borrow area
Total of the bold items above = $7.19 per ton

$7.19 per ton was adjusted to $7.30 per ton.

Install, compact and grade backfill, per ton. Reimbursement shall be based upon the weight of material as determined above.	$4.40 per ton

Assumptions
500 tons of backfill material can be placed in one 8 hour day with a dozer and compaction.

Calculations
$55 per hour for backhoe multiplied by 8 hours = $440
$440 divided by 500 tons = **$0.88 per ton**
$48.60 hourly rate for equipment operator multiplied by 8 hours = $388.80
$388.80 divided by 500 tons = **$0.78 per ton**

$240 per day for a vibratory compactor divided by 500 tons = **$0.48 per ton**
$43.20 hourly rate for laborer multiplied by 8 hours = $345.60
$345.60 divided by 500 tons = **$0.69 per ton**
$97.20 hourly rate for project manager (for oversight) multiplied by 8 hours = $777.60
$777.60 divided by 500 tons = **$1.56 per ton**
The total of the bold items above = $4.39 per ton

$4.39 per ton is adjusted to $4.40 per ton.

Trenching, per linear foot.	$20 per ln. ft, at 5’ of depth

Assumptions
Trenches are twenty-four (24) inches wide, and 5 feet deep.
80 feet of trenching can be completed in one 8 hour day.

$48.60 hourly rate for equipment operator multiplied by 8 hours = **$388.80**
$97.20 hourly rate for project manager (for oversight) multiplied by 8 hours = **$777.60**
$180 per day for a mini-excavator
$97.20 hourly rate for project manager (for scheduling) multiplied by 3 hours = **$291.60**
The total of the bold items above = $1,638 per day

$1,638 per day divided by 80 feet of trenching = $20.50 per linear foot for each 5’ depth

$20.50 per linear foot is adjusted to $20.00 per linear foot for each 5’ depth.

Backfill material: Reimbursement shall be based on weigh tickets to verify tonnage.	
Nearest quarry within 50 one-way miles of the facility.	$19.55 per ton
Nearest quarry 50 to 100 one-way miles from the facility.	$27 per ton
Nearest quarry over 100 one-way miles from the facility.	$34.50 per ton

This includes the purchase and transportation of backfill material to replace the contaminated material that was disposed or treated.

Assumptions

The average cost per ton for backfill material is **$11 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 $5.00 per gallon.
A dump truck will transport 22.5 tons.
A dump truck and an operator costs $85 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 $5.00 per gallon = $83.35 for fuel for a trip of 50 miles
1 hour for dump truck and operator ($85 per hour) divided by 22.5 tons = **$3.77 per ton**
$83.35 for fuel for a trip of 50 miles divided by 22.5 tons = **$3.70 per ton for fuel**
$97.20 hourly rate for project manager (for scheduling) multiplied by 2 hours = $194.40
$194.40 divided by 8 hours = $24.30 per hour
$24.30 per hour divided by 22.5 tons = **$1.08 per ton**

The total of the bold items above = $19.55 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 $5.00 per gallon = $166.65 for fuel for a trip of 100 miles
2 hours for dump truck and operator ($85 per hour) = $170.00
$170.00 divided by 22.5 tons = **$7.56 per ton**
$166.65 for fuel for a trip of 100 miles divided by 22.5 tons = **$7.41 per ton for fuel**
$97.20 hourly rate for project manager (for scheduling) multiplied by 2 hours = $194.40
$194.40 divided by 8 hours = $24.30 per hour
$24.30 per hour divided by 22.5 tons = **$1.08 per ton**

The total of the bold items above = $27.05 per ton.

$27.05 per ton is adjusted to $27.00 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 $5.00 per gallon = $250.00 for fuel for a trip of 150 miles
3 hours for dump truck and operator ($85 per hour) divided by 22.5 tons = **$11.33 per ton**
$250 for fuel for a trip of 150 miles divided by 22.5 tons = **$11.11 per ton for fuel**
$97.20 hourly rate for project manager (for scheduling) multiplied by 2 hours = $194.40
$194.40 divided by 8 hours = $24.30 per hour
$24.30 per hour divided by 22.5 tons = **$1.08 per ton**

The total of the bold items above = $34.52 per ton

$34.52 per ton is adjusted to $34.50 per ton.

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

Nearest landfill within 50 one-way miles of the facility.	$62 per ton
Nearest landfill 50 to 100 one-way miles from the facility.	$77 per ton
Nearest landfill over 100 one-way miles from the facility.	$92 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 **$46.97** (includes tax and 15% markup).
A dump truck travels 50 miles per hour with an average of 3 miles per gallon.
Fuel costs $5.00 per gallon.
A dump truck will transport 22.5 tons.
A dump truck and an operator costs $85 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 $5.00 per gallon = $83.35 for fuel
1 hour for dump truck and operator ($85 per hour) divided by 22.5 tons = **$3.77 per ton**
$83.35 for fuel for a trip of 50 miles divided by 22.5 tons = **$3.71 per ton for fuel**

The total of the bold items above = $7.48 per ton

$7.48 multiplied by 2 = $14.96 per ton for round trip
$46.97 per ton + $14.96 per ton for round trip = $61.93 per ton

$61.93 per ton is adjusted to $62.00 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 $5.00 per gallon = $166.65 for fuel
2 hours for dump truck and operator ($85 per hour) = $170.00
$170.00 divided by 22.5 tons = **$7.56 per ton**
$166.65 for fuel for a trip of 100 miles divided by 22.5 tons = **$7.41 per ton for fuel**

The total of the bold items above = $14.97 per ton

$14.97 multiplied by 2 = $29.94 per ton for round trip
$46.97 per ton + $29.94 per ton for round trip = $76.91 per ton

$76.91 per ton is adjusted to $77.00 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 $5.00 per gallon = $250.00 for fuel for a trip of 150 miles
3 hours for dump truck and operator ($85 per hour) divided by 22.5 tons = **$11.33 per ton**
$250 for fuel for a trip of 150 miles divided by 22.5 tons = **$11.11 per ton for fuel**

The total of the bold items above = $22.44 per ton

$22.44 multiplied by 2 = $44.88 per ton for round trip
$46.97 per ton + $44.88 per ton for round trip = $91.85 per ton

$91.85 per ton is adjusted to $92.00 per ton.

2.7 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.

Transportation of contaminated water removed from within the excavation zone, during permanent closure activities conducted after October 1, 2011. Cost associated with the removal of contaminated water during permanent closure, from within the excavation zone or from a holding tank, are not reimbursable unless the PSTEAF applicant is conducting permanent closure under an approved SOTRA Application for Assistance (401 KAR 42:330).	$0.12 per gallon, minimum of $300
This formulated task rate is based on invoices received for the transportation of contaminated water.	
Removal and transportation of contaminated water from an excavation, resulting from over-excavation activities directed in writing by the cabinet, or well(s) to an approved permitted disposal, treatment, or recycling facility, including truck, driver and travel time, per gallon.	$0.25 per gallon, minimum of $600
Assumption The volume of a typical tank truck is 2,400 gallons. Calculations The cost to pump and transport contaminated pit water or groundwater minimum rate is based on the hourly rate of $75 per hour (based on invoices received) for the tank truck and operator multiplied by 8 hours = $600. **$600 (the daily rate for a tank truck and operator) divided by 2,400 gallons (the volume of the tank truck) = $0.25 per gallon (with a minimum reimbursement of $600)**	
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.	$0.45 per gallon
This formulated task rate is based on invoices received for the disposal of contaminated 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 KPDES permit or local regulatory authority, and associated charges, per gallon.	$0.45 per gallon
This formulated task rate is based on invoices received for the removal, treatment and discharge of contaminated water from a mobile unit.	
Free Product Recovery (by hand bailing, absorbent socks, etc.) per well as directed by the cabinet.	$82.35 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 2.3 of this outline. Assumption 8 wells can be hand bailed in an 8 hour day. Calculations $70.20 hourly rate for field technician multiplied by 1 hour = **$70.20 per well** $97.20 hourly rate for project manager (for scheduling) for 1 hour $97.20 divided by 8 wells = **$12.15 per well** **Total of bold items above = $82.35 per well.**	

2.8 Drilling/Well Installation, Sampling, and Decommissioning

The following table lists formulated task rates associated with drilling, well installation, sampling (includes chain-of-custody documentation), surveying and decommissioning. 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. An additional $55 per foot will be added for each well installed over 30'.	$1,755 per well up to 30' in depth (with soil sampling) $1,455 per well up to 30' in depth (without soil sampling)

This includes all well construction and completion materials, equipment decontamination, surface preparation, completion and submittal of well records, drilling crew and project manager (for oversight).

Assumptions for $1,755 per well up to 30' in depth (with soil sampling)
A 30' well is installed using a hollow stem auger.
Continuous soil samples are collected.
4 wells can be installed in an 8 hour day.
$35 per foot accounts for equipment and materials.

Calculations
$97.20 hourly rate for project manager (for oversight) multiplied by 8 hours = $777.60 per day
$777.60 divided by 4 wells = $194.40
$194.40 divided by 30 feet = **$6.48 per foot**

$300 for monitoring well surface completion divided by 30 feet = **$10 per foot**

$250 per day for a two man drill crew divided by 4 = $62.50
$62.50 divided by 30 feet = **$2.08 per foot**

$97.20 hourly rate for project manager (for scheduling) multiplied by 2 hours = $194.40
$194.40 divided by 4 wells = $48.60
$48.60 divided by 30 feet = **$1.62 per foot**

Total of bold items above = $20.18 per foot

$35 per foot for equipment and materials + $20.18 per foot = $55.18 per foot
$55.18 per foot multiplied by 30 feet = $1,655.40
$1,655.40 + $100 per well for surveying = $1,755.40 per well

$1,755.40 per well was adjusted to $1,755.00 per well.

An additional $55 per foot will be added to each foot installed over 30'.

Assumptions for $1,455 per well up to 30' in depth (without soil sampling)
A 30' well is installed using a hollow stem auger.
4 wells can be installed in an 8 hour day.
$35 per foot accounts for equipment and materials.

$1,755.00 per well from above - $300 (adjusted soil boring sampling cost) = $1,455.00 per well

An additional $55 per foot will be added to each foot installed over 30'.

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. An additional $75 per foot will be added for each well installed over 30'.	$2,355 per well up to 30' in depth (with soil sampling) $2,055 per well up to 30' in depth (without soil sampling)

This includes all well construction in bedrock and completion materials, equipment decontamination, surface preparation, completion and submittal of well records, drilling crew and project manager (for oversight). For double cased wells, an additional mobilization of the project manager (for oversight) will be included.

Assumptions for $2,355 per well up to 30' in depth (with soil sampling)
A 30' 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.
$55 per foot accounts for equipment and materials.

Calculations
$97.20 hourly rate for project manager (for oversight) multiplied by 8 hours = $777.60 per day
$777.60 divided by 4 wells = $194.40
$194.40 divided by 30 feet = **$6.48 per foot**

$300 for monitoring well surface completion divided by 30 feet = **$10 per foot**

$250 per day for a two man drill crew divided by 4 = $62.50
$62.50 divided by 30 feet = **$2.08 per foot**

$97.20 hourly rate for project manager (for scheduling) multiplied by 2 hours = $194.40
$194.40 divided by 4 wells = $48.60
$48.60 divided by 30 feet = **$1.62 per foot**

Total of bold items above = $20.18 per foot

$55 per foot for equipment and materials + $20.18 per foot = $75.18 per foot
$75.18 per foot multiplied by 30 feet = $2,255.40
$2,255.40+ $100 per well for surveying = $2,355.40 per well

$2,355.40 per well was adjusted to $2,355.00 per well.

An additional $75 per foot will be added to each foot installed over 30'.

Assumptions for $2,055.00 per well up to 30' in depth (without soil sampling)
A 30' well is installed using an air rotary drill.
4 wells can be installed in an 8 hour day.
$55 per foot accounts for equipment and materials.

$2,355.00 per well from above - $300 (adjusted soil boring sampling cost) = $2,055.00 per well

An additional $75 per foot will be added to each foot installed over 30'.

Installation of 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. An additional $75 per foot will be added for each well installed over 30'.	$2,355 per well up to 30' in depth (with soil sampling) $2,055 per well up to 30' in depth (without soil sampling)

This includes all well construction and completion materials, equipment decontamination, surface preparation, completion and submittal of well records, drilling crew and project manager (for oversight).

Assumptions for $2,355 per well up to 30' in depth (with soil sampling)
A 4 inch well is installed to 30 feet using a hollow stem auger.
Continuous soil samples are collected.
4 wells can be installed in an 8 hour day.
$55 per foot accounts for equipment and materials.

Calculations
$97.20 hourly rate for project manager (for oversight) multiplied by 8 hours = $777.60 per day
$777.60 divided by 4 wells = $194.40
$194.40 divided by 30 feet = **$6.48 per foot**

$300 for monitoring well surface completion divided by 30 feet = **$10 per foot**

$250 per day for a two man drill crew divided by 4 = $62.50
$62.50 divided by 30 feet = **$2.08 per foot**

$97.20 hourly rate for project manager (for scheduling) multiplied by 2 hours = $194.40
$194.40 divided by 4 wells = $48.60
$48.60 divided by 30 feet = **$1.62 per foot**

Total of bold items above = $20.18 per foot

$55 per foot for equipment and materials + $20.18 per foot = $75.18 per foot
$75.18 per foot multiplied by 30 feet = $2,255.40
$2,255.40 + $100 per well for surveying = $2,355.40 per well

$2,355.40 per well was adjusted to $2,355.00 per well.

An additional $75 per foot will be added to each foot installed over 30'.

Assumptions for $2,055.00 per well up to 30' in depth (without soil sampling)
A 4 inch well is installed to 30 feet using a hollow stem auger.
4 wells can be installed in an 8 hour day.
$55 per foot accounts for equipment and materials.

$2,355.00 per well from above - $300 (adjusted soil boring sampling cost) = $2,055.00 per well

An additional $75 per foot will be added to each foot installed over 30'.

Well decommissioning: includes the cost of all material, equipment and labor, including oversight personnel, the preparation and submission of well records, and surface material replacement. An additional $26.40 per foot will be added for each well decommissioned over 30'.	$792.30 per well up to 30' in depth

Assumption
2 hours are necessary to decommission a 30' well.

Calculations
$97.20 hourly rate for project manager (for oversight) multiplied by 2 hours = **$194.40 per well**
$48.60 hourly rate for equipment operator (driller) multiplied by 2 hours = **$97.20 per well**
$43.20 hourly rate for laborer multiplied by 2 hours = **$86.40 per well**
$97.20 hourly rate for project manager (for scheduling) multiplied by 1/4 hour = **$24.30 per well**

$13 per foot for equipment and material multiplied by 30 feet = **$390 per well**

Total of bold items above = $792.30 per well

An additional $26.40 per foot will be added for each well decommissioned over 30 feet.

Soil borings: applies to those borings where monitoring wells are not required in the same location. Cost includes labor, water supply, personnel time for soil sample collection, backfilling of soil boring, and decontamination of equipment. An additional $2 per foot will be added for each soil boring over 30'.	$303 per soil boring up to 30' in depth, minimum $700.

This includes direct push equipment, operator 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.

Assumptions
A 30' boring is installed using direct push equipment.
Continuous soil samples are collected.
8 borings can be installed in an 8 hour day.

Calculations
$97.20 hourly rate for project manager (for oversight) multiplied by 8 hours = $777.60 per day
$777.60 divided by 8 borings = **$97.20 per soil boring**

$1,200.00 for direct push equipment divided by 8 borings = **$150.00 per boring**

$250 per day for a two man drill crew divided by 8 = **$31.25 per boring**

$97.20 hourly rate for project manager (for scheduling) multiplied by 2 hours = $194.40 per day
$194.40 per day divided by 8 borings = **$24.30 per boring**

Total of bold items above = $302.75 per boring

$302.75 per boring is adjusted to $303.00 per boring (with a minimum reimbursement of $700.00).

An additional $2.00 per foot will be added to each boring over 30 feet.

Installation and construction of temporary monitoring well: includes down-hole material, well development, backfilling of void, and decontamination of equipment. An additional $30 per foot will be added for each well installed over 30'.	$900 per temporary monitoring well

This includes direct push equipment, operator and project manager (for oversight), equipment decontamination, backfilling of void and soil sample collection.

Assumptions
A 30' 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.

Calculations
$97.20 hourly rate for project manager (for oversight) multiplied by 8 hours = $777.60 per day
$777.60 divided by 8 temporary monitoring wells = **$97.20 per temporary monitoring well**

$1,200.00 for direct push equipment divided by 8 temporary monitoring wells = **$150.00 per temporary monitoring well**

$97.20 hourly rate for project manager (for scheduling) multiplied by 2 hours = $194.40 per day
$194.40 per day divided by 8 temporary monitoring wells = **$24.30 per temporary monitoring well**

$250 per day for a two man drill crew divided by 8 = **$31.25 per temporary monitoring well**

$15.00 for material and backfilling multiplied by 30 feet per temporary monitoring well = **$450.00 per temporary monitoring well**

$100.00 per temporary monitoring well for surveying

Total of bold items above = $852.75 per temporary monitoring well

$852.75 per temporary monitoring well is adjusted to $900.00.

Installation and construction of piezometer: includes down-hole material, well development, backfilling of void, and decontamination of equipment. An additional $30 per foot will be added for each piezometer installed over 30'.	$900 per piezometer

This includes direct push equipment, operator and project manager (for oversight), equipment decontamination, backfilling of void and soil sample collection.

Assumptions
A 30’ piezometer is installed using direct push equipment.
Continuous soil samples are collected.
8 piezometers can be installed in an 8 hour day.

Calculations
$97.20 hourly rate for project manager (for oversight) multiplied by 8 hours = $777.60 per day
$777.60 divided by 8 piezometers = **$97.20 per piezometer**

$1,200.00 for direct push equipment divided by 8 piezometers = **$150.00 per piezometer**

$97.20 hourly rate for project manager (for scheduling) multiplied by 2 hours = $194.40 per day
$194.40 per day divided by 8 piezometers = **$24.30 per piezometer**

$250 per day for a two man drill crew divided by 8 = **$31.25 per piezometer**

$15.00 for material and backfilling multiplied by 30 feet per piezometer = **$450.00 per piezometer**

$100.00 per piezometer for surveying

Total of bold items above = $852.75 per piezometer

$852.75 per piezometer is adjusted to $900.00.

Decommissioning of Domestic-Use Cistern or Domestic-Use Well: as directed by the cabinet.	$1,601.80 each

Assumption
Grout costs $70 per cubic yard.
4 hours are necessary to decommission a domestic-use well or a 2,000 gallon domestic-use cistern.

Calculations
$97.20 hourly rate for project manager (for oversight) multiplied by 4 hours = **$388.80 per well**

$48.60 hourly rate for equipment operator (driller) multiplied by 4 hours = **$194.40 per well**

$43.20 hourly rate for laborer multiplied by 4 hours = **$172.80 per well**

$97.20 hourly rate for project manager (for scheduling) multiplied by 1.5 hours = **$145.80 per well**

$70.00 per cubic yard for grout multiplied by 10 cubic yards = **$700.00 for grout**

Total of bold items above = $1,601.80 per domestic-use well or domestic-use cistern

Water Sampling (including gauging and purging for monitoring wells), per well as directed by the cabinet.	$90 per well

Assumptions
1 hour is necessary to sample each well.
8 wells can be sampled in one 8-hour day.

Calculations
$97.20 hourly rate for project manager (scheduling) divided by 8 wells = **$12.15 per well**

$70.20 hourly rate for field technician = **$70.20 per well**

Total of the bold items above = $82.35 per well

$82.35 per well was adjusted to $90 per well.

Low-Flow Water Sampling (including gauging and purging for monitoring wells), per well as directed by the cabinet.	$180 per well

Assumptions
2 hours are necessary to collect a low-flow sample from each well.
4 wells can be sampled in one 8-hour day.

Calculations
$97.20 hourly rate for project manager (scheduling) divided by 4 wells = **$24.30 per well**

$70.20 hourly rate for field technician multiplied by 2 = **$140.40 per well**

Total of the bold items above = $164.70 per well

$164.70 per well was adjusted to $180.00 per well.

Surface Water Sampling as directed by the cabinet.	$30 per sample point

Assumption
20 minutes are necessary to collect a surface water sample.

Calculation
$70.20 hourly rate for field technician multiplied by 1/3 hour = **$23.17 per well**

$23.17 per well was adjusted to $30.00 per well.

Well Gauging, per well	$45 per well

Assumption
30 minutes are necessary to gauge a well.

Calculation
$70.20 hourly rate for field technician multiplied by 1/2 hour = **$35.10 per well**

$35.10 per well was adjusted to $45.00 per well.

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.	$360 per well pad replacement

This includes personnel time, materials and equipment needed to replace a damaged monitoring well pad.

$48.60 hourly rate for equipment operator (driller)

$43.20 hourly rate for laborer

$165.00 for materials and equipment

$100.00 per monitoring well for surveying

Total of bold items above = $356.80 per monitoring well pad replacement

$356.80 per monitoring well pad replacement is adjusted to $360 per monitoring well pad replacement.

Rock Coring	$129.20 per foot

This includes personnel time, materials and equipment needed for rock

coring. Set-up time $150 per core divided by 30 feet = **$5 per foot of core**

$97.20 hourly rate for project manager (for oversight) multiplied by 8 hours = $777.60 per day
$777.60 divided by 8 cores = **$97.20 per foot of core**

$27 per foot of core for equipment

Total of bold items above = $129.20 per foot of core

Daily Rate for Direct-Push (as directed by the cabinet for bedrock soundings)	$2,273 per day

This includes personnel time, materials and equipment needed for bedrock soundings.

$97.20 hourly rate for project manager (for oversight) multiplied by 8 hours = **$777.60 per day**

$1,200.00 for direct push equipment

$97.20 hourly rate for project manager (for scheduling) multiplied by 3 hours = **$291.60 per day**

Total of bold items above = $2,269.20 per day

$2,269.20 per day is adjusted to $2,273.00 per day.

Shoring Evaluation Boring soundings)	$303 per boring
This includes direct push equipment, operator and project manager (for oversight), equipment decontamination, backfilling of void and soil sample collection. Assumptions A 30' shoring evaluation (SE) boring is installed using direct push equipment. Continuous soil samples are collected. 8 SE borings can be installed in an 8 hour day. Calculations $97.20 hourly rate for project manager (for oversight) multiplied by 8 hours = $777.60 per day $777.60 divided by 8 SE borings = **$97.20 per soil SE boring** $1,200.00 for direct push equipment divided by 8 SE borings = **$150.00 per SE boring** $250 per day for a two man drill crew divided by 8 = **$31.25 per SE boring** $97.20 hourly rate for project manager (for scheduling) multiplied by 2 hours = $194.40 per day $194.40 per day divided by 8 SE borings = **$24.30 per SE boring** Total of bold items above = $302.75 per SE boring **$302.75 per SE boring is adjusted to $303.00 per SE boring.** An additional $2.00 per foot will be added to each SE boring over 30 feet.	
Well or Piezometer Top of Casing Elevation Survey	$400 per directive

2.9 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 tank waste (only reimbursable in accordance with 401 KAR 42:330), 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.	$108 per drum
This formulated task rate is based on invoices received for the transportation of a drum.	
Disposal of drummed tank waste, per drum (only reimbursable in accordance with 401 KAR 42:330)	Disposal cost shall be actual cost at point of disposal plus a maximum 15% markup.
Disposal of drums containing 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.	$124 per drum
This formulated task rate is based on invoices received for the disposal of a drum.	

2.10 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: this survey shall be performed in accordance with the Site Investigation Outline incorporated by reference in 401 KAR 42:060 and shall be directed in writing by the UST Branch.	$1,395 per 100' radius of the excavation zone
Assumption An Initial Site Survey can be completed in one 8-hour day. Calculations $70.20 hourly rate for field technician multiplied by 2 = $140.40 $140.40 multiplied by 8 hours = **$1,123.20 per survey** $97.20 hourly rate for project manager (for scheduling) multiplied by 2.75 hours = **$267.30 per survey** Total of the bold items above = $1,390.50 per survey **$1,390.50 per survey is adjusted to $1,395.00 per survey.**	
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 in writing by the UST Branch.	$700 each
Assumption An Additional Site Survey can be completed in 4 hours. Calculations $70.20 hourly rate for field technician multiplied by 2 = $140.40 $140.40 multiplied by 4 hours = **$561.60 per survey** $97.20 hourly rate for project manager (for scheduling) multiplied by 1.25 hours = **$121.50 per survey** Total of the bold items above = $683.10 per survey **$683.10 per survey is adjusted to $700.00 per survey.**	

2.11 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	$395
$97.20 hourly rate for project manager multiplied by 3 hours = **$291.60** $48.60 hourly rate for administrative assistant multiplied by 1.5 hours = **$72.90** **$30.50** for materials, postage, etc. **Total of bold items above = $395 for initial encroachment permit**	
Encroachment Permit Renewal	$175
$105.00 for bond renewal cost $48.60 hourly rate for administrative assistant multiplied by .75 hour = **$36.45** **$30.50** for postage Total of bold items above = $171.95 for encroachment permit renewal **$171.95 for encroachment permit renewal is adjusted to $175.00 for encroachment permit renewal.**	

Off-Site Property Access Agreement (including properly documented denials in accordance with the Site Investigation Outline 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 once per off-site property owner, so long as the off-site property owner is not the PSTEAF applicant. This formulated task rate is also allowed for an Off- Site Property Access Agreement, directed in writing by the cabinet, if a new eligible company is contracted.	$395
$97.20 hourly rate for project manager multiplied by 3 hours = **$291.60** $48.60 hourly rate for administrative assistant multiplied by 1.5 hours = **$72.90** **$30.50** for materials, postage, etc. **Total of bold items above = $395 for off-site property access agreement**	
Supplemental Off-Site Property Access Agreement This formulated task rate is allowed when an additional off-site access agreement is directed in writing by the cabinet.	$230
$97.20 hourly rate for project manager multiplied by 1.5 hours = **$145.80** $48.60 hourly rate for administrative assistant multiplied by 1 hour = **$48.60** **$30.50** for materials, postage, etc. Total of bold items above = $224.90 **$224.90 is adjusted to $230.00 for supplemental off-site property access agreement.**	

2.12 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– as directed by the cabinet (includes the disposal or treatment of water)	
8-hr pump test.	$1,858 per test
12-hr pump test.	$2,786 per test
24-hr pump test.	$5,573 per test
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. Calculations $97.20 hourly rate for project manager (for oversight) multiplied by 8 hours = **$777.60** **$175.00** per day for portable tank **$905.00** per day for field equipment listed above per day Total of bold items above = $1,857.60 **$1,857.60 divided by 8 hours = $232.20 per hour** 8 hours multiplied by $232.20 = $1,857.60 per 8 hour event **(adjusted to $1,858.00 per test)** 12 hours multiplied by $232.20 = $2,786.40 per 12 hour event **(adjusted to $2,786.00 per test)** 24 hours multiplied by $232.20 = $5,572.80 per 24 hour event **(adjusted to $5,573.00 per test)**	
Slug Test – as directed by the cabinet.	$500 per well
This formulated task rate is based on information received from certified contractors. This includes all field personnel and equipment.	

Mobile dual-phase extraction (MDPE) initial event, up to 24 hours. Cost includes all personnel, equipment, material needed in order to perform this task, as directed by the cabinet.	$3,000 up to 24 hours (1 day)
This formulated task rate is based on information received from certified contractors. This includes all field personnel and equipment.	
Continuous MDPE event, for each day after the initial event. Reimbursement shall be prorated based on the duration of system operation. Cost includes all personnel, equipment, material needed in order to perform this task, as directed by the cabinet.	$1,500 per day
This formulated task rate is based on information received from certified contractors. This includes all field personnel and equipment.	
Direct push injection point (this does not include the price of the injectant)	$403 per point
This includes all field personnel and equipment. **$303.00** for soil boring $97.20 hourly rate for project manager (for oversight) divided by .5 hour = **$48.60** **$51.40** for additional materials and equipment **Total of bold items above = $403.00 per point**	

2.13 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 and as reported in the Corrective Action Monitoring Report, DEP8045. This formulated task rate excludes utilities.	High: $3,159 per qtr Medium: $1,685 per qtr Low: $1,053 per qtr
This includes all personnel and equipment. <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. <u>Calculations</u> $70.20 hourly rate for field technician multiplied by 5 hours = $351.00 per day **$351.00 per day multiplied by 9 days = $3,159.00 per qtr** <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/hrs per each visit: <u>Calculations</u> $70.20 hourly rate for field technician multiplied by 4 hours = $280.80 per day $280.80 per day multiplied by 6 days = $1,684.80 **$1,684.80 was adjusted to $1,685.00 per qtr** <u>Assumptions for low maintenance</u> The cost associated with low maintenance is based on 3 months per quarter and visiting the site 1 days per month and being on site 5 hours per each visit: <u>Calculations</u> $70.20 hourly rate for field technician multiplied by 5 hours = $351.00 per day **$351.00 per day multiplied by 3 days = $1,053.00 per qtr**	

Unscheduled Maintenance of a Remediation System. Reimbursement shall be limited to 4 unscheduled maintenance visits per 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. This formulated task rate excludes replacement of components.	$1,000 per visit
This includes all personnel and equipment. $70.20 hourly rate for field technician multiplied by 8 hours = **$561.60 per unscheduled maintenance visit** $97.20 hourly rate for project manager divided by 4.5 hour = **$437.40 per unscheduled maintenance visit** Total of bold items above = $999.00 **$999.00 per unscheduled maintenance visit is adjusted to $1,000.00 per unscheduled maintenance visit.**	

2.14 Other Tasks

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

Initial Response Actions: for actions taken outside of the excavation zone, in accordance with the Release Response and Initial Abatement Requirements Outline 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. The formulated task rate outlined for this item also includes preparation of the required status letter, facility sketch, description of work completed, photographic documentation, and recommendations for future actions.	$1,000 per occurrence
This formulated task rate is based on a general estimate to complete the associated tasks. This includes all personnel and equipment.	
Site visit to reevaluate previously confirmed classification criteria when directed in writing by the UST Branch, as a stand-alone event (includes completion of an amended Classification Guide DEP8056).	$400 per request
$70.20 hourly rate for field technician multiplied by 4 hours = **$280.80** **$118.80** hourly rate for P.E./P.G. to complete the class guide The total of the bold items above = $399.60 **$399.60 is adjusted to $400.00.**	
Site visit to complete a Classification Guide DEP8056 as part of a Site Check when directed in writing by the cabinet.	$400 per request
$70.20 hourly rate for field technician multiplied by 4 hours = **$280.80** **$118.80** hourly rate for P.E./P.G. to complete the class guide The total of the bold items above = $399.60 **$399.60 is adjusted to $400.00.**	
Tank & Line Tightness Testing as directed in writing by the UST Branch in conjunction with site check, site investigation, or corrective action activities for a facility.	$590 per test
This formulated task rate is based on invoices received for tank & line tightness testing plus a 15% markup.	

2.15 Laboratory Analysis

The following table lists formulated task rates associated with laboratory analysis 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 Analysis	
BTEX - (MTBE reporting included if directed by the cabinet for domestic-use sources)	$80 per sample
PAH	$212 per sample
Total Lead (soil)	$50 per sample
Dissolved Lead (groundwater)	$50 per sample
Trip Blank for BTEX (water only)	$80 per sample
Grain Size Analysis	$100 per sample
Ignitability	$55 per sample
Paint Filter Test	$48 per sample
pH	$40 per sample
Waste Characterization	Actual cost plus 15%
Biological Oxygen Demand	$40 per sample
Calcium	$50 per sample
Carbonate Alkalinity	$20 per sample
Chemical Oxygen Demand	$35 per sample
Dissolved Iron	$17 per sample
Dissolved Magnesium	$23 per sample
Heterotrophic Plate Count	$65 per sample
Inorganic Nitrogen	$60 per sample
Intrinsic Soil Permeability (includes all costs for collection and analysis)	$500 per sample
Iron	$40 per sample
Manganese	$23 per sample
Microbe Enumeration Studies	$105 per sample
Nitrate/Nitrite	$35 per sample
Phosphate	$31 per sample
Soil Moisture Content	$15 per sample
Soil Oxidation Reduction Potential	$40 per sample
Sulfate	$28 per sample
Sulfide	$30 per sample
Total Dissolved Solids	$25 per sample
Total Organic Carbon	$75 per sample
Total Petroleum Hydrocarbon	$75 per sample
Total Organic Nitrogen	$50 per sample
Total Iron	$23 per sample
Vapor Intrusion Assessment Laboratory Analysis	
Individual Summa Canister Certification	$100 each
Method TO-15	$300 per sample
Method 8260	$125 per sample
O2 and CO2	$100 per sample

2.16 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 Outline Reporting			
Initial Abatement Report			$1,120
Personnel	**Unit Rate ($)**	**Total Units (hrs)**	**Reimbursement Cost ($)**
Professional Geologist (Alt. PE)	$118.80	2	$237.60
Project Manager (Geologist, Engineer, Scientist)	$97.20	7	$680.40
Drafting [figure support]	$64.80	1.5	$97.20
Admin./Clerical [copy, filing, etc…]	$48.60	1	$48.60
Misc. [materials etc…]	$50.00	1	$50.00
TOTAL			$1,113.80
Completion of Building Assessment DEP0058			$178.20, per building
Personnel	**Unit Rate ($)**	**Total Units (hrs)**	**Reimbursement Cost ($)**
Professional Geologist (Alt. PE)	$118.80	1.5	$178.20
TOTAL			**$178.20**
Completion of Vapor Intrusion Assessment DEP0059			$178.20, per sampling event
Personnel	**Unit Rate ($)**	**Total Units (hrs)**	**Reimbursement Cost ($)**
Professional Geologist (Alt. PE)	$118.80	1.5	$178.20
TOTAL			**$178.20**
Initial Vapor Intrusion Assessment Report			$2,975
Personnel	**Unit Rate ($)**	**Total Units (hrs)**	**Reimbursement Cost ($)**
Professional Geologist (Alt. PE)	$118.80	6	$712.80
Project Manager (Geologist, Engineer, Scientist)	$97.20	17	$1,652.40
Drafting [figure support]	$64.80	5	$324.00
Admin./Clerical [copy, filing, etc…]	$48.60	4	$194.40
Misc. [materials etc…]	$50.00	1.5	$75.00
TOTAL			$2,958.60
Intermediate Vapor Intrusion Assessment Report			$1,910
Personnel	**Unit Rate ($)**	**Total Units (hrs)**	**Reimbursement Cost ($)**
Professional Geologist (Alt. PE)	$118.80	3	$356.40
Project Manager (Geologist, Engineer, Scientist)	$97.20	11	$1,069.20
Drafting [figure support]	$64.80	4	$259.20
Admin./Clerical [copy, filing, etc…]	$48.60	3.5	$170.10
Misc. [materials etc…]	$50.00	1	$50.00
TOTAL			**$1,904.90**
Site Check Outline Reporting			
Site Check Report			$1,108
Personnel	**Unit Rate ($)**	**Total Units (hrs)**	**Reimbursement Cost ($)**
Professional Geologist (Alt. PE)	$118.80	2	$237.60
Project Manager (Geologist, Engineer, Scientist)	$97.20	6	$583.20
Drafting [figure support]	$64.80	3	$194.40
Admin./Clerical [copy, filing, etc…]	$48.60	1	$48.60
Misc. [materials etc…]	$50.00	0.75	$37.50
TOTAL			**$1,101.30**

Site Investigation Outline Reporting

Initial Site Investigation Report — $2,975

Personnel	Unit Rate ($)	Total Units (hrs)	Reimbursement Cost ($)
Professional Geologist (Alt. PE)	$118.80	6	$712.80
Project Manager (Geologist, Engineer, Scientist)	$97.20	17	$1,652.40
Drafting [figure support]	$64.80	5	$324.00
Admin./Clerical [copy, filing, etc…]	$48.60	4	$194.40
Misc. [materials etc…]	$50.00	1.5	$75.00
TOTAL			$2,958.60

Intermediate Site Investigation Report — $1,905

Personnel	Unit Rate ($)	Total Units (hrs)	Reimbursement Cost ($)
Professional Geologist (Alt. PE)	$118.80	3	$356.40
Project Manager (Geologist, Engineer, Scientist)	$97.20	11	$1,069.20
Drafting [figure support]	$64.80	4	$259.20
Admin./Clerical [copy, filing, etc…]	$48.60	3.5	$170.10
Misc. [materials etc…]	$50.00	1	$50.00
TOTAL			**$1,904.90**

Corrective Action Outline Reporting

Preliminary CSM Data Gap Scope of Work Proposal — $1,665

Personnel	Unit Rate ($)	Total Units (hrs)	Reimbursement Cost ($)
Professional Geologist (Only)	$118.80	8	$950.40
Toxicologist	$135.00	0	$0.00
Project Manager (geologist, engineer, scientist)	$97.20	5	$486.00
Drafting [figure support]	$64.80	2	$129.60
Admin./Clerical [copy, filing, etc…]	$48.60	1	$48.60
Misc. [materials etc…]	$50.00	1	$50.00
TOTAL			**$1,665**

Preliminary CSM Data Report — $2,183

Personnel	Unit Rate ($)	Total Units (hrs)	Reimbursement Cost ($)
Professional Geologist (Only)	$118.80	8	$950.40
Toxicologist	$135.00	0	$0.00
Project Manager (geologist, engineer, scientist)	$97.20	9	$874.80
Drafting [figure support]	$64.80	4	$259.20
Admin./Clerical [copy, filing, etc…]	$48.60	1	$48.60
Misc. [materials etc…]	$50.00	1	$50.00
TOTAL			**$2,183**

Conceptual Site Model — $14,939

Personnel	Unit Rate ($)	Total Units (hrs)	Reimbursement Cost ($)
Professional Geologist (Only)	$118.80	81	$9,622.80
Toxicologist	$135.00	0	$0.00
Project Manager (geologist, engineer, scientist)	$97.20	41	$3,985.20
Drafting [figure support]	$64.80	16	$1,036.80
Admin./Clerical [copy, filing, etc…]	$48.60	4	$194.40
Misc. [materials etc…]	$50.00	2	$100.00
TOTAL			**$14,939**

Corrective Action Plan – Soil Only — $3,329

Personnel	Unit Rate ($)	Total Units (hrs)	Reimbursement Cost ($)
Professional Geologist (Alt. Engineer)	$118.80	16	$1,900.80
Toxicologist	$135.00	0	$0.00
Project Manager (geologist, engineer, scientist)	$97.20	9	$874.80
Drafting [figure support]	$64.80	4	$259.20
Admin./Clerical [copy, filing, etc…]	$48.60	4	$194.40
Misc. [materials etc…]	$50.00	2	$100.00
TOTAL			**$3,329**

Corrective Action Plan – Groundwater Only or Groundwater and Soil — $5,554

Personnel	Unit Rate ($)	Total Units (hrs)	Reimbursement Cost ($)
Professional Geologist (Alt. Engineer)	$118.80	26	$3,088.80
Toxicologist	$135.00	0	$0.00
Project Manager (geologist, engineer, scientist)	$97.20	17	$1,652.40
Drafting [figure support]	$64.80	8	$518.40
Admin./Clerical [copy, filing, etc…]	$48.60	4	$194.40
Misc. [materials etc…]	$50.00	2	$100.00
TOTAL			**$5,554**

Amended Corrective Action Plan - Soil Only — $1,763

Personnel	Unit Rate ($)	Total Units (hrs)	Reimbursement Cost ($)
Professional Geologist (Alt. Engineer)	$118.80	8	$950.40
Toxicologist	$135.00	0	$0.00
Project Manager (geologist, engineer, scientist)	$97.20	5	$486.00
Drafting [figure support]	$64.80	2	$129.60
Admin./Clerical [copy, filing, etc…]	$48.60	2	$97.20
Misc. [materials etc…]	$50.00	2	$100.00
TOTAL			**$1,763**

Amended Corrective Action Plan – Groundwater Only or Groundwater and Soil — $3,135

Personnel	Unit Rate ($)	Total Units (hrs)	Reimbursement Cost ($)
Professional Geologist (Alt. Engineer)	$118.80	16	$1,900.80
Toxicologist	$135.00	0	$0.00
Project Manager (geologist, engineer, scientist)	$97.20	9	$874.80
Drafting [figure support]	$64.80	2.5	$162.00
Admin./Clerical [copy, filing, etc…]	$48.60	2	$97.20
Misc. [materials etc…]	$50.00	2	$100.00
TOTAL			**$3,135**

As-Built or Corrective Action- Implemented Report — $1,017

Personnel	Unit Rate ($)	Total Units (hrs)	Reimbursement Cost ($)
Professional Geologist (Alt. Engineer)	$118.80	2	$237.60
Toxicologist	$135.00	0	$0.00
Project Manager (geologist, engineer, scientist)	$97.20	5	$486.00
Drafting [figure support]	$64.80	3	$194.40
Admin./Clerical [copy, filing, etc…]	$48.60	1	$48.60
Misc. [materials etc…]	$50.00	1	$50.00
TOTAL			**$1,017**

Corrective Action Monitoring Report Form DEP8045 (operating remedial system) — $1,190

Personnel	Unit Rate ($)	Total Units (hrs)	Reimbursement Cost ($)
Professional Geologist (Alt. Engineer)	$118.80	4	$475.20
Toxicologist	$135.00	0	$0.00
Project Manager (geologist, engineer, scientist)	$97.20	5	$486.00
Drafting [figure support]	$64.80	2	$129.60
Admin./Clerical [copy, filing, etc…]	$48.60	1	$48.60
Misc. [materials etc…]	$50.00	1	$50.60
TOTAL			**$1,190**

Corrective Action Monitoring Report Form DEP8045 (without an operating remedial system) — $806

Personnel	Unit Rate ($)	Total Units (hrs)	Reimbursement Cost ($)
Professional Geologist (Alt. Engineer)	$118.80	2	$237.60
Toxicologist	$135.00	0	$0.00
Project Manager (geologist, engineer, scientist)	$97.20	3.5	$340.20
Drafting [figure support]	$64.80	2	$129.60
Admin./Clerical [copy, filing, etc…]	$48.60	1	$48.60
Misc. [materials etc…]	$50.00	1	$50.00
TOTAL			**$806**

Corrective Action Completion Report (No further action request) — $1,492

Personnel	Unit Rate ($)	Total Units (hrs)	Reimbursement Cost ($)
Professional Geologist (Alt. Engineer)	$118.80	6	$712.80
Toxicologist	$135.00	0	$0.00
Project Manager (geologist, engineer, scientist)	$97.20	6	$583.20
Drafting [figure support]	$64.80	1.5	$97.20
Admin./Clerical [copy, filing, etc…]	$48.60	1	$48.60
Misc. [materials etc…]	$50.00	1	$50.00
TOTAL			**$1,492**

Scope of Work Proposal (Pilot Study or Feasibility Study) — $1,427

Personnel	Unit Rate ($)	Total Units (hrs)	Reimbursement Cost ($)
Professional Geologist (Alt. Engineer)	$118.80	6	$712.80
Toxicologist	$135.00	0	$0.00
Project Manager (geologist, engineer, scientist)	$97.20	5	$486.00
Drafting [figure support]	$64.80	2	$129.60
Admin./Clerical [copy, filing, etc…]	$48.60	1	$48.60
Misc. [materials etc…]	$50.00	1	$50.00
TOTAL			**$1,427**

Feasibility Study Report — $1,600

Personnel	Unit Rate ($)	Total Units (hrs)	Reimbursement Cost ($)
Professional Geologist (Alt. Engineer)	$118.80	8	$950.40
Toxicologist	$135.00	0	$0.00
Project Manager (geologist, engineer, scientist)	$97.20	5	$486.00
Drafting [figure support]	$64.80	1	$64.80
Admin./Clerical [copy, filing, etc…]	$48.60	1	$48.60
Misc. [materials etc…]	$50.00	1	$50.00
TOTAL			**$1,600**

Pilot Study Report — $3,036

Personnel	Unit Rate ($)	Total Units (hrs)	Reimbursement Cost ($)
Professional Geologist (Alt. Engineer)	$118.80	16	$1,900.80
Toxicologist	$135.00	0	$0.00
Project Manager (geologist, engineer, scientist)	$97.20	9	$874.80
Drafting [figure support]	$64.80	2.5	$162.00
Admin./Clerical [copy, filing, etc…]	$48.60	1	$48.60
Misc. [materials etc…]	$50.00	1	$50.00
TOTAL			**$3,036**

Risk Assessment Scope of Work Proposal — $2,886

Personnel	Unit Rate ($)	Total Units (hrs)	Reimbursement Cost ($)
Professional Geologist	$118.80	9	$1,069.20
Toxicologist	$135.00	12	$1,620.00
Project Manager (geologist, engineer, scientist)	$97.20	0	$0.00
Drafting [figure support]	$64.80	0	$0.00
Admin./Clerical [copy, filing, etc…]	$48.60	2	$97.20
Misc. [materials etc…]	$50.00	2	$100.00
TOTAL			**$2,886.40**

Risk Assessment (Tier II) — $22,858

Personnel	Unit Rate ($)	Total Units (hrs)	Reimbursement Cost ($)
Professional Geologist	$118.80	44	$5,227.20
Toxicologist	$135.00	120	$16,200.00
Project Manager (geologist, engineer, scientist)	$97.20	0	$0.00
Drafting [figure support]	$64.80	16	$1,036.80
Admin./Clerical [copy, filing, etc…]	$48.60	4	$194.40
Misc. [materials etc…]	$50.00	4	$200.00
TOTAL			**$22,858.40**

Risk Assessment (Tier III) — $22,858

Personnel	Unit Rate ($)	Total Units (hrs)	Reimbursement Cost ($)
Professional Geologist	$118.80	44	$5,227.20
Toxicologist	$135.00	120	$16,200.00
Project Manager (geologist, engineer, scientist)	$97.20	0	$0.00
Drafting [figure support]	$64.80	16	$1,036.80
Admin./Clerical [copy, filing, etc…]	$48.60	4	$194.40
Misc. [materials etc…]	$50.00	4	$200.00
TOTAL			**$22,858.40**

Mobile Dual-Phase Extraction Report — $1,084

Personnel	Unit Rate ($)	Total Units (hrs)	Reimbursement Cost ($)
Professional Geologist (Alt. PE)	$118.80	1	$118.80
Toxicologist	$135.00	0	$0.00
Project Manager (geologist, engineer, scientist)	$97.20	8.5	$826.20
Drafting [figure support]	$64.80	1	$64.80
Admin./Clerical [copy, filing, etc…]	$48.60	0.5	$24.30
Misc. [materials etc…]	$50.00	1	$50.00
TOTAL			**$1,084.10**

Shoring Evaluation Report — $1,144

Personnel	Unit Rate ($)	Total Units (hrs)	Reimbursement Cost ($)
Professional Geologist (Alt. PE)	$118.80	6	$712.80
Toxicologist	$135.00	0	$0.00
Project Manager (geologist, engineer, scientist)	$97.20	3	$291.60
Drafting [figure support]	$64.80	1	$64.80
Admin./Clerical [copy, filing, etc…]	$48.60	0.5	$24.30
Misc. [materials etc…]	$50.00	1	$50.00
TOTAL			**$1,143.50**

Closure Outline Reporting

Closure Assessment Report (SOTRA) — $2,095

Personnel	Unit Rate ($)	Total Units (hrs)	Reimbursement Cost ($)
Professional Geologist (Alt. PE)	$118.80	3	$356.40
Project Manager (Geologist, Engineer, Scientist)	$97.20	13	$1,263.60
Draftsperson/CAD	$64.80	3.5	$226.80
Admin. Assistant	$48.60	4	$194.40
Misc. [materials etc…]	$50.00	1	$50.00
TOTAL			**$2,091.20**

Optional Soil Removal at time of Permanent Closure Report (submitted with Closure Assessment Report) — $500

Personnel	Unit Rate ($)	Total Units (hrs)	Reimbursement Cost ($)
Professional Geologist (Alt. PE)	$118.80	1	$118.80
Toxicologist	$135.00	0	$0.00
Project Manager (geologist, engineer, scientist)	$97.20	2.5	$243.00
Drafting [figure support]	$64.80	1	$64.80
Admin./Clerical [copy, filing, etc…]	$48.60	0.5	$24.30
Misc. [materials etc…]	$50.00	1	$50.00
TOTAL			**$500.90**

Miscellaneous Reporting

Free Product Recovery Report — $500

Personnel	Unit Rate ($)	Total Units (hrs)	Reimbursement Cost ($)
Professional Geologist (Alt. PE)	$118.80	1	$118.80
Toxicologist	$135.00	0	$0.00
Project Manager (geologist, engineer, scientist)	$97.20	2.5	$243.00
Drafting [figure support]	$64.80	1	$64.80
Admin./Clerical [copy, filing, etc…]	$48.60	0.5	$24.30
Misc. [materials etc…]	$50.00	1	$50.00
TOTAL			**$500.90**

Over-Excavation Report < 500 cubic yards — $500

Personnel	Unit Rate ($)	Total Units (hrs)	Reimbursement Cost ($)
Professional Geologist (Alt. PE)	$118.80	1	$118.80
Toxicologist	$135.00	0	$0.00
Project Manager (geologist, engineer, scientist)	$97.20	2.5	$243.00
Drafting [figure support]	$64.80	1	$64.80
Admin./Clerical [copy, filing, etc…]	$48.60	0.5	$24.30
Misc. [materials etc…]	$50.00	1	$50.00
TOTAL			**$500.90**

Over-Excavation Report > 500 cubic yards — $1,287

Personnel	Unit Rate ($)	Total Units (hrs)	Reimbursement Cost ($)
Professional Geologist (Alt. PE)	$118.80	1	$118.80
Toxicologist	$135.00	0	$0.00
Project Manager (geologist, engineer, scientist)	$97.20	8.5	$826.20
Drafting [figure support]	$64.80	3	$194.40
Admin./Clerical [copy, filing, etc…]	$48.60	2	$97.20
Misc. [materials etc…]	$50.00	1	$50.00
TOTAL			**$1,286.60**

Miscellaneous Request Report — $476

Personnel	Unit Rate ($)	Total Units (hrs)	Reimbursement Cost ($)
Professional Geologist (Alt. PE)	$118.80	1	$118.80
Toxicologist	$135.00	0	$0.00
Project Manager (geologist, engineer, scientist)	$97.20	2.5	$243.00
Drafting [figure support]	$64.80	1	$64.80
Admin./Clerical [copy, filing, etc…]	$48.60	0.5	$24.30
Misc. [materials etc…]	$50.00	0.5	$25.00
TOTAL			**$475.90**

3.0 RATES

The following tables lists rates for equipment and personnel to perform a specific task that does not have a formulated task rates listed in Section 2 of this outline. The rates listed in this section shall be used when completing the Cost Estimate Form DEP6090, as applicable.

3.1 Equipment

These formulated task rates are based on average rental rates.	
Air compressor, less than 190 CFM	$120 per day
Air compressor, 190 CFM or greater	$165 per day
Backhoe, trailer and accessories	$60 per hr
Concrete saw	$60 per day
Concrete saw (push type)	$80 per day
Conductivity meter	$20 per day
Dingo Stand on Loader	$35 per hr
Direct-push unit (includes operator)	$1,200 per day
Drum (55 gallon), each	$35 each
DO Meter	$30 per day
Electronic water-level indicator	$20 per day
Electronic water level recorder/transducer (two well capability)	$50 per day
Electronic water level recorder/transducer (four well capability)	$100 per day
Excavator	$50 per hr
FID, OVA	$95 per day
Flow regulator (air samples only)	$40 per day
Generator	$75 per day
Grout pump	$75 per day
Jackhammer – air w/ bit and hose	$50 per day
Jackhammer – electric w/ bit	$75 per day
LEL Meter	$35 per day
Loader, Skid	$35 per hr
Multi-meter (multiple measurement device)	$30 per day
pH Meter	$20 per day
PID/Hnu Meter	$75 per day
Post Hole Auger for Bobcat	$25 per hr
Power auger (hand held)	$50 per day
Pump, 2” submersible pump, electric	$45 per day
Pump, 2” trash pump	$65 per day
Pump, 3” trash pump	$85 per day
Rock Drill	$40 per day
Self-contained steam cleaning unit	$125 per day
Steam cleaner	$85 per day
Survey equipment	$45 per day
Trencher, walk behind	$45 per hr
Trackhoe, trailer and accessories	$100 per hour
Velocity meter	$45 per day
Water truck (500 gal.) (usage must be justified)	$75 per day
Water truck (800 gallon capacity or greater) (usage must be justified)	$175 per day
6L Summa Canister Rental (weekly)	$50 each
1L Summa Canister Rental (weekly)	$50 each
Flow Regulator Rental (weekly)	$50 each
Copies	$0.10 per page
Faxes	$1.25 per page
Mileage, per mile for personnel vehicle, this is based upon the date of the directive issued.	State reimbursement rate established pursuant to 200 KAR 2:006

3.2 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.

8% cost of living raise was added to each personnel rate.	
Title	**Max. Hourly Rate**
Professional Engineer (Licensed in KY) **Professional Geologist** (Registered in KY)	$118.80
Project Manager (Geologist, Engineer, Scientist)	$97.20
Field Technician	$70.20
Toxicologist	$135.00
Administrative Assistant	$48.60
Draftsperson/CAD	$64.80
Laborer	$43.20
Equipment Operator	$48.60
Electrical Contractor (License required)	$64.80
Apprentice Plumber	$48.60
Journeyman Plumber	$54.00
Master Plumber (License required)	$59.40

3.3 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.

8% cost of living raise was added to each personnel rate.	
Legal Services	
Sole practitioner, per hour	$118.80 per hour
Partner or principal in firm, per hour	$189.00 per hour
Associate in firm, per hour	$151.20 per hour
Paralegal, per hour	$64.80 per hour

Appendix A

Personnel Tasks and Responsibilities

Professional Classification	Tasks and Responsibilities
Professional Geologist Professional Engineer	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.
Project Manager (Geologist, Engineer, Scientist)	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., supervises hydraulic tests, and may prepare limited or technical sections of reports. Supervises the work of lower level professional and technical staff. Project management Report review Report preparation Development and oversee 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 Acquire property access as required by the cabinet
Toxicologist	Uses and complies 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). Primarily engaged when performing a Tier II or III risk assessment along with the P.E. or P.G.
Field Technician	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. Fieldwork preparation Operation and maintenance of equipment Well development Remediation system installation Waste handling Sampling and monitoring Decontamination