



UTAH DEPARTMENT *of*
ENVIRONMENTAL QUALITY

**ENVIRONMENTAL RESPONSE
& REMEDIATION**

**Cost Guidelines
for Utah
Underground Storage Tank Sites**

June 3, 2021

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LIST OF ACRONYMS AND ABBREVIATIONS

BTEXN	Benzene, Toluene, Ethylbenzene, Xylene, Naphthalene
CAD	Computer Aided Design
CAP	Corrective Action Plan
CFR	Code of Federal Regulations
CPI	Consumer Price Index
CPs	Cost Proposal(s) and/or budgets
DERR	Division of Environmental Response and Remediation and/or the director
DOPL	Division of Occupational and Professional Licensing
EPA	Environmental Protection Agency
ft	Feet
GIS	Geographic Information Systems
hr	Hour
MTBE	Methyl t-butyl ether
NELAP	National Environmental Laboratory Accreditation Program
NTE	Not to Exceed
O&G	Oil and Grease
O&M	Operation and Maintenance
P-CODE	Personal Classification
P.E.	Professional Engineer
P.G.	Professional Geologist
PID	Photo-ionization Detector
PST	Petroleum Storage Tank
TPH-DRO	Total Petroleum Hydrocarbons, Diesel Range Organics
TPH-GRO	Total Petroleum Hydrocarbons, Gasoline Range Organics
TRPH	Total Recoverable Petroleum Hydrocarbons
UAC	Utah Administrative Code
UST	Underground Storage Tank and/or Aboveground Storage Tank
UT	Utah

INTRODUCTION

Refer to Utah Administrative Code (UAC) R311-200 and in Section 19-6-402 for definitions of terms used in this document.

This document has been prepared to facilitate the preparation and review of Cost Proposals (CPs) submitted by petroleum storage tank owner/operator(s) or Utah certified consultants. The forms contained herein may be requested from the Division of Environmental Response and Remediation (DERR) by calling (801) 536-4100, or downloaded from our website at <https://deq.utah.gov/division-environmental-response-remediation>.

The purpose of this cost guideline is to provide a mechanism for the consistent preparation and efficient review of CPs by certified consultants and by DERR staff, respectively. The document is based on data associated with previously approved CPs, published cost guideline documents utilized in several other states, and comments received from certified consultants and DERR staff.

Rates presented in this document were updated to more accurately reflect current market conditions. These considerations included: adjustments for inflation using the Consumer Price Index (CPI); currently approved certified consultant rates; current costs charged by vendors and contractors; and other state agency reimbursement programs.

The June 2021 Personnel Classifications, Requirements, and Rates Table will be updated every other calendar year to adjust for general inflation using the CPI calculator, beginning in January 2023. Updates to the Table will be published on the DERR website.

This document may be revised as additional standards are established and as the DERR Underground Storage Tank (UST) Branch deems necessary.

PERSONNEL CLASSIFICATIONS, REQUIREMENTS, RATES, TASKS, AND RESPONSIBILITIES

This document is not intended to provide direction on how to conduct assessment or remediation activities. Appropriate assessment and remediation activities must be conducted at sites pursuant to the request/authorization of the DERR.

The Personnel Classifications, Requirements, and Rates Table and Personnel Classifications, Tasks, and Responsibilities Table are presented as general guidelines. DERR does not dictate how a certified consultant utilizes personnel. Please note, however, that appropriate personnel-levels and corresponding hourly rates should be utilized for corresponding tasks. For example, using Senior Project Manager level personnel for activities that are appropriate for Field Technician level personnel will result in denial of costs unless prior approval is given by the DERR.

For each task presented in a CP, the DERR will compare the proposed personnel levels of effort with guideline hours and associated costs presented in this document. The DERR understands that in some circumstances, a task may not be completed in the typical number of hours indicated in guideline tables. If a certified consultant can perform a task in less time than summarized in the applicable Guideline Tasks in Appendix A, the reduced level of effort must be proposed. However, if a certified consultant anticipates additional hours will be required to complete a particular task, **complete justification for the increased level of effort must be provided in the CP.**

Tasks must be performed pursuant to the requirements and standards stated in 40 CFR Part 280 and UAC R311-200 through R311-212.

SPECIALIZED TASKS

Some projects may require specialized tasks that are not presented in this document. Any hours, skill levels, in-house equipment, mileage, etc. may be proposed as the certified consultant deems necessary. A discussion of the task(s) and reasoning for the proposed hours/costs must be approved by the DERR.

MOBILIZATION AND DEMOBILIZATION

Use a mapping tool to calculate the mileage and time based on the fastest route required to travel from the certified consultant's office (whichever is the shortest distance or time) to the site destination. To calculate the round-trip time, multiply the time required to travel one-way by two, round up to the next 15-minute interval.

Only charges based on actual miles traveled for an individual project are eligible for reimbursement. Duplicative charges for travel time and mileage for any trip to multiple job sites where such costs are billed in total to multiple projects rather than allocated between the separate projects are ineligible for reimbursement. **Travel time for activities is reimbursed for one personnel only, unless specified in the CP or approved otherwise by the DERR.**

Personnel Classifications, Requirements, and Rates Table

June 2021

PERSONNEL CLASSIFICATION	DEGREE REQUIRED	MINIMUM LICENSE OR CERTIFICATION REQUIRED	MINIMUM YEARS EXPERIENCE	MAXIMUM HOURLY RATE
P100 Principal	None	None	12 ^{1,3}	\$153
P101 Senior Project Manager	Bachelor Degree ⁵	Utah Certified Consultant	8 ¹	\$138
P102 Professional Engineer/Geologist	Bachelor Degree in Engineering or Geoscience ⁴	P.E. or P.G. ⁴	6 ¹	\$133
P103 Project Manager	Bachelor Degree ⁵	Utah Certified Consultant ⁷	4 ¹	\$107
P104 Field Scientist	Bachelor Degree ⁵	Utah Certified Sampler ⁶	2 ¹	\$92
P105 Senior Technician	Associate Degree or Licensed Tradesperson ⁵	Utah Certified Sampler ⁶	6 ¹	\$82
P106 Field Technician	None	Utah Certified Sampler ⁶	0	\$66
P107 Drafter	Associate Degree ⁵	None	2 ²	\$77
P108 PST Trust Fund Claim Specialists	None	None	2 ³	\$71
P109 Administrative Assistant	None	None	2 ³	\$56
P110 Technical Expert	None	None	15	As Approved ⁸

¹ Equivalent work-related or college level education with significant coursework in the physical, life, or environmental sciences can be substituted for all or part of the specified experience requirements

² Equivalent work-related or college level education with significant coursework in drafting or computer aided design (CAD) can be substituted for all or part of the specified experience requirements

³ Equivalent work-related or college level education with coursework in administrative or business can be substituted for all or part of the specified experience requirements

⁴ In accordance with DOPL Act 58-22 and 58-76

⁵ Equivalent work-related experience as approved by the DERR

⁶ Utah Sampling Certification only required if conducting sampling activities

⁷ Utah Consultant Certification only required if performing Certified Consultant duties

⁸ Prior approval is required from the DERR

Personnel Classifications, Tasks, and Responsibilities Table

PERSONNEL CLASSIFICATION (P-CODES)	TASKS AND RESPONSIBILITIES
<p>PRINCIPAL (P100)</p> <p>Professional head of organization with authority and responsibility for conceiving and executing plans and functions of the organization, and directing a professional staff.</p>	<p>Expert testimony Legal strategies Depositions Review complex sites Final document review Authorize new technology Limited hours per site</p>
<p>SENIOR PROJECT MANAGER (P101)</p> <p>Responsible for managing entire projects and serves as technical expert on complex remediation projects.</p>	<p>Project management Direct work activities of lower level staff Client relations Development of project budget Oversight of project budget Review PST Trust Fund payment voucher packages Create and maintain field work schedule Site assessment planning Complex corrective active plan development Corrective action plan selection and design Corrective action effectiveness evaluation Final data review, analysis, and interpretation Report review Complex data interpretation Periodic site inspection Limited on-site supervision</p>
<p>PROFESSIONAL ENGINEER/GEOLOGIST (P102)</p> <p>Serves as senior technical leader for remediation projects and has developed substantial expertise in the field of practice.</p>	<p>Project oversight and management Review engineering plans, specifications, reports, maps, sketches, surveys, drawings, documents, and plans Review requests for proposals Complex corrective active plan development Corrective action plan selection and design Corrective action effectiveness evaluation Geological analysis Review plans, maps, documents, and reports in accordance with DOPL requirements Oversight of project regulatory compliance Complex data interpretation Limited hours per site</p>

PERSONNEL CLASSIFICATION (P-CODES)	TASKS AND RESPONSIBILITIES
<p>PROJECT MANAGER (P103)</p> <p>Performs specific specialized tasks related to environmental investigation and remediation activities.</p>	<p>Site reconnaissance Access agreements Field work planning Oversight of lower level staff Agency and contractor coordination Supervision of investigation and complex site work Permitting Oversight of project regulatory compliance Corrective action plan development Preliminary corrective action plan review Remedial system installation Supervision of initial and confirmation sampling activities Technical support Preliminary data review and analysis Report preparation</p>
<p>FIELD SCIENTIST (P104)</p> <p>Performs non-routine tasks related to environmental investigation and remediation activities.</p>	<p>Field work planning and preparation Initial and confirmation sampling activities Surveying Contractor oversight Oversight of specialized remedial system maintenance Data compilation Preparation of simple charts or graphs Waste handling</p>
<p>SENIOR TECHNICIAN (P105)</p> <p>Performs non-routine and complex assignments which may require non-standard procedures and complex instrumentation.</p>	<p>Specialized operation and maintenance of equipment Record, compute, and analyze test data Prepare test reports</p>
<p>FIELD TECHNICIAN (P106)</p> <p>Performs routine labor tasks related to site monitoring and remediation activities. Entry level position and works under close supervision.</p>	<p>Field work preparation Routine sampling activities Routine operation and maintenance of equipment Assist with surveying Well development Well abandonment and site restoration</p>
<p>DRAFTER (P107)</p> <p>Prepares project graphics with or without computer-aided programs.</p>	<p>Prepare project graphics CAD and GIS work Cartography Specialized drawings and maps</p>

PERSONNEL CLASSIFICATION (P-CODES)	TASKS AND RESPONSIBILITIES
PST TRUST FUND CLAIM SPECIALIST (P108) Performs only PST Trust Fund related accounting services.	Accounting Verification of invoices PST Trust Fund reimbursement request preparation
ADMINISTRATIVE ASSISTANT (P109) Performs project related office and accounting services.	Accounting Verification of invoices (non-PST Trust Fund) Reimbursement request preparation (non-PST Trust Fund) Document formatting and proofing Typing and filing General secretarial
TECHNICAL EXPERT (P110) Provide expert consultancy within their area of specialism on high risk and highly complex projects.	Provide expert consultancy Innovative technology implementation Development of technical solutions Catastrophic release response Risk assessment

Note: Reimbursement of P-Codes will be according to the task(s) performed, not job title of the person performing the task(s).

Maximum Allowable Rates for Equipment Table

These are allowable rates for consultant-owned equipment and supplies when a third party vendor's invoice is not provided. Actual reasonable and customary costs, when accompanied by a vendor's invoice, are reimbursable. The combination of the daily rates or the weekly rate that results in the lesser cost will be used. If equipment is rented, rates must be based comparatively to the most cost effective rental timeframe for the expected duration of use for the equipment. Rental fees must not exceed a competitive rate.

EQUIPMENT	DAILY RATE	WEEKLY RATE
Photo-ionization Detector (PID)	\$95.00	\$285.00
Water Level Meter	\$25.00	\$75.00
Oil/Water Interface Probe	\$55.00	\$165.00
Water Quality Meter (pH, conductivity, temperature)	\$40.00	\$120.00
Dissolved Oxygen Meter	\$50.00	\$150.00
Peristaltic Pump (includes decontamination materials)	\$30.00	\$90.00
Hand Auger	\$25.00	\$75.00
Survey Equipment (theodolite and rod)	\$50.00	\$150.00
Sampling Supplies	\$25.00	\$100.00
Traffic Safety Equipment	\$15.00	\$60.00
Bailer (each)	(unweighted) \$9.00 (weighted) \$11.00	
55-Gallon Drum (each)	\$50.00	
Tubing (<1/2 in vinyl or nylon)	\$0.50/ft	

QUOTE AND BID REQUIREMENTS

Laboratory analytical costs and items listed on the Maximum Allowable Rates for Equipment Table are exempt from the quote and bid requirements.

For any non-certified consultant services or equipment purchases that exceed \$1,000.00 but are less than \$5,000.00, a minimum of two quotes must be submitted on the Quotes for Small Purchases Form to document price competition. Forms should be attached to the associated CP.

A minimum of three valid, written, signed bids must be evaluated by the certified consultant for any non-certified consultant services or equipment purchases that exceed \$5,000.00. Each contractor's bid must be submitted on the appropriate Bid Form to ensure all bids can be evaluated and compared using the same criteria. A bid must be signed by both the contractor and the certified consultant certifying the integrity of the submitted bid to be considered valid. The Bid Form should be attached to the associated CP.

Special Note: Under the Architect and Engineering Contract, any construction activities must follow requirements specified in UAC R33 Purchasing Procurement Rules.

A valid bid is one in which the contractor or vendor provides a price quote for the services solicited and acknowledges that they are appropriately licensed and can perform the task and/or supply the materials in the time frame requested. In most cases it may be necessary to request bids from more than three contractors in order to receive three valid bids. Notification from a contractor that they cannot or do not wish to provide a bid does not constitute receipt of a valid bid.

Please note, a single invoice of greater than \$5,000.00 shall not be split into multiple invoices totaling less than \$5,000.00 each to avoid the bidding process requirements. Additionally, the requirements of the bidding process cannot be circumvented by requesting an amount of \$5,000.00 or less, with an invoice greater than \$5,000.00.

EMERGENCY ABATEMENT ACTIVITIES

Emergency abatement activities include situations that pose immediate threats of impact to human health, safety, and/or the environment, as concurred with by the DERR. Emergency abatement activities do not require CPs and are exempt from the quote and bid requirements, however, **approval is required by the DERR prior to implementation.**

Maximum Allowable Rates for Laboratory Services Table

These are allowable rates for NELAP certified laboratory services including costs for containers, packaging, shipping, and disposal. Analytical tests will be reimbursed at invoiced rate not to exceed the maximum allowable rate.

MATRIX	ANALYSIS	METHOD	MAXIMUM ALLOWABLE RATE
Soil	MTBE, BTEXN, TPH-GRO, TPH-DRO, TPH-GRO/DRO fractionation, TRPH, O&G	EPA 8015 ¹	\$50.00
		EPA 8015 ¹ , 8260 ^{2,3}	\$85.00
		EPA 8260 ^{2,3}	\$45.00
		EPA 8260 (full VOCs) ^{2,3}	\$100.00
		EPA 8270 (fractionation)	\$135.00
		EPA 1664 ¹	\$65.00
Water	MTBE, BTEXN, TPH-GRO, TPH-DRO, TPH-GRO/DRO fractionation, TRPH, O&G	EPA 8015 ¹	\$50.00
		EPA 8015 ¹ , 8260 ³	\$85.00
		EPA 8260 ³	\$45.00
		EPA 8260 (full VOCs) ³	\$100.00
		EPA 8270 (fractionation)	\$135.00
		EPA 1664 ¹	\$65.00

¹ Addition of Silica Gel Treatment increases maximum allowable rate by \$5.00

² Use of alternate Method 5035 does not increase maximum allowable rate

³ Addition of TPH-GRO fractionation does not increase maximum allowable rate

ALLOWABLE COSTS

Allowable costs are those costs and activities which arise directly from the performance of eligible work deemed to be reasonable, customary, and legitimate. Allowable costs include, but are not limited to, the following:

- Abatement of immediate threats of impact to public health, safety, and/or the environment
- Identification and testing of affected or potentially affected drinking water sources
- Temporary provision of water supply utilized specifically for domestic consumption
- Temporary relocation of utility structures when necessary to the performance of corrective action
- The fair market value of use to property outside of the facility boundaries where such access is necessary for the performance of corrective action
- Supplies and materials directly associated with the project
 - Prices must be verified by the original vendor's receipt or invoice
- Postage for commercial services where a receipt is provided
- Mileage at the rates allowed by the IRS for cars and light trucks
 - For heavier vehicles with special equipment, such as drill rigs, actual expenses can be used (i.e., storage, fuel, insurance, licensing, repairs and maintenance, rental fees)
 - Documentation for these expenses is required
- Lodging at actual cost unless clearly excessive under the circumstances
 - Accommodations where no receipt is available will be reimbursed at the rate of \$20.00 per day
 - Documentation of employee name and dates is required
- Meals at a per diem rate will be reimbursed in accordance with R25-7 reimbursement for meals
 - Documentation of employee name, dates, and **times** (departure and return) must be included when requesting reimbursement
 - Meal receipts are not required
- Costs as approved the DERR on a case-by-case basis if they are determined to reduce the impact or potential impact of contamination on the public health or the environment, be cost effective, and technologically feasible

Special Note: Owner/operator(s) may be eligible to receive reimbursement if the work constitutes physical and economic benefit to site activities (i.e., operating equipment, bailing wells, restoration, etc.). Reimbursement will be made for the number of hours approved in the work plan, at the appropriate labor rate category.

INELIGIBLE COSTS

Ineligible costs are those costs and activities which are not deemed to be reasonable, customary, and legitimate; and are therefore ineligible for reimbursement under the DERR UST Program. Ineligible costs include, but are not limited to, the following:

- Environmental site assessments or audits performed as a requirement of financial transactions, potential property purchases, title transfers, or when not specifically approved by the DERR
- Costs of upgrading or improving a site beyond those expenses incurred as a necessary part of investigation or remedial action
- Demolition or repair of buildings, unless it can be demonstrated that it would be more cost effective than performing a cleanup without the demolition or repair
- Expenses related to UST system compliance and/or upgrades
- Expenses related to UST system closure, with the exception of product removal from a tank associated with an emergency abatement action
- Costs associated with goods or services provided by out-of-state suppliers when similar goods or services are available locally
- Activities not conducted in compliance with applicable state and federal environmental laws and regulations, including those relating to the transport and disposal of waste
- Time, materials, and laboratory costs for samples collected by non-certified personnel
- Re-usable equipment and small hand or power tools (i.e., tape measures, tool boxes, buckets, saw blades, and Level D personal protective equipment)
- Travel to and from the state and lodging and meals along the Wasatch Front for contractors not based in Utah
 - If the required contractor skill or knowledge is not available in the state, prior approval is required from the DERR
- Rental vehicles except at the established IRS mileage rate
- Legal fees and expenses
- Costs of compiling and storing records
- Loss of business revenues (business interruption)
- Airfare
- Company's general overhead operating costs

Special Note: Owner/operator(s) will not be eligible to receive reimbursement for work that does not constitutes a physical or economic benefit to site activities (i.e., administrative and project management work, oversight, report review, meetings, travel, etc.).

AMENDMENTS

A CP amendment must be approved by the DERR if a scope of work is expected to incur additional expenses. A CP amendment must clearly identify the applicable line item(s) cost. Amendments must include descriptions of and justification for the additional activities. If additional time is necessary to complete field activities, the certified consultant must use their judgment to complete the task as expeditiously and cost effectively as possible. The certified consultant should be in communication with the DERR during field activities to discuss additional work scope.

Circumstances that may justify an amendment include, but are not limited to:

- Drilling conditions of extreme difficulty
- Developing or purging wells with extremely slow recharge rates
- Additional field exploration activities to characterize a site
- Implementation of innovative assessment and remediation technologies
- Design, installation and/or maintenance of a complex remediation system
- Additional corrective action to meet cleanup standards
- Additional action based on field or laboratory data

APPENDIX A
Guideline Tasks

1. INITIAL SUBSURFACE INVESTIGATION

1.1. Boring and/or Well Installation

- a. Work Plan Preparation: Not to Exceed (NTE) \$2,000.00
- b. Field Preparation Activities: Applicable for P104
 - 2 hours (includes travel time to pick up sampling supplies)
- c. Oversight Activities: Applicable for P103
- d. Sampling Activities: Applicable for P104/P106*
**P106 is applicable for any additional personnel approved for sampling activities*
- e. Report Preparation (see Subsurface Investigation Report Template, Appendix B):

P-CODE	TASK DESCRIPTION
P101	Final document review
P102	Report review
P103	Report preparation (preliminary data review, analysis)
P104	Data compilation (tables, charts, graphs)
P107	Map preparation
P109	Document formatting and proofing

Hour(s) per Task NTE approved Work Plan

2. ADDITIONAL SUBSURFACE INVESTIGATION

2.1. Boring and/or Well Installation

- a. Work Plan Preparation: NTE \$1,000.00
- b. Field Preparation Activities: Applicable for P104
 - 2 hours (includes travel time to pick up sampling supplies)
- c. Oversight Activities: Applicable for P103*/P104
 - *P103 is only applicable for significant or critical oversight activities*
- d. Sampling Activities: Applicable for P104/P106*
 - *P106 is applicable for any additional personnel approved for sampling activities*
- e. Report Preparation (see Subsurface Investigation Report Template, Appendix B):

P-CODE	TASK DESCRIPTION
P101	Final document review
P102	Report review
P103	Report preparation (preliminary data review, analysis)
P104	Data compilation (tables, charts, graphs)
P107	Map preparation
P109	Document formatting and proofing

Hour(s) per Task NTE approved Work Plan

3. INITIAL VAPOR SAMPLING

3.1. Subsurface, Subslab, Indoor, and/or Outdoor (ambient) Monitoring Point Installation

- a. Work Plan Preparation: NTE \$1,000.00
- b. Field Preparation Activities: Applicable for P104
 - 2 hours (includes travel time to pick up and/or ship sampling supplies)
- c. Oversight Activities: Applicable for P103*/P104
**P103 is only applicable for significant or critical oversight activities*

d. Sampling Activities:

SAMPLING METHOD	P-CODE	HOUR(s)
Canister Sampler (SUMMA®)	P104	1 hr/location
Vapor Sampler (Tedlar®)	P104	0.25 hr/location
Flux Chamber	P104	0.25 hr/location*

The following activities are included in the total hours listed in the table above:

- Equipment set-up
- Field measurement collection
- Sample collection*
- Sample preparation and documentation for laboratory

** Total hours **do not** include time for duration of test*

e. Report Preparation:

P-CODE	HOUR(s)	TASK DESCRIPTION
P101	3	Final document review
P102	3	Report review
P103	12 (≤4 locations) +0.5/location (>4 locations)	Report preparation (preliminary data review, analysis)
P104	6 (≤4 locations) +0.5/location (>4 locations)	Data compilation (tables, charts, graphs)
P107	2	Map preparation
P109	1	Document formatting and proofing

4. ADDITIONAL VAPOR SAMPLING

4.1. Subsurface, Subslab, Indoor, and/or Outdoor (ambient) Monitoring Point Installation

- a. Work Plan Preparation: NTE \$650.00
- b. Field Preparation Activities: Applicable for P106
 - 2 hours (includes travel time to pick up and/or ship sampling supplies)
- c. Oversight Activities: Applicable for P104
- d. Sampling Activities:

SAMPLING METHOD	P-CODE	HOUR(s)
Canister Sampler (SUMMA®)	P104	1 hr/location
Vapor Sampler (Tedlar®)	P106	0.25 hr/location
Flux Chamber	P106	0.25 hr/location*

The following activities are included in the total hours listed in the table above:

- Equipment set-up
- Field measurement collection
- Sample collection*
- Sample preparation and documentation for laboratory

* Total hours **do not** include time for duration of test

- e. Report Preparation:

P-CODE	HOUR(s)	TASK DESCRIPTION
P101	2	Final document review
P102*	2	Report review (technical sampling report)
P103	8 (≤4 locations) +0.25/location (>4 locations)	Report preparation (preliminary data review, analysis)
P104	4 (≤4 locations) +0.25/location (>4 locations)	Data compilation (tables, charts, graphs)
P107	2	Map preparation
P109	1	Document formatting and proofing

*P102 is only applicable for review of a sampling report indicating significant site conditions (i.e., progression to corrective action, MNA, NFA)

5. CORRECTIVE ACTION PLAN (CAP)

5.1. CAP Preparation and Implementation

- a. Work Plan Preparation: NTE \$1,500.00
 - Includes CAP meeting (if applicable)
- b. Public Notification Activities: Applicable for P103
 - Includes preparation and distribution
 - *Refer to DERR Corrective Action Plan Guides, dated 2017*
- c. Field Preparation Activities: Applicable for P104
 - 2 hours (includes travel time to pick up sampling supplies)
- d. Subcontractor Oversight Activities: Applicable for P103*/P104
 - *P103 is only applicable for significant or critical oversight activities*
- e. Sampling Activities: Applicable for P104/P106*
 - *P106 is applicable for any additional personnel approved for sampling activities*
- f. Report Preparation:

P-CODE	TASK DESCRIPTION
P101	Final document review
P102	Report review
P103	Report preparation (preliminary data review, analysis)
P104	Data compilation (tables, charts, graphs) (see Data Tables, Appendix C)
P107	Map preparation
P109	Document formatting and proofing

Hour(s) per Task NTE approved Work Plan

6. INITIAL GROUNDWATER SAMPLING

6.1. Purge (via bailer or pump)

- a. Work Plan Preparation: NTE \$1,000.00
- b. Field Preparation Activities: Applicable for P104
 - 2 hours (includes travel time to pick up sampling supplies)
- c. Sampling Activities: Applicable for P104/P106*

**P106 is applicable for any additional personnel approved for sampling activities*

TOTAL WELL DEPTH	1 INCH WELL	2 INCH WELL	4 INCH WELL
≤30 ft	0.5 hr/well	1 hr/well	1.5 hr/well
>30 ft and ≤60 ft	1 hr/well	1.5 hr/well	2 hr/well
>60 ft	1.5 hr/well	2 hr/well	2.5 hr/well

The following activities are included in the total hours listed in the table above*:

- Equipment set-up and decontamination
- Field measurement collection (see Field Data Information Sheet, Appendix C)
- Groundwater monitoring well purging and recovery
- Sample collection
- Sample preparation and documentation for laboratory

Total hours **do not include time for development of wells*

- d. Report Preparation:

P-CODE	HOUR(s)	TASK DESCRIPTION
P101	2	Final document review
P102	2	Report review
P103	12 (≤10 wells) +0.5/well (>10 wells)	Report preparation (preliminary data review, analysis)
P104	6 (≤10 wells) +0.5/well (>10 wells)	Data compilation (tables, charts, graphs) (see Data Tables, Appendix C)
P107	2	Map preparation
P109	1	Document formatting and proofing

7. ADDITIONAL GROUNDWATER SAMPLING

7.1. Purge (via bailer or pump)

- e. Work Plan Preparation: NTE \$650.00
- f. Field Preparation Activities: Applicable for P104
 - 2 hours (includes travel time to pick up sampling supplies)
- g. Sampling Activities: Applicable for P104/P106*

**P106 is applicable for any additional personnel approved for sampling activities*

TOTAL WELL DEPTH	1 INCH WELL	2 INCH WELL	4 INCH WELL
≤30 ft	0.5 hr/well	1 hr/well	1.5 hr/well
>30 ft and ≤60 ft	1 hr/well	1.5 hr/well	2 hr/well
>60 ft	1.5 hr/well	2 hr/well	2.5 hr/well

The following activities are included in the total hours listed in the table above:

- Equipment set-up and decontamination
- Field measurement collection (see Field Data Information Sheet, Appendix C)
- Groundwater monitoring well purging and recovery
- Sample collection
- Sample preparation and documentation for laboratory

- d. Report Preparation:

P-CODE	HOUR(s)	TASK DESCRIPTION
P101	1	Final document review
<i>P102*</i>	2	Report review (technical sampling report)
P103	8 (≤10 wells) +0.25/well (>10 wells)	Report preparation (preliminary data review, analysis)
P104	4 (≤10 wells) +0.25/well (>10 wells)	Data compilation (tables, charts, graphs) (see Data Tables, Appendix C)
P107	2	Map preparation
P109	1	Document formatting and proofing

**P102 is only applicable for review of a sampling report indicating significant site conditions (i.e., progression to corrective action, MNA, NFA)*

7.2. No Purge (prior DERR approval required)

- a. Work Plan Preparation: NTE \$650.00
- b. Field Preparation Activities: Applicable for P106
 - 2 hours (includes travel time to pick up sampling supplies)
- c. Sampling Activities: Applicable for P106

TOTAL WELL DEPTH	1 INCH WELL	2 INCH WELL	4 INCH WELL
≤30 ft	0.25 hr/well	0.25 hr/well	0.5 hr/well
>30 ft and ≤60 ft	0.5 hr/well	0.5 hr/well	0.75 hr/well
>60 ft	0.75 hr/well	0.75 hr/well	1 hr/well

The following activities are included in the total hours listed in the table above:

- Equipment set-up and decontamination
- Field measurement collection
- Sample collection
- Sample preparation and documentation for laboratory

- d. Report Preparation:

P-CODE	HOUR(s)	TASK DESCRIPTION
P101	1	Report review
P103	6 (≤10 wells) +0.25/well (>10 wells)	Report preparation (preliminary data review, analysis)
P104	3 (≤10 wells) +0.25/well (>10 wells)	Data compilation (tables, charts, graphs) (see Data Tables, Appendix C)
P107	2	Map preparation
P109	1	Document formatting and proofing

7.3. Gauge Only

- a. Work Plan Preparation: NTE \$650.00
- b. Field Preparation Activities: Applicable for P106
 - 0.5 hour
- c. Sampling Activities: Applicable for P106

TOTAL WELL DEPTH	1 INCH WELL	2 INCH WELL	4 INCH WELL
≤30 ft	0.25 hr/well	0.25 hr/well	0.25 hr/well
>30 ft and ≤60 ft	0.25 hr/well	0.25 hr/well	0.25 hr/well
>60 ft	0.5 hr/well	0.5 hr/well	0.5 hr/well

The following activities are included in the total hours listed in the table above:

- Equipment set-up and decontamination
- Field measurement collection

- d. Report Preparation:

P-CODE	HOUR(s)	TASK DESCRIPTION
P101	1	Report review
P103	4 (≤10 wells) +0.25/well (>10 wells)	Report preparation (preliminary data review, analysis)
P104	2 (≤10 wells) +0.25/well (>10 wells)	Data compilation (tables, charts, graphs) (see Data Tables, Appendix C)
P107	2	Map preparation
P109	1	Document formatting and proofing

8. WELL ABANDONMENT AND SITE RESTORATION

8.1. Wells >30 Feet

- a. Work Plan Preparation: NTE \$1,000.00
- b. Field Preparation Activities: Applicable for P104
 - 0.5 hour
- c. Abandonment and Restoration Activities: Applicable for P104/P106*
 - Refer to Utah Division of Water Rights current rules
 - *P106 is applicable for any additional personnel approved for sampling activities*
- d. Report Preparation:

P-CODE	HOUR(s)	TASK DESCRIPTION
P101	1	Final document review
P103	3	Report preparation
P104	1 hr/well	Data compilation (abandonment logs, photos)
P107	2	Map preparation
P109	1	Document formatting and proofing

Additional costs may be proposed in the Work Plan if a remediation system is in place

8.2. Wells ≤30 Feet

- a. Work Plan Preparation: NTE \$650.00
- b. Field Preparation Activities: Applicable for P106
 - 2 hours
- c. Abandonment and Restoration Activities: Applicable for P106

TOTAL WELL DEPTH	1 INCH WELL	2 INCH WELL	4 INCH WELL
≤30 ft	0.75 hr/well	1 hr/well	1.5 hr/well

The following activities are included in the total hours listed in the table above:

- Equipment set-up
- Casing plugging
- Monument removal (when applicable)
- Site restoration

- d. Report Preparation:

P-CODE	HOUR(s)	TASK DESCRIPTION
P101	1	Final document review
P103	2	Report preparation
P104	0.5 hr/well	Data compilation (abandonment logs, photos)
P107	2	Map preparation
P109	1	Document formatting and proofing

Additional costs may be proposed in the Work Plan if a remediation system is in place

NOT TO EXCEED COSTS

ACTIVITY	NOT TO EXCEED COST
Initial Health and Safety Plan	\$400.00
Additional Health and Safety Plan	\$200.00
On-Site Property Access Agreement	\$100.00
High Vacuum Dual Phase Extraction	\$1,000.00
Remediation System O&M Progress Report	\$2,000.00
Initial Environmental Covenant (complex site)	\$2,000.00
Initial Environmental Covenant (simple site)	\$1,000.00
Additional Environmental Covenant	\$650.00
WORK PLAN PREPARATION	
Initial Subsurface Investigation	\$2,000.00
Additional Subsurface Investigation	\$1,000.00
Initial Vapor Sampling	\$1,000.00
Additional Vapor Sampling	\$650.00
Corrective Action Plan	\$1,500.00
Initial Groundwater Sampling	\$1,000.00
Additional Groundwater Sampling	\$650.00
Well Abandonment and Site Restoration (>30 ft)	\$1,000.00
Well Abandonment and Site Restoration (≤30 ft)	\$650.00

APPENDIX B

DERR Access Agreement Template



**ENVIRONMENTAL RESPONSE
& REMEDIATION**

GRANT OF ACCESS TO PROPERTY FORM

_____, is the owner (Owner) of record, title holder, or authorized agent for the record owner of certain real property located at _____, Utah (Property). Any change in Owner will require a new Grant of Access to Property Form to be filed with the Division of Environmental Response and Remediation (DERR).

The Owner hereby grants access to certified consultant, contractors, and authorized representatives of the DERR, to the Property for the following purposes:

1. To conduct investigative activities to determine the extent and degree of petroleum contamination originating from an underground and/or above ground storage tank system. This may include temporary or permanent monitoring well installation for conducting soil, groundwater, and/or vapor sampling.
2. To implement corrective action activities to address petroleum contamination which may exist on the Property.
3. Any other actions related to investigation or cleanup of petroleum contamination on the Property.

It is anticipated that the work described herein will be performed between normal business hours of operation. If it becomes necessary to perform the work at other times, sufficient advance notice (24 to 72 hours) shall be provided to the Owner prior to entering the Property.

This grant of access shall remain in effect until investigation, corrective action, and any other related activities are complete on the Property.

By granting access, the Owner makes no admission of liability or responsibility for any petroleum contamination which may be found on the Property.

Owner's Printed Name: _____

Owner's Signature: _____

Date: _____

APPENDIX C

Subsurface Investigation Report Template

A Subsurface Investigation Report submitted to the DERR shall include, at a minimum, the following elements as applicable to the scope of work conducted at the facility:

INTRODUCTION

1. Provide facility history including tank information (number, size, and contents of all current and former USTs), date release reported to the DERR, estimated quantity of release, cause of release, and status of any other releases at the facility
2. Provide current facility name and document use (indicate if facility is potential redevelopment property)
3. Describe regional geology and hydrogeology

RECEPTOR SURVEY AND SITE DATA

1. Identify potential receptors as defined by the UST Facility Cleanup Standards (i.e., buildings, property boundaries, utilities, water wells, and surface water)
2. Document current property use and adjacent land use (residential, commercial, agricultural, industrial, other)
3. Identify any UST site(s) within a 500 ft radius of the subject site and provide applicable Facility ID(s) and Release ID(s)
4. Describe site-specific geology and hydrogeology

SOIL DATA

1. Describe primary soil types and field screening results
2. Describe field screening procedure
3. Describe soil sample collection and preservation methodology

MONITORING WELL DATA

1. Describe monitoring well installation methodology
2. Describe well development procedure, volume of development water generated, and waste water disposal handling
3. Provide justification for monitoring well locations

GROUNDWATER DATA

1. Describe groundwater sampling methodology and sampling date(s)
2. Describe purging methodology and provide an explanation for any incomplete purging
3. Provide measured thickness of any free product encountered and note color of product

CONCLUSIONS AND RECOMMENDATIONS

1. Discuss results of investigation and methodology used
2. Describe aquifer characteristics including hydraulic gradient, conductivity, seepage velocity, etc.
3. Discuss results of fate and transport modeling and identify all assumptions (present input parameters in tabular format)
4. Discuss site conceptual model exposure pathway evaluation results, and data requirements for any selected pathway evaluation
5. Include recommendations for further action (additional investigation, remediation, monitoring, site closure, etc.)

TABLES

1. List the following general information in tabular form: UST facility name, facility ID, release ID, address, and phone number; owner/operator's name, address, and phone number; property owner's name, address, and phone number; certified consultant' name, certification number, company address, and phone number; certified sampler's name, certification number, company address, and phone number; driller's name, certification number, company address, and phone number; NELAP certified laboratory name, certification number, address, and phone number
2. Well Construction Data Table (see template in Appendix D)
3. Soil Analytical Data Table (see template in Appendix D)
4. Groundwater Analytical and Elevation Data Table (see template in Appendix D)
5. Site Conceptual Model Data Table (see template in Appendix D)

FIGURES

1. Topographic Map - provide a copy of the relevant portion of a USGS 7.5 min topographic map showing site location and locations of all water wells and surface water within 1,000 feet of the site (include bar scale and North arrow)
2. Site Map - include the following information:
 - Location of property boundaries
 - Streets or highways (indicate names and numbers)
 - Location of on-site and adjacent buildings
 - Location of all existing and former USTs and associated lines, fill ports, and dispensers
 - Underground and aboveground utilities (sewer, water, gas, phone, electric, storm drains, etc.)
 - Location of any potential receptors
 - All sampling locations (current and historical)
 - Any excavated area (indicate length, width, and depth)
 - Bar scale
 - North arrow
3. Isoconcentration Maps - depict estimated extent of contamination in soil and groundwater, using separate maps for each medium and constituent of concern
4. Groundwater Elevation Map - indicate water level elevations for each monitoring well, showing groundwater flow direction

Note: Exercise great care using computer contouring programs (e.g., Surfer®); any unusual potentiometric features depicted on the map (e.g., sinks, mounds, abnormally steep gradients, etc.) must be explained
5. Geologic Cross Sections - include two cross sections showing lithology, hydrology, and stratigraphy of the site, and estimated extent of contamination in soil and groundwater. Cross sections should intersect at a 90-degree angle. One cross section should include source area and go down gradient through as many wells as practicable with the highest concentrations

APPENDICES

1. Field Data Information Sheet (see template in Appendix D)
2. Laboratory Analytical Report
3. Soil Boring/Field Screening Logs
4. Well Completion Logs and Well Development Logs
5. Aquifer Evaluation Summary Forms Data, Graphs, Equations
6. Disposal Manifests
7. Fate and Transport Modeling Input, Output, and Assumptions
8. Copy of Grant of Access to Property Form (see template in Appendix B)

APPENDIX D

Data Table Templates

Facility Name: _____

Facility ID: _____

Release ID: _____



WELL CONSTRUCTION DATA TABLE									
Well ID	Date Installed	Casing Diameter (in)	Screened Interval (ft bgs)	Measured Well Depth (ft bgs)	Top of Casing Elevation* (ft)	Depth to Water (ft bgs)	Groundwater Elevation** (ft)	Northing***	Easting***

- KEY:**
- in = inches
 - ft bgs = feet below ground surface
 - * = reference point for elevation measurements, assumed elevation: ft
 - ** = if free product is present in a well, groundwater elevation is calculated by: [Top of Casing Elevation - Depth to Water] + [free product thickness x 0.8581]
 - *** = location must be sufficiently accurate and precise to allow easy recovery of lost or damaged wells

Facility Name: _____

Facility ID: _____

Release ID: _____



SOIL ANALYTICAL DATA TABLE (mg/kg)											
Sample ID	Sample Date	Collection Depth (ft bgs)	Benzene	Toluene	Ethyl-benzene	Total Xylenes	Napht.	MTBE	TPH-GRO	TPH-DRO	O&G/TRPH*
			Analytical Method ()							()	()
Initial Screening Levels			0.2	9	5	142	51	0.3	150	500	1000
Tier 1 Screening Levels			0.9	25	23	142	51	0.3	1500	5000	10000

KEY:
 mg/kg = milligrams per kilogram
 ft bgs = feet below ground surface
 Napht. = naphthalene
 MTBE = methyl tert-butyl ether
 TPH-GRO = total petroleum hydrocarbons-gasoline range organics
 TPH-DRO = total petroleum hydrocarbons-diesel range organics
 O&G = oil & grease
 TRPH = total recoverable petroleum hydrocarbons
 * = indicate which constituent analyzed
BOLD value exceeds Initial Screening Level
BOLD value exceeds Tier 1 Screening Level

Facility Name: _____

Facility ID: _____

Release ID: _____



SITE CONCEPTUAL MODEL DATA TABLE					
Media	Exposure Pathway	Pathway Selected for Evaluation? (Yes or No)		Explanation for Selection of Non-Selection	Data Requirements (IF pathway selected)
		Yes	No		
Air	Inhalation	Yes	No		
	Explosion Hazard	Yes	No		
Surface Water	Ingestion	Yes	No		
	Dermal Contact	Yes	No		
	Inhalation	Yes	No		
Groundwater	Ingestion	Yes	No		
	Dermal Contact	Yes	No		
	Inhalation	Yes	No		
Surface Soil	Ingestion	Yes	No		
	Dermal Contact	Yes	No		
	Inhalation	Yes	No		
	Leaching to Groundwater	Yes	No		
Subsurface Soil	Ingestion	Yes	No		
	Dermal Contact	Yes	No		
	Inhalation	Yes	No		
	Leaching to Groundwater	Yes	No		

APPENDIX E

Quote and Bid Forms



**ENVIRONMENTAL RESPONSE
& REMEDIATION**

QUOTES FOR SMALL PURCHASES FORM

For purchases costing more than \$1,000 with a maximum total of \$5,000, a certified consultant shall obtain a minimum of two competitive quotes that include minimum specifications and shall purchase the item(s) from the responsible vendor offering the lowest quote that meets the specifications. Price quotes can be obtained by email, fax, letter, or phone, and must be from a representative of an established, viable vendor. Email and other written quotes should be attached to the form in accordance with Administrative Services, Purchasing and General Services Rule R33-5-107.

CONSULTING FIRM:	PURCHASER'S NAME:
-------------------------	--------------------------

	VENDOR #1	VENDOR #2	VENDOR #3
VENDOR NAME:			
SALES PERSON:			
E-MAIL ADDRESS:			
PHONE NUMBER:			
ADDRESS:			
DATE OF QUOTE:			

QUANTITY	UNIT	DESCRIPTION OF PRODUCT(S)/SERVICE(S) TO BE PURCHASED	VENDOR #1 QUOTE*	VENDOR #2 QUOTE*	VENDOR #3 QUOTE*
(To update TOTAL, right click in TOTAL column and select Update Field)			TOTAL:	\$ 0.00	\$ 0.00

**If delivery cost is not included in provided quote, add delivery cost as additional purchase item, as applicable.*

COMMENTS:			
SIGNATURE:		DATE:	



**ENVIRONMENTAL RESPONSE
& REMEDIATION**

GENERAL BID FORM

For purchases costing more than \$5,000, a certified consultant shall obtain and evaluate a minimum of three valid, written, signed bids. This Bid Form should be attached to the associated Cost Proposal for DERR approval. Bids shall include all labor, materials, tipping fees, equipment, and cleanup as applicable.

CONSULTING FIRM:	CONTACT PERSON:
SITE NAME:	SITE LOCATION:

CONTRACTING COMPANY:	CONTACT PERSON:
ADDRESS:	DATE OF BID:
PHONE NUMBER:	EXPIRATION DATE OF BID:

SCOPE OF WORK:

DESCRIPTION	QUANTITY	UNIT	COST PER UNIT	UNIT TOTAL	
(To update TOTAL, right click in TOTAL column and select Update Field)				TOTAL COST ESTIMATE:	\$ 0.00

The Contractor hereby certifies the truthfulness and accuracy of the bid information provided. Failure to sign this form will result in the rejection of this bid.

Submitted by (Contracting Company): _____

Submitted by (Signature): _____

Submitted on (Date): _____

The Utah certified consultant hereby certifies the integrity of the submitted bid and that the information provided on this form is complete. Failure to sign this form will result in the rejection of this bid.

Reviewed by (Consultant Signature): _____

Reviewed on (Date): _____



**ENVIRONMENTAL RESPONSE
& REMEDIATION**

EXCAVATION BID FORM

For purchases costing more than \$5,000, a certified consultant shall obtain and evaluate a minimum of three valid, written, signed bids. This Bid Form should be attached to the associated Cost Proposal for DERR approval. Bids shall include all labor, materials, tipping fees, equipment, and cleanup as applicable.

CONSULTING FIRM:	CONTACT PERSON:
SITE NAME:	SITE LOCATION:

CONTRACTING COMPANY:	CONTACT PERSON:
ADDRESS:	DATE OF BID:
PHONE NUMBER:	EXPIRATION DATE OF BID:

SCOPE OF WORK:

DESCRIPTION	QUANTITY	UNIT	COST PER UNIT	UNIT TOTAL
Mobilization and demobilization		job		
Private utility location		job		
Site access control (fencing)		ft		
Traffic control (barricades and signage)		job		
Remove, transport, and dispose of site debris		yd ³		
Excavate, transport, and dispose of unimpacted soil		yd ³		
Excavate, transport, and dispose of impacted soil		yd ³		
Excavate and stockpile soil for re-use as backfill		yd ³		
Excavate soil for landfarming		yd ³		
Place and compact stockpiled soil		yd ³		
Deliver, place, and compact appropriate fill (includes geotextile fabric)		yd ³		
Deliver, place, and compact road base to grade		yd ³		
Resurface excavation area		ft ²		

(To update TOTAL, right click in TOTAL column and select Update Field)	TOTAL COST ESTIMATE:			\$ 0.00

The Contractor hereby certifies the truthfulness and accuracy of the bid information provided. Failure to sign this form will result in the rejection of this bid.

Submitted by (Contracting Company): _____
Submitted by (Signature): _____
Submitted on (Date): _____

The Utah certified consultant hereby certifies the integrity of the submitted bid and that the information provided on this form is complete. Failure to sign this form will result in the rejection of this bid.

Reviewed by (Consultant Signature): _____
Reviewed on (Date): _____



**ENVIRONMENTAL RESPONSE
& REMEDIATION**

DRILLING BID FORM

For purchases costing more than \$5,000, a certified consultant shall obtain and evaluate a minimum of three valid, written, signed bids. This Bid Form should be attached to the associated Cost Proposal for DERR approval. Bids shall include all labor, materials, tipping fees, equipment, and cleanup as applicable.

CONSULTING FIRM:	CONTACT PERSON:
SITE NAME:	SITE LOCATION:

CONTRACTING COMPANY:	CONTACT PERSON:
ADDRESS:	DATE OF BID:
PHONE NUMBER:	EXPIRATION DATE OF BID:

SCOPE OF WORK:

DRILL RIG TYPE:	
DRILL CONFIGURATION:	

DESCRIPTION	QUANTITY	UNIT	COST PER UNIT	UNIT TOTAL
Mobilization and demobilization		job		
Private utility location		job		
Site access control (fencing)		ft		
Traffic control (barricades and signage)		job		
Daylighting (hand auger)		each		
Daylighting (water knife, vac truck)		each		
Drums		each		
Boring installation, sampling, and abandonment		each		
2-in well installation, sampling, and completion		each		
4-in well installation, sampling, and completion		each		
Well development		each		
Decontamination		each		

(To update TOTAL, right click in TOTAL column and select Update Field)	TOTAL COST ESTIMATE:			\$ 0.00

The Contractor hereby certifies the truthfulness and accuracy of the bid information provided. Failure to sign this form will result in the rejection of this bid.

Submitted by (Contracting Company): _____

Submitted by (Signature): _____

Submitted on (Date): _____

The Utah certified consultant hereby certifies the integrity of the submitted bid and that the information provided on this form is complete. Failure to sign this form will result in the rejection of this bid.

Reviewed by (Consultant Signature): _____

Reviewed on (Date): _____