Underground Storage Tank Petroleum Product Cleanup Fund

Massachusetts General Laws Chapter 21J

503 Code of Massachusetts Regulations 2.00

Appendix 3-Reimbursement Fee Schedule and Guidelines

Effective Date: September 1, 2015

With Revsions:
November 19, 2015
April 25, 2016

APPENDIX 3 – REIMBURSEMENT FEE SCHEDULE
(SEPTEMBER 1, 2015 VERSION)

SUMMARY OF REVISIONS
POST SEPTEMBER 1, 2015

Revision A: Changes approved by the UST Board on November 19, 2015 and April 25, 2016 – all changes with an effective date 9/1/15: All Task 2 status reports task maximum reduced to 5% above the 2007 prior task maximum rather than the 7% increase originally approved; task maximum for VPH analysis increased to $105.00; revisions to allowable EFR events (see Workbook section)

503 CODE OF MASSACHUSETTS REGULATIONS 2.00
APPENDIX 3
UNDERGROUND STORAGE TANK PETROLEUM PRODUCT CLEANUP FUND
REIMBURSEMENT FEE SCHEDULE POLICY
MASSACHUSETTS GENERAL LAWS CHAPTER 21J
TABLE OF CONTENTS

SECTION **PAGE**

1.0 PURPOSE AND SCOPE 1
2.0 APPLICATION FOR REIMBURSEMENT 1
3.0 STANDARD MATERIALS LIST 2
4.0 MASSACHUSETTS REIMBURSEMENT FEE SCHEDULE TASK CODE GUIDANCE 3
4.1 TASK CODE 1 – LABOR CATEGORIES 3
4.2 TASK CODE 2 – REPORTS 10
4.3 TASK CODE 3 – HEALTH AND SAFETY PLAN 12
4.4 TASK CODE 4 – PRE-FIELD ACTIVITIES 16
4.5 TASK CODE 5 – OBTAIN PROPERTY ACCESS 16
4.6 TASK CODE 6 - EXCAVATED SOILS MANAGEMENT, HANDLING, REPORTING, SHORING, BIOREMEDIATION, AND OXIDANT/SURFACTANT INJECTION 17
4.7 TASK CODE 7 – PORTABLE GAS CHROMATOGRAPH 21
4.8 TASK CODE 8 – DRILLING, SAMPLING AND GROUTING OF SOIL BORINGS AND WELLS 22
4.9 TASK CODE 9 – DRILLING ACTIVITIES 22
4.10 TASK CODE 10 - WELL DEVELOPMENT 25
4.11 TASK CODE 11 – GROUNDWATER GAUGING/BAILING & SAMPLING 26
4.12 TASK CODE 12 – AQUIFER PUMP TEST 26
4.13 TASK CODE 13 – RISING OR FALLING HEAD (SLUG) TESTS 27
4.14 TASK CODE 14 – SOIL VAPOR EXTRACTION (SVE)/AIR SPARGING (AS) PILOT TESTING 28
4.15 TASK CODE 15 – REMEDIATION FEASIBILITY STUDIES 28
4.16 TASK CODE 16 – LEASE/PURCHASE ANALYSIS AND BID PREPARATION 30
4.17 TASK CODE 17 – REMEDIATION PERMITTING AND REPORTING 31
4.18 TASK CODE 18 – TRENCHING AND INSTALLATION OF UNDERGROUND PIPING AND EQUIPMENT, AREA/ENCLOSURE FOR SVE, AS, AND/OR GROUNDWATER EXTRACTION SYSTEM 32
4.19 TASK CODE 20 –UTILITIES INSTALLATION FOR REMEDIATION SYSTEMS ONLY 33
4.20 TASK CODE 22 PURCHASE AND INSTALLATION OF REMEDIATION SYSTEMS 39
4.21 TASK CODE 23 - REMEDIATION SYSTEMS OPERATION AND MAINTENANCE 40
4.22 TASK CODE 24 –ROAD BOX REMOVAL, REPAIR OR REPLACEMENT 42
4.23 TASK CODE 25 – WELL ABANDONMENT 42
4.24 TASK CODE 26 – MASSDEP REQUIRED MEETINGS AND TRAVEL 43
4.25 TASK CODE 27 – LABORATORY ANALYSES 40

..... 39

503 CODE OF MASSACHUSETTS REGULATIONS 2.00
APPENDIX 3
UNDERGROUND STORAGE TANK PETROLEUM PRODUCT CLEANUP FUND
REIMBURSEMENT FEE SCHEDULE POLICY
MASSACHUSETTS GENERAL LAWS CHAPTER 21J
TABLE OF CONTENTS (continued)

SECTION **PAGE**

4.26 TASK CODE 28 – EQUIPMENT RENTAL 45
4.27 TASK CODE 29 – MISCELLANEOUS MATERIALS 47
4.28 TASK CODE 30 – STATE SALES TAX (..... 47
4.29 TASK CODE 31 – FREIGHT 47
4.30 TASK CODE 32 – FIRMS AND EQUIPMENT NOT APPROVED .....

5.0 ACRONYMS 48

6.0 LIST OF REFERENCES 51

TABLES

Massachusetts 21J Reimbursement Fee Schedule

1.0 PURPOSE AND SCOPE

The regulations in 503 CMR 2.00 govern the administration of reimbursement of the Underground Storage Tank Petroleum Cleanup Fund Administrative Review Board created by Chapter 524 of the Massachusetts Acts of 1990, which constitutes Chapter 21J of the Massachusetts General Laws (M.G.L. C. 21J).

The purpose of Appendix 3 to the regulations is to:

a) Establish maximum, not to exceed reimbursement fees to eligible claimants for allowable costs, expenses and obligations incurred by taking response actions, meeting claims of third parties, or otherwise incurring expenses, as a result of releases of petroleum products from UST systems;
b) Define the specific response actions for which reimbursements will be allowed; and
c) Provide an Application for Reimbursement Form to allow eligible claimants to be reimbursed for allowable costs, expenses, and obligations.

All response actions for which reimbursement will be requested, where conducted as a result of releases of petroleum products from UST systems, must be conducted in accordance with applicable Federal, State, and local statutes and regulations, nationally recognized codes and standard industry practices, e.g., ASTM, ASCE, API, AEG, AIPG, etc.

Time and Materials (T & M) are to be reimbursed at the rates provided in the Reimbursement Fee Schedule.

The Reimbursement Fee Schedule (the Fee Schedule) is designed to provide a list of Tasks which must be selected in order to comply with the provisions of the Massachusetts Contingency Plan (MCP) found at 310 CMR 40.0000, and other applicable Massachusetts Department of Protection (MassDEP) regulations and policies. The implementation of the Tasks must also comply with other applicable Federal, State or Local statutes and regulations and recognized national codes. The Tasks are undertaken as a result of releases of petroleum products from underground storage tank (UST) systems. Therefore, complementary Tasks will need to be selected for implementation when conducting MCP related response, assessment, remedial, response action outcome, etc. activities.

2.0 APPLICATION FOR REIMBURSEMENT

All Claimants seeking reimbursement shall fully complete the Application for Reimbursement (using form Appendix 4 or via e-UST) with the Listing of Costs, Expenses and Obligations. . The Claimant must provide documentation for all tasks to be reimbursed with each Application for Reimbursement. Documentation which must be included, but not limited to, and attached to the Listing of Costs, Expenses and Obligations Form is as follows:

A. Consultant Invoices:
B. Consultant Time and Expense Sheets;
C. Field Notes
D. Material Vendor Invoices;

E. Subcontractor Invoices;
F. Copies of all correspondence to MassDEP;
G. Proof of Payment, i.e., copy of canceled check (front and back), Contractor/Payee Certification on contractor's/payee's letterhead, a credit card receipt, or other documentation acceptable to the Board. For utility bills, a copy of the utility bill showing a credit for the previous month(s) service(s) will be accepted in lieu of a copy of cancelled check (front and back) or contractor/payee certification. The utility bill must indicate that actual date the payment was credited.

3.0 STANDARD MATERIALS LIST

Supplies may be considered usual and customary when used during activities performed that are not directly incorporated into any work of a temporary or permanent nature. It is understood that several items have multiple end uses and, therefore, in specific situations, the supplies may be classified as materials of construction or consumable supplies, depending on the actual use. Under these circumstances the charges associated with the supplies shall not be eligible.

The following list is considered to be representative of usual and customary supplies:

Abrasives	Cups	Helmets	Rags	Wheel-cutting
Air Fare	Dies	Hoods	Rain Gear	Wire
Badges	Dippers	Keys	Rakes	
Bags	Disinfectants	Lanterns	Wastes-wipes	
Bags-water	Drills (< 3 hp)	Lantern Bulbs	Rope	
Bands-elastic	Electrode holders	Lashing	Rollers	
Barrels-trash	Extractors-screw	Levels	Rubber Boots	
Batteries	Extension cords	Line/chalk	Safety Goggles	
Belting	Fasteners	Masks, Dust	Salt Tablets & Dispenser	
Brads/nails	Faucets	Mandrels	Sandpaper	
Brooms	Files	Measurers	Saws (< 3 hp)	
Brushes	Filters	Medical Supplies	Shields, face/side	
Buckets	Filters-respirator	Mirrors	Soap	
Bulbs	Fire extinguishers	Mops	Soapstone	
Cables	Flashlights	Needles, Acetylene	Stencils	
Camcorder	Flints	Nuts	Supplies-washroom	
Camera	Flux-braising	Office Supplies	Tacks	
Cans	Funnels	Oils-cutting	Tags	
Chain	Fuses	Packing	Tapes	
Chalk	Globes, Lantern	Pails	Taps, Bolt	
Chamois	Glove liner-wool	Paper	Taxi Fare	
Chisels	Gloves cotton-work	Parking	Thimbles-wire,rope	
Clamps	Glue	Paste	Tips-cutting & welding	
Clips	Goggles	Patterns	Towels	
Cloth	Graphite	Pencils	Twine	
Connectors	Grinding wheels	Postage	Wash powder	
Cotter Pins	Hacksaws	Pulleys	Water cooler	
Crayons	Handles	Punches	Wedges	

4.0 MASSACHUSETTS REIMBURSEMENT FEE SCHEDULE TASK CODE GUIDANCE

The following information is provided to clarify eligible tasks and associated backup requirements as defined in the Reimbursement Fee Schedule and should be carefully reviewed to properly apply to the allowable rates and fees. Where available, references have been made to the MassDEP regulations, standard methods or published MassDEP policies. Future policies will be incorporated into this text as they become available. The Board shall reimburse costs or activities completed in accordance with these references or accepted industry or engineering practices.

As of the effective date of this revision, three competitive bids may be obtained for work and/or materials covered by Task Codes 9, 10, 12, 13, 14, 18, 20, 22, 23, 24, 25, 27, and 28 in place of the unit price(s). In addition, Task Codes 6.3, 6.4, 6.5 require three quotes, while task code 22.4, **requires** a minimum of three bids responses be submitted in order to claim reimbursement.

MARKUPS: Eligible costs on subcontractor or material invoices must be supported with time and materials backup (date of service, 21J equivalent labor category, labor hours and labor rates, itemized equipment and materials breakdown). Reimbursement rates specified as "At Cost" or "Actual Cost" will be reimbursed at the direct cost to the Claimant as supported by invoices and proof of payment. Claimants are not eligible to apply mark-ups for reimbursement. However, markup of vendor and lower-tier subcontractor invoices by the Claimant's prime contractor/consultant will be reimbursed at 8 percent, only if the prime contractor/consultant provides proof of payment for the lower-tier vendor/subcontractor costs being claimed. The prime consultant/contractor must have paid the lower-tier vendor/subcontract prior to the submission of the Reimbursement Application (i.e. the proof of payment must pre-date the claim Reimbursement Application date). Equipment and materials invoiced based on the consultant/contractor's published rate sheet (e.g. materials pulled from a general inventory) are assumed to already include mark-ups and will be reimbursed at the published rates subject to the task maximums. Claimed costs for markup will be included with and applied with other applicable task code costs for the purposes of determining task maximums. A lower-tier vendor or subcontractor shall not be an affiliate of the prime consultant/contractor. For the purposes of 503 CMR 2.00, an affiliate is an individual or entity that is related to the prime consultant/contractor within the scope of Internal Revenue Code § 267(b) or §707(b)(1).

4.1 TASK CODE 1 – LABOR CATEGORIES (TASK CODES 1.1 THROUGH 1.17)

The labor rates presented in Task Codes 1.1 through 1.17 represent the maximum reimbursable hourly rates for each labor category based on education, experience, and certifications (See below for detailed descriptions of labor categories and qualifications). Experience is defined as experience directly related to the services being performed. For example, a person who worked for an environmental consulting firm for 3 years in an office/clerical position and 1 year as a Field Technician conducting sampling or related field work, would only be considered to have 1 year of related experience.

The labor rates serve as guidelines for determining reasonableness and cost-effectiveness of labor rates being charged as part of Task Codes 2 through 26 of the Fee Schedule, as well as

labor rates charged by subcontractors under the Task Codes that are bid. Labor categories claimed for specific tasks in the Fee Schedule should reasonably reflect the technical and experiential requirements for the task at hand. For example, the majority of field tasks such as groundwater sampling are typically conducted by technicians and scientists. The more senior labor categories task codes are typically involved with coordination, data review, and reporting of such field work. Work performed by an LSP or PE involved with conducting a field activity may be reimbursed within the Task maximum applicable to Task Codes 2 through 26 of the Fee Schedule, provided there is no duplication of services provided. The Claimant must provide adequate documentation to support reimbursable charges, including time sheets, field records, etc. for all activities, in addition to the normal reimbursement claim documentation (proof of payment, Notice of Responsibility, etc.).

The labor rates presented in Task Codes 1.1 through 1.17 also apply to tasks that are not specifically defined in the Fee Schedule. For example, Task Codes 1.1 through 1.17 may be appropriately claimed immediately after a Two-Hour Release Condition notification (i.e. emergency response activities) as defined at 310 CMR 40.0311. Claimants are advised to provide documentation and justification that demonstrates, to the satisfaction of the Board, that activities performed were "emergency" in nature and could not be performed under the existing task codes.

Costs directly related to the response action(s) incurred by a qualified employee of the Owner or Operator will be reimbursed at not more than the hourly rates listed in Task 1 for the labor category applicable to the level of effort provided by the employee. The hourly rate to be reimbursed for the employee of the Owner or Operator shall be calculated as the product of 1.33 times the employee's hourly rate. Detailed time sheets verifying the work completed and employee pay records must accompany all claims for reimbursement for an employee of the Owner or Operator.

Unless otherwise noted, the term "degree" refers to an Associates, Bachelors, Masters, or Doctorate degree in a related field from an accredited college or university.

Task Code 1.1 - Principal

- Owner, partner, associate, and/or corporate officer of the organization
- Corporate responsibility.
- Ensure all organizational personnel comply with applicable federal, state or local statutes, regulations or policies.

Task Code 1.2 - Licensed Site Professional/Other Registered Professional

- Directs professional staff.
- Performs final review of project documents.
- Provides expert testimony.
- Evaluates and approves new technological innovations.
- Certifies MassDEP documents and renders professional opinion.

Normal Qualifications and Experience:

- Degree in engineering, geology, hydrogeology or related science and 8 years of related experience in investigation and remediation of contamination in soil and ground water.
- Professional registration by the Massachusetts Board of Registration of Hazardous Waste Cleanup Professionals. Professional registration when applicable (e.g. P.E., C.P.G., C.I.H., etc.).

Task Code 1.3 - Project Manager

- Responsible for making budgetary, project management and supervisory decisions.
- Plans, conducts and supervises project assignments or discrete tasks within larger projects.
- Estimates and schedules work to meet completion dates.
- Develops scope of work and project or task-level budget; writes and reviews reports.
- Responsible for project management and execution of project assignments, subcontractor agreements, project quality assurance, adherence to contract terms, staff assignment and team composition, cost, schedule and project deliverables.
- Typically there is only one project manager for each scope of work

Normal Qualifications and Experience:

Ph.D. degree or equivalent, with 5 years of related experience
M.S. degree or equivalent, with 5 years of related experience
B.A./B.S. degree with 5 years of related experience

Technical Experience: Technical experience in waste site investigations, cleanup activities or other discipline directly related to the requirements of this contract. Minimum of 4 years experience managing environmental projects and personnel.

Typical Labor Classification under Federal Labor Standards Act (FLSA): Exempt employee.

Examples for Eligible Project Management Charges (technical related):

- Office coordination/scheduling of field event (i.e. sampling; drilling; soil excavation; system O&M; system repairs; system installation; DEP audits; EFR activities, etc.) (project management time would be claimed towards the corresponding field task code)
- Telephone communication with field personnel during field event (claimed towards corresponding field task code. Documentation of communication in field notes or complete description on invoice required.)
- Quality Control/Quality Assurance review of field notes/documentation from an eligible field event (charges claimed against corresponding field event task code up to a maximum of 1 hour per field event up to the task maximum for the field event; and should occur within 30 days of completion of the field event.)
- Technical review of required MCP reports (charges claimed against corresponding MCP report Task Code 2.1 through 2.22)

Examples for Ineligible Project Management Charges (project administration related):

- Office related activities associated with billing; invoicing; preparation/copying of supporting documentation for 21J reimbursement claim or responding to RFI/preliminary adjustments;
- Communication with Client; preparation of internal reports; preparation of proposals for additional work with Client; and
- Reviewing prior environmental reports and/or meeting/corresponding with prior environmental consultants in order to get "up to speed" when assuming activities as a "new" environmental consultant /LSP of record;

Task Code 1.4 - Senior Scientist/Engineer/Geologist

- Responsible for making scientific and supervisory decisions; provide scientific or engineering specialties.
- Plans, conducts and supervises project assignments or discrete tasks within larger projects.
- Estimates and schedules work to meet completion dates.
- Writes and reviews reports.
- Responsible for execution of project assignments, subcontractor agreements, project quality assurance, adherence to contract terms, staff assignment and team composition, cost, schedule and project deliverables.

Normal Qualifications and Experience:

Ph.D. degree or equivalent, with 5 years of related experience
M.S. degree or equivalent, with 5 years of related experience
B.A./B.S. degree with 5 years of related experience

Technical Experience: Technical experience in waste site investigations, cleanup activities or other discipline directly related to the requirements of this contract.

Typical Labor Classification Under Federal Labor Standards Act (FLSA): Exempt employee.

Task Code 1.5 - Staff Scientist/Engineer/Geologist/Hydrogeologist II

- Implements projects under direction of senior staff; analyzing and interpreting data; identifying need for modifications to work plans based on available data; supervising other technical personnel during on-site assessment or remediation activities.
- Under the supervision of more senior personnel, carries out assignments associated with project.
- Applies training within professional discipline to assigned projects and translates technical guidance and training received into usable products and reports.
- Collects and evaluates data, conducts field work, and prepares, or provides input for, reports.
- Provides resident site engineering and construction inspection activities at the site of remediation actions.

Normal Qualifications and Experience:

M.S. degree or equivalent with 1 year experience in discipline
B.A./B.S. degree with 2 years experience in discipline

Typical Labor Classification Under Federal Labor Standards Act (FLSA): Exempt employee.

Task Code 1.6 - Scientist/Engineer/Geologist/Hydrogeologist I

- Supports staff, senior staff scientists and engineers, and project managers in data and information collection and field assessment and remediation activities; performs work under the close supervision of more senior staff.
- Entry Level for professional classifications; works under supervision of more senior personnel.
- Gathers and correlates basic data and performs routine tasks and other duties as assigned.
- Makes recommendations on work assignments and variables that effects field operations.
- Assists field operations as directed, including manual tasks such as equipment setup and maintenance.

Normal Qualifications and Experience:

B.A./B.S. degree with 0 to 2 years of related experience
Associates degree with 2 years of related experience

Typical Labor Classification Under Federal Labor Standards Act (FLSA): Exempt employee.

Task Code 1.7 - Permits/Health & Safety Coordinator

- Permit preparation and coordination. Waste and laboratory coordination.
- Prepares site specific Health and Safety Plan.
- Oversees Health and Safety Plan activities on-site when necessary.

Normal Qualifications and Experience:

2 years related experience
B.A./B.S. degree in related discipline may be substituted for experience requirement

Typical Labor Classification Under Federal Labor Standards Act (FLSA): Exempt employee, may qualify as non-exempt.

Task Code 1.8 - Construction Foreman

- Responsible for supervision and overall direction of moderate size routine field service operations.
- Has successfully been involved with at least 5 system installations as on-site supervisor and has assisted in cost estimates for time and materials.
- Develops staff assignments.

- Executes work requests.
- Schedules projects.
- Ensures compliance of field service operations within company procedures and safety standards.

Typical Labor Classification Under Federal Labor Standards Act (FLSA): Non-exempt employee, but may qualify as exempt.

Task Code 1.9 - Senior Technician/Technician III

- Performs non-routine and complex tasks in addition to routine assignments.
- Assists in the planning of field work and works at the direction of the team or project leader.
- Gathers and correlates basic data and performs routine analyses.
- May also perform experiments or tests that may require nonstandard procedures and complex instrumentation.
- May construct components, subassemblies, or prototype models.
- May troubleshoot malfunctioning equipment and make simple repairs as authorized by team or project leader.
- May supervise lower level staff

Normal Qualifications and Experience:

4 years of related experience

Typical Labor Classification Under Federal Labor Standards Act (FLSA): Non-exempt employee.

Task Code 1.10 - Technician II

- Performs non-routine and complex tasks in addition to routine assignments
- Assists in the planning of field work and works at the direction of the team or project leader.
- Gathers and correlates basic data and performs routine analyses.
- May also perform experiments or tests that may require nonstandard procedures and complex instrumentation.
- May construct components, subassemblies, or prototype models.
- May troubleshoot malfunctioning equipment and make simple repairs as authorized by team or project leader.
- May supervise lower level staff

Normal Qualifications and Experience:

2 years of related experience

Typical Labor Classification Under Federal Labor Standards Act (FLSA): Non-exempt employee.

Task Code 1.11 - Technician I

- Performs simple, routine tasks under supervision.
- Performs routine maintenance and may install, setup or operate field equipment of moderate complexity.
- Provides a wide variety of support functions during field operations.

Normal Qualifications and Experience:

0 to 2 years of related experience

Typical Labor Classification Under Federal Labor Standards Act (FLSA): Non-exempt employee.

Task Code 1.12 - CADD Operator

- Includes CADD equipment and time.
- Generates new drawings.
- Works from provided plans and maps.
- Coordinates scales.
- Interfaces with all levels of technical and professional staff.
- Interpolates groundwater contour maps.

Normal Qualifications and Experience:

2 years of related experience with Computer Assisted Design operations. Requires a Technical Drawing Certificate or AutoCAD related cartography studies, B.A./B.S. degree in GIS, Cartography or related discipline may be substituted for the experience requirement

Typical Labor Classification Under Federal Labor Standards Act (FLSA): Non-exempt employee, but may qualify as exempt.

Task Code 1.13 - Draftsperson

- Makes and files copies of maps.
- Organizes and files drawings.
- Purchases department technical supplies.

Normal Qualifications and Experience:

Requires a Technical Drawing Certificate or a HS diploma.

Typical Labor Classification Under Federal Labor Standards Act (FLSA): Non-exempt employee, but may qualify as exempt.

Task Code 1.14 - Administrative Support

- Operates computer for word processing, spreadsheets, and statistical typing, correspondence, report generation, creation of boring logs, hydrographs, etc.
- Word processing.
- Spreadsheets.

- Report generation.

Normal Qualifications and Experience:
None

Typical Labor Classification Under Federal Labor Standards Act (FLSA): Non-exempt employee.

Task Code 1.15 – Heavy Equipment Operator

- Licensed in the Commonwealth of Massachusetts to operate specific heavy equipment (e.g. backhoe, excavator, loader, boom truck, etc.).

Typical Labor Classification Under Federal Labor Standards Act (FLSA): Non-exempt employee.

Task Code 1.16 – Truck Driver

- Licensed to operate multi-axle dump truck and/or tractor for equipment mobilization/demobilization.

Typical Labor Classification Under Federal Labor Standards Act (FLSA): Non-exempt employee.

Task Code 1.17 - Laborer

- General laborer to support heavy equipment operation only.

Typical Labor Classification Under Federal Labor Standards Act (FLSA): Non-exempt employee.

4.2 TASK CODE 2 - REPORTS (TASK CODES 2.1 THROUGH 2.22)

These task codes are for report research and writing, data tabulation, plan preparation, file review fees, and public involvement and are not for labor, materials, or expenses associated with the performance of field activities (e.g. drilling, sampling, operation and maintenance, laboratory analyses, etc.).

Reports included in this section include MCP required reports such as the Phase Reports (one through five and their associated status reports), Remedy Operation Reports, Immediate Response Action (IRA) and Release Abatement Measure (RAM) Reports (and their associated status and completion reports), Method 1 through 3 Risk Assessments, Permanent and Temporary Solution Statement Reports, Remedial Monitoring Forms, Activity and Use Limitations (AULs), Numerical Ranking Score sheets (initial and rescoring), and permit extensions and modifications or other reports required by the MCP and/or MassDEP. Charges that should be associated with these reports include data evaluation including usability (i.e. Representativeness Evaluations and Data Usability Assessments (REDUA)), research and preparation of the actual report inclusive of all tables, figures, and plans. Copies of the completed reports should be available in its entirety on the MassDEP's file viewer website. The

reports should include:

- Text, tables, graphs, lab analysis, and any additional attachments to the report;
- Electronic receipt verification from the MassDEP;
- If reports are not completed at the time of request, the consultant should indicate the expected completion date.

Task Code 2.1.2 - File Review Fees

Fee charges incurred during a file, record, or plan review are reimbursed under this task code. A copy of the receipt from the state agency or local municipality shall be provided as backup to support the charges. Labor to perform the file, record, or plan review is not eligible under this task code and shall be claimed under the task code of the applicable report.

Task Code 2.3 - Phase II Report

Risk Characterizations performed in conjunction with the Phase II Report are not reimbursed under this task code. Risk Characterization charges will be reimbursed under task codes 2.7.1, 2.7.2, and 2.7.3.

Task Codes 2.3.1, 2.4.1, 2.5.4 - Phase II, III, IV Addendums

These task codes are not limited to a report titled Addendum and may be used when:

- A second RTN is issued to a facility where a previous release has been determined to be eligible and response actions for that release have been completed through Phase II, III or IV of the MCP but are continuing

A site where a permanent RAO or Solution has been submitted to MassDEP which is reopened due to change in MCP cleanup standards.

These task codes are not to be used to correct deficiencies in a previously submitted Phase II III or IV report.

Task Code 2.5.1 - Phase IV Status Reports

Per the MCP, it is required that this status Report be submitted every six months. Therefore, only 2 status reports per year shall be reimbursed, unless required on a more frequent basis by MassDEP or the MCP (e.g. Imminent Hazard). The claimant shall attach a copy of the MassDEP letter requiring the more frequent status reports, as backup for the additional incurred costs, to the submittal to the Board with the Application for Reimbursement. Remedial Monitoring Reports associated with this report will be reimbursed under task code 2.22 at the required MCP frequency.

Task Codes 2.6.1, 2.6.1.1, and 2.6.3 - Phase V, ROS, and Temporary Solution Status Reports

Per the MCP, it is required that these status Reports be submitted at a minimum of every six months. Therefore, only 2 status reports per year shall be reimbursed, unless required on a more frequent basis by MassDEP. The claimant shall attach a copy of the MassDEP letter requiring the more frequent status reports, as backup for the additional incurred costs, to the

submittal to the Board with the Application for Reimbursement. Remedial Monitoring Reports associated with these reports will be reimbursed under task code 2.22 at the required MCP frequency.

An active remedial system is where an remediation system is operating on a regular basis during the reporting period. For remediation involving injections or extractions, if an injection /extraction event occurs during the reporting period, it is considered to be an active remediation system. A system operated solely to perform O&M is not considered to be an active system.

Task Codes 2.7.1, 2.7.2 and 2.7.3 - Risk Characterization

Risk Characterizations shall be submitted solely in conjunction with either a Phase II Report or a Permanent and Temporary Solution Statement and will be reimbursed as task codes 2.7.1, 2.7.2, or 2.7.3. Method 3 Risk Characterizations performed in response to indoor air sampling (in accordance with MassDEP's EPH/VPH Guidance Document) will be reimbursed as task code 2.14, Imminent Hazard Evaluation, per sampling event

Task Code 2.7.4 - Feasibility of Permanent Solutions

Feasibility of Permanent Solutions (310 CMR 40.0860) and Feasibility of Restoration of Background (310 CMR 40.1020) performed in conjunction with a Phase III Report or aPermanent Solution Statement will be reimbursed as task code 2.7.4.

Task Code 2.7.5 – Micro-scale/Macro scale NAPL Evaluation

Up to two (2) micro/macro scale NAPL evaluations (310 CMR 40.1003(7)) are reimbursable per eligible release.

Task Code 2.8 - Permanent and Temporary Solution Statements

Up to two permanent solution Permanent Statements (310 CMR 40.1000) may be reimbursed provided that the second Permanent Solution is an upgrade in Classification (e.g. from a Permanent Solution with Conditions to a Permanent Solution without Conditions.

Task Code 2.10 – Tier I Permit

These task codes shall be utilized solely for sites ranked as Tier I under the MCP and not where there have been changes to the Tier II Permit under the MCP.

Task Code 2.11 and 2.11.1 – Tier II Permit Modification and Tier II Permit Extension
These task codes shall be utilized for sites ranked as Tier II disposal sites under the MCP.

Task Codes 2.12.2 and 2.13.2 - RAM and IRA Status Reports
Per the MCP, it is required that RAM and IRA Status Reports be submitted within 120 days of their respective plans and at six month intervals thereafter until a completion statement is filed. Therefore, only 2 status reports per year shall be reimbursed, unless required on a more frequent basis by MassDEP. The claimant shall attach a copy of the MassDEP letter requiring the more frequent status reports, as backup for the additional incurred costs, to the submittal to the Board with the Application for Reimbursement. Remedial Monitoring Reports associated with these reports will be reimbursed under task code 2.22 at the required MCP frequency.

Task Code 2.16 - Activity and Use Limitations
This task code does not include professional land survey. Surveying activity performed in response to Activity and Use Limitations (310 CMR 40.1000) will be reimbursed as task codes 9.7 and/or 9.8.

Task Code 2.19 - Public Involvement
Documentation to support public involvement activity is required. Letters to notify Public officials and others of the availability of the report shall be claimed under the report task code, unless the letters are required as part of a PIP.

One of the following items is required:

- A copy of the document (e.g. letter) used to provide notification or information;
- A copy of the legal notice with receipt (including RTN #, Job #, etc.). If the copy of the legal notice and receipt is included in a report, it should be specified in the Appendix 4 separately with the report and page number indicated;
- Employee timesheets describing work performed to support duties not associated with a written document; or
- Phone logs or other supporting documentation delineating and/or explaining the duties performed to support employee office time may be supplied in lieu of descriptions of work performed on employee timesheets.

Task Code 2.21 - Prepare Monitoring Well & Boring Logs
This task code is for the labor to complete typed monitoring well reports and/or boring logs associated with the installation of borings and monitoring wells. Documentation to support the use of this task code must consist of typed monitoring well reports and/or boring logs or reference the previously submitted report the log is included in. This task code may only be used once per boring. Monitoring well reports and/or boring logs prepared by the driller are included in task codes 9.3.1.1 and 9.3.1.3 and are excluded from this task code.

Task Code 2.22 - Prepare Remedial Monitoring Report Form
This task code is for the labor to complete and submit MassDEP's RMR form (310 CMR 40.0027) as required for all sites undergoing Active Operation and Maintenance inclusive of

Active Remedial Systems and Active Remedial Monitoring Programs (e.g. remedial additives, monitored natural attenuation, etc.) at the frequency, monthly or in conjunction with the status reports, required by the MCP and/or MassDEP.

The task maximum will apply to the initial Remedial Monitoring Report. Subsequent Remedial Monitoring Reports prepared by the same consultant will be reimbursed to 90% of the Task Maximum.

4.3 TASK CODE 3 – HEALTH AND SAFETY PLAN (TASK CODES 3.1 THROUGH 3.7.2)

The following task codes shall be used when developing health and safety plans and updates and when using protective and confined space entry equipment.

Task Code 3.1 - Health & Safety Plan

The Health & Safety Plan (H&S Plan) (29 CFR 1910.12 and any other applicable OSHA regulation) shall cover all activities performed at a petroleum contaminated site (e.g., sampling, excavation, and remediation of petroleum contaminated soil and groundwater). Only one initial H&S Plan is allowed per site; subsequent plans are considered updates and are reimbursed as task code 3.2 - H&S Plan Update. A site visit necessary for plan completion is to be completed under other sub-tasks.

The Health & Safety Plan shall include the following:

- organizational structure for site activities
- brief site history
- tasks to be performed
- hazard analysis for each task to be completed
- employee assignments
- personal protection equipment
- medical surveillance
- frequencies and types of air monitoring
- description of site control methods
- decontamination methods
- emergency response plan
- emergency phone numbers
- site plan
- hospital route

Task Code 3.2 - Health & Safety Plan Update (H&S Plan Update)

A H&S Plan Update should be completed regularly (at a minimum of every two years) to ensure it is current with regard to applicable emergency information or when there has been a change in the scope of work requiring the performance of activities not previously conducted (e.g. drilling or excavation activities). There are no limitations on the number of H&S Plan updates which can be filed for reimbursement; however, reimbursement for the update requires that the update meet the same guidelines as specified for the H&S plan and that the new activities being covered by this update be clearly delineated. This task code may not be used when there has

been a change in ownership of the site or claimant. This task code may be used when there is a new consultant that is required to prepare a H&S Plan.

Task Codes 3.3 to 3.5 - Level A, B and C Personal Protective Equipment (OSHA 29 CFR, 1919.120)

Personal protective equipment (PPE) are devices worn by workers to protect them against work-related hazards such as liquid or air contaminants, falling materials, and noise. These task codes are used in addition to the task codes used for the activities completed on site. See the following entries for additional information.

Task Code 3.3 - Level A Personal Protection Equipment

Level A PPE is selected when skin, respiratory, and eye protection is required. The following constitutes Level A Equipment:

- Coveralls
- Long underwear
- Gloves, outer chemical-resistant
- Gloves, inner, chemical-resistant
- Boots, chemical-resistant, steel toe and shank
- Hard hat (under suit)
- Disposal protective suit, gloves and boots (depending on suit construction, may be worn over totally-encapsulating suit)

Task Code 3.3.1 - Level A Fully Encapsulated Suit and Self Contained Breathing Apparatus

Level A Suit and Breathing Apparatus PPE is selected when the greatest level of skin, respiratory and eye protection is required. The following constitute Level A full encapsulation and self-contained breathing apparatus (SCBA) Equipment:

- Positive pressure, full face-piece self-contained breathing apparatus (SCBA), or positive pressure supplied air respirator with escape SCBA, approved by the National Institute for Occupational Safety and Health (NIOSH).
- Totally-encapsulating chemical-protective suit.
- Coveralls
- Long underwear
- Gloves, outer, chemical-resistant
- Gloves, inner, chemical-resistant
- Boots, chemical-resistant, steel toe and shank
- Hard hat (under suit)
- Disposable protective suit, gloves and boots (depending on suit construction, may be worn over totally-encapsulating suit)

Task Code 3.4 - Level B Personal Protective Equipment

Level B PPE is selected when the highest level of respiratory protection is necessary but a lesser level of skin protection is needed. The following constitutes Level B Equipment:

- Positive pressure, full-face piece SCBA, or positive pressure supplied air respirator with escape SCBA (NIOSH approved)
- Hooded chemical-resistant clothing (overalls and long-sleeved jacket, coveralls, one or two piece chemical-splash suit, disposable chemical-resistant overalls)
- Coveralls
- Gloves, outer chemical-resistant
- Gloves, inner, chemical-resistant
- Boots, outer, chemical-resistant steel toe and shank
- Boot-covers, outer, chemical-resistant (disposable)
- Hard hat (under suit)
- Face shield

Task Code 3.5 - Level C Personal Protective Equipment

Level C PPE is selected when the concentrations(s) and type(s) of airborne substance(s) is known, can be monitored, and the criteria for using air purifying respirators are met. The following constitute Level C Equipment:

- Full-face or half-mask, air purifying respirators (NIOSH approved)
- Hooded chemical-resistant clothing (overalls, two piece chemical-splash suit, disposable chemical-resistant overalls)
- Coveralls
- Gloves, outer chemical-resistant
- Gloves, inner, chemical-resistant
- Boots, outer, chemical-resistant steel toe and shank
- Boot-covers, outer, chemical-resistant (disposable)
- Hard hat (under suit)
- Escape Mask
- Face shield

Task Code 3.6 - Confined Space Entry Equipment (OSHA 29 CFR 1910.146)

A confined space is a space large enough for a person to enter, has limited means of entry and exit, and is not designed for continuous occupancy. Confined spaces have limited natural ventilation, making it easier for gases or vapors to accumulate. A permit-required confined space poses one or more of the following hazards:

- Potentially hazardous atmosphere
- Potential engulfment of worker
- An internal configuration, such as a tapered floor, which could cause a worker to become trapped
- Any other serious safety or health hazard such as high temperatures or unguarded machinery

Copies of all completed confined space entry permits are required for reimbursement of confined space entry equipment charges.

Task Codes 3.7.1 and 3.7.2 - Air or Soil Gas Monitoring

Air monitoring of petroleum product-derived air contaminants shall be applied to this task code Air monitoring may be conducted on site at any time and areas often screened are man-way/manhole drains, utility trenches, drainage sumps, and indoor air of station buildings or kiosks. Task Code 3.7.1 is used when greater than 6 hours (including travel time) is applied to air monitoring activity; task code 3.7.2 is used when 6.0 hours or less (including travel time) is applied to air monitoring activity. For example, set up and removal of a 24 hr SUMMA canister for indoor air monitoring over two days would use task code 3.7.2 twice as the setup and take down occurred on different days. Items covered under these task codes include:

- Labor to coordinate and conduct air monitoring, field screening, sample collection, and supervision;
- Field preparation and breakdown (including setup and removal of SUMMA canisters if applicable);
- Travel time and vehicle expenses to/from site;
- PID, oxygen/explosion meter;
- Toxic gas monitoring and/or sampling equipment (air pump and calibrator);
- Sample jars/bags, sampling incidentals, color metric sampling equipment; and/or
- Sample preparation, logging, storage, and transportation of samples to laboratory.

4.4 TASK CODE 4 – PRE-FIELD ACTIVITIES (TASK CODES 4.1 THROUGH 4.3)

The following task codes shall be used in order to supervise and coordinate drilling activities, remedial system installation activities, and other substantial subsurface assessment and/or remedial response actions (coordination for routine well gauging/sampling, remedial system operation and maintenance (O&M), EFR, disposal events, etc shall not be allowed).

Task Code 4.1 - Pre-Field Activity Coordination and Implementation

Scheduling of field activities with subcontractors, site owners, and/or personnel conducting field work shall be applied to this task code (this does not include labor to obtain offsite access, see task code 5.1). This also includes phone calls and administrative time if required to generate work orders, etc. Employee timesheets documenting the office work performed shall be provided to support the charges. Phone logs or other supporting documentation delineating and/or explaining the duties performed to support employee office time may be supplied in lieu of employee timesheets. All services claimed must have a date of service on or prior to the actual event. Preparation time for the actual oversight of the event (e.g. ordering sample kits, gathering supplies, loading trucks, etc.) should be claimed under the actual oversight task code.

Task Code 4.2 – Pre-Field Activity Site Visit, Digsafe and Utility Pre-Mark

This task code is for the labor, materials, and equipment associated with a site visit performed before any substantial subsurface assessment or remedial response activity in order to develop/design/inspect a site-specific work plan. This task code also includes activities to obtain subsurface utility clearance shall be performed prior to any subsurface event and include costs associated with the pre-marking of site. Dig Safe charges that are incurred after the subsurface event are not reimbursable.

Documentation should include:

- Phone logs for Dig Safe call-in

- Field notes for pre-marking activity

Two site visits are allowed, up to the task maximum, per field event (a field event is one or more contiguous days of drilling, soil excavation, air monitoring, remedial system installation, etc.). Field notes reflecting the purpose of the site visits are required.

Task Code 4.3 – Post-Field Activity Site Visit
This task code is for the labor, materials, and equipment associated with a site visit performed within 30 days after any substantial subsurface assessment or remedial response activity in order to evaluate the assessment or response activities.

Task Code 4.4 – Utility/ Equipment Survey
This task code is for the labor, materials and equipment (i.e. magnetometer, utility line locator, "Schonstedt" pipe locator etc.) necessary to locate underground utility lines on private property and/or subsurface equipment prior to subsurface assessment/and or remediation activities. One (1) utility/ equipment survey is allowed per owner per facility up to the task maximum.

Supporting documentation consists of field notes, contractor invoices to support the labor equipment charges and identification of the Report submitted to MassDEP *where the utility survey information is contained*.

4.5 TASK CODE 5 – OBTAIN PROPERTY ACCESS (TASK CODE 5.1)

Task Code 5.1 – Obtain Off-Site Property Access
Off site access is required when it is necessary to conduct assessment and/or remedial activities on a property other than the actual site to determine the extent of the release and/or to remediate it. One off-site access agreement is allowed per property and/or scope of work (e.g. installation of off-site monitoring wells, vapor gas points, sub-slab depressurization system, off site indoor air monitoring, etc.). Once an access agreement has been established, communications where coordination is required with the off-site owner to notify them of an associated upcoming event shall be claimed under the task code of the actual event being performed (e.g. scheduling a sample event). Other correspondence` and reports sent to off-site property owners will be reimbursed under task code 2.19, Public Involvement [310 CMR 40.1400].

Items covered under this task code include:
- Labor and materials to prepare and submit an access agreement letter
- Labor to communicate with off-site property owner

Either an access agreement letter or phone logs shall be provided to support the charges. Charges are eligible as long as attempt(s) were made to gain access.

4.6 TASK CODE 6 – EXCAVATED SOILS MANAGEMENT, HANDLING, REPORTING, SHORING, BIOREMEDIATION, AND OXIDANT/SURFACTANT INJECTIONS (TASK CODES 6.1 THROUGH 6.12)

The following task codes shall be used when managing, excavating, handling, and remediating contaminated soils.

Task Codes 6.1.1 and 6.1.2 - Excavated Soil Field Monitoring, Shoring, and Soil Load Out Oversight

These task codes may be used when performing field monitoring of soil excavations, shoring and load out oversight activities. Task Code 6.1.1 is used when greater than 6 hours (including travel time) is applied to these activities; task code 6.1.2 is used when 6.0 hours or less (including travel time) is applied to these activities. Evidence in the form of field notes and/or lab data of samples collected must be provided to document the occurrence of excavated soil field monitoring.

Items covered under these task codes include:

- Coordination and labor to conduct excavated soil field monitoring, sample collection, shoring and soil load-out oversight;
- Field preparation and breakdown;
- Travel time and vehicle expenses to/from site;
- Materials and equipment (inclusive of PID, oxygen/explosion meter, etc.); and
- Sample preparation, logging, storage, and transportation of samples to laboratory.

Task Code 6.1.3 - Soil Excavation, Placement and/or Shoring

This task code is for the labor (e.g. operator, foreman, laborer) required to perform the excavation of petroleum contaminated soils, excavation shoring, and/or placement of backfill. Backfill material costs should be coded under task code 6.6. Equipment should be coded to Section 28 without operator. The equipment, operator and/or laborer costs should be clearly distinguished on the invoice. All consultant charges (subcontractors included) must be supported with backup. Backup for excavation and shoring subcontractor invoices must include equipment rates, equipment hours, labor rates, labor hours, and itemized materials breakdown. Evidence in the form of lab data or field observation notes for soil samples collected from the excavated area must be provided to document excavation to remove soils impacted by petroleum release.

Items covered under this task should include:

- Labor to conduct contaminated soil excavation, shoring, and/or backfill placement;
- Field preparation, mobilization, and breakdown; and
- Travel time to/from site.

Items not covered under this task include:

- Backfill material, see task code 6.6.
- Excavation equipment and vehicles, see Task Code 28.

Task Code 6.2 – Disposal Management

This task code is for labor costs associated with management and coordination of the loading, transportation and disposal of petroleum contaminated media.

Items covered under this task code include:

- Review of laboratory analytical results for contaminated media disposal;
- Coordination with subcontractors for removal and disposal/recycling of contaminated media; and
- Preparation of documentation (Bill of Lading (BOL), Hazardous Waste Manifest, or Material Shipping Record (MSR)).

Charges shall be reimbursed for work performed prior to the date of the latest BOL, Hazardous Waste Manifest or MSR. If it can be sufficiently established that work performed after the date of the latest BOL, waste manifest or MSR is directly related to the management of the BOL, Hazardous Waste Manifest, or MSR pursuant to the MCP, charges shall be allowed.

Task Codes 6.3 to 6.5 - Soil Disposal/Recycling

These task codes shall be used for disposal or recycling of petroleum contaminated soils, as that term is defined under 310 CMR 40.0000 A minimum of three (3) competitive quotes for soil disposal with three (3) competitive corresponding transportation must be received (not just solicited) prior to conducting the work. All quotes must be provided (or converted to) per $/ton prices. Each disposal bid submitted must include two (2) parts: the disposal or tipping bid and the corresponding transportation cost from the Site to the facility. If the required bids are not submitted, the maximum allowed under this task code will be $48 per ton, inclusive of transportation, disposal, taxes, and fees.

All excavated soils shall be managed in accordance with 310 CMR 40.0000. The maximum weight of soil eligible for reimbursement per site shall be 8,000 tons (1 cubic yard equals approximately 1.5 tons of soil), regardless of disposal/recycling method selected. Supporting documentation in the form of copies of the BOL, Hazardous Waste Manifests, and/or weight slips (any one of which constitutes sufficient backup) must be attached to all invoices submitted for soil disposal/hot recycling, cold recycling, or lined landfill.

Items covered under these task codes include:

- Labor, equipment, and materials to transport soil from site to disposal/recycling facility;
- Disposal/recycling costs; and
- Fuel surcharge.

Items not covered under these task codes include:

- Labor, equipment, and materials to load soil from site onto trucks, see task code 6.1.3.;
- State hazardous waste transporters fee;
- Insurance surcharge.

Task Code 6.6 – Backfill/Restoration Materials

This task code is associated with any type of material (e.g. loam, sand, stone, asphalt, etc), as long as it does not constitute landscaping work. Loam is eligible for restoration of excavation activities in areas where loamed areas previously existed. Any restoration beyond original condition is not eligible for reimbursement.

Backfill costs shall not be claimed for the volume of tanks removed and not replaced.

Items covered under this task code include:

- Labor, equipment, and materials to transport backfill to site; and
- Backfill material costs.

Items not covered under this task code include:

- Landscaping expense;
- Trees;
- Shrubs; and
- Signs.

Task Code 6.7 - Bioremediation

This task code is associated with Bioremediation, a process that uses indigenous or cultured microorganisms to return the environment altered by petroleum contaminants to its original condition. Labor, equipment, and materials for gauging and/or sampling of wells not receiving injections are to be reimbursed under Task Code 11, (labor and equipment for travel on the same day as a bioremediation event are to be reimbursed under task code 6.7). The purchase and installation of oxygen filter socks shall be reimbursed under task codes 6.8.1 to 6.8.4 and Oxygen Release Powder shall be reimbursed under task codes 6.9.1. Oxygen cylinders shall be reimbursed under task code 6.10. Note that surfactant agents (e.g. Biosolve) that are applied are not to be considered bioremediation under this task and should instead be performed under task code 6.12, surfactant injection. All consultant charges (subcontractors included) must be supported with backup. Backup for bioremediation subcontractor invoices consists of labor hours, labor rates, and itemized equipment and materials breakdown.

Items covered under this task code include:

- Labor to coordinate, conduct, and oversee bioremediation application event;
- Field preparation and breakdown;
- Travel time and vehicle expenses;
- Labor, equipment, and materials to gauge and/or sample wells receiving injections on the day of injection;
- Materials and equipment; and
- Cost of bacteria, nutrients, water, and other materials/supplies necessary for the bioremediation application.

To determine the maximum cubic yards that will be reimbursed for this task code, the nature and extent of petroleum contamination at the site must be characterized in accordance with 310 CMR 40.0835(4)(f). A site plan delineating the horizontal and vertical extent of petroleum impacted soil and/or groundwater as well as soil test boring logs, and soil and/or groundwater data from within the petroleum impacted area shall be provided as supporting documentation. The depth to the petroleum impacted soil and/or groundwater and its associated thickness shall be indicated on the site plan along with the calculations for the total volume of contaminated soil at the site, in cubic yards. The total calculated volume of petroleum impacted soil is a lifetime maximum for the site. The cubic yard calculation should be based on the total treated area, not just a hot spot that may be targeted for limited remediation.

Task Codes 6.7.1 and 6.7.2 – Bioremediation/Chemical Application Feasibility Bench Scale Evaluation and Report

This task code should be used to conduct a bench scale test to determine the feasibility of using bioremediation or chemical application as a remedial option. A report should be generated with the data accumulated during the test that clearly indicates the feasibility of a bioremediation program as a remedial option. Backup for this task code should include the final report and all supporting documentation.

Items covered under this task code include:

- Labor to coordinate and conduct the bioremediation/chemical oxidation bench scale test;
- Materials and equipment for the test;
- Cost of bacteria, nutrients, water, and other materials/supplies necessary for the bench scale test; and
- Labor to complete the report detailing the test procedures and the results.

Task Codes 6.8.1 to 6.8.3 - Purchase and Installation of Oxygen Filter Socks

This task code shall be used for the purchase and installation of oxygen filter socks on a per foot basis. Labor for the installation of the socks is to be coded to task code 6.8.4.

Task Code 6.9.1 - Purchase of Oxygen Release Powder

This task code shall be used for the purchase of Oxygen Release Powder/Compound on a per pound basis. Labor for the installation of the powder is to be coded to task code 6.11.

Task Codes 6.10 - Purchase/Rental/Lease of Oxygen/Nitrogen Cylinder

This task code shall be used for the purchase/rental of the cylinder. A lease/purchase/rental analysis must be completed per task code 16.1.

Task Code 6.10.1 – Oxygen/Nitrogen

This task code should be used for the purchase of gases associated with task code 6.10.

Task Code 6.11 - Oxidant Injection

This task code shall be used when performing oxidant injection activities. Oxidants and associated amendments are to be reimbursed under task code 6.11.3.

Items covered under this task code include:

- Labor to coordinate, conduct, and oversee oxidant application event;
- Labor to gauge and sample oxidant injection wells and wells used to determine extent of injection;
- Field preparation and breakdown;
- Travel time and vehicle expenses; and
- Materials and equipment.

Task Code 6.12 - Surfactant Injection

This task code shall be used when performing surfactant injection activities. Task Code 6.12.1 is used when greater than 6 hours (including travel time) is applied to the surfactant application event; Task Code 6.12.2 is used when 6 hours or less (including travel time) is applied to the surfactant application event. Surfactants and associated amendments are to be reimbursed under task code 6.12.3. Vacuum removal of the surfactants should be coded to task code 28.18.4.3 Enhanced Fluid Recovery (EFR).

Items covered under this task code include:

- Labor to coordinate, conduct, and oversee surfactant application event;
- Labor to gauge and sample surfactant injection wells and wells used to determine extent of injection;
- Field preparation and breakdown;
- Travel time and vehicle expenses; and
- Materials and equipment;

4.7 TASK CODE 7 – PORTABLE GAS CHROMATOGRAPH (TASK CODES 7.1 THROUGH 7.2)

The following task codes shall be used when performing on-site chemical analysis with a portable gas chromatograph (GC). The portable gas chromatograph is a chemical analysis instrument used to separate chemicals in a complex sample. The analyses are limited to total volatile hydrocarbons or aromatics. All charges must be supported with time and materials backup (dates of service, labor hours, labor rates, itemized equipment and materials breakdown), field notes and GC calibration records.

Task Code 7.1.1, 7.1.2 and 7.1.3 – Portable Gas Chromatograph

These task codes should be used when utilizing a portable GC on site. Task Code 7.1.1 should be used when 6 hours or less (including travel time) is applied to portable GC activities at the site. Task Code 7.1.2 should be used when more than 6 hours (including travel time) is applied to portable GC activities at the site. Task Code 7.1.3 should be utilized when the portable GC is utilized on a weekly basis.

Items covered under this task code include:

- Labor to coordinate and conduct chemical analysis event;
- Field preparation and breakdown;
- Travel time and vehicle expenses;
- Equipment such as syringes, sample jars, regulators, carrier gas, etc.

Items not covered under this task code include:

- Soil collection (See Task Code 6, 9, 18 or 28)
- Ground water collection (See Task Code 11)
- Air collection (See Task Code 3)

Task Code 7.1.4 – Analysis/Sampling Report
This task code should be used to complete the Analysis/Sampling Report for the event that utilized the portable gas chromatograph. Only one report per event will be reimbursed. An event is considered one or more consecutive days of portable gas chromatograph use.

Task Code 7.1.5 to 7.2 – Tedlar Bags and Soil Gas Sensors
These task codes should be used for the listed items when they are used in the analyses completed with the portable gas chromatograph.

4.8 TASK CODE 8 – DRILLING, SAMPLING, AND GROUTING OF BORINGS AND WELLS

Task Codes 8.1 through 8.6.3 are no longer applicable. All tasks previously performed and submitted under Task Code 8 are now to be submitted under Task Code 9 – Drilling Activities.

4.9 TASK CODE 9 – DRILLING ACTIVITIES (TASK CODES 9.1 THROUGH 9.8)

The following task codes shall be used for the installation of all borings and wells (e.g. ground water monitoring, ground water/LNAPL recovery, soil vapor extraction, air sparge, injection wells, soil gas points, etc.) with related oversight, soil sampling, grouting, surveying, and drafting. Boring permits required by local agencies should be coded to task code 17.1.5.

Task Codes 9.1.1 to 9.1.2 – Equipment Mobilization/Demobilization
These task codes are to be used to mobilize and demobilize drilling equipment and drilling personnel to the site. The task codes can be used once for each day of drilling on the site.

Items not covered under this task code include:
- Travel for oversight personnel (See task codes 9.2.1 and 9.2.2)

Task Code 9.1.3 – Overtime
This task code is to be used to cover overtime costs associated with the drill rig and drilling personnel when it is more cost effective to work a longer day than complete another day of drilling. This task code is to be used for onsite time over 8 hours in a day. Backup for this task code should include a job sheet indicating the time the driller arrived at the site and the time the driller left the site.

Items not covered under this task code include:
- Mobilization/Demobilization time (See task codes 9.1.1 and 9.1.2)
- Overtime for oversight personnel (See task codes 9.2.1 and 9.2.2)

Task Code 9.2 – Drilling Oversight
This task code shall be used when performing drilling oversight activities. Task Code 9.2.1 is used when greater than 6 hours (including travel time) is applied to the oversight of the drilling event; Task Code 9.2.2 is used when 6 hours or less (including travel time) is applied to the oversight of the drilling event.

Items covered under this task code include:

- Labor to oversee, field screen and document drilling event;
- Field preparation and breakdown;
- Travel time and vehicle expenses;
- Sample preparation, logging, storage and transportation;
- Field screening equipment; and
- On site coordination.

Task Code 9.3 – Drill Rig and Material

These task codes should be used for the drill rig day rate and materials used to install soil borings, ground water monitoring wells, ground water extraction wells, soil vapor extraction wells, air sparge well, injection well, bedrock wells, soil gas sampling points, etc. Air knifing activities to pre-clear boring locations should be coded to the appropriate equipment task code. Material not specifically included in the fee schedule (e.g. stainless steel screen) should be bid.

Task Code 9.3.1.6 – Half Day Drilling Contingent

This task code should be used if less than four hours of drilling activities occur on site for all drill rigs covered under task code 9.3.1.

Task Code 9.3.3 – Road Box Installation

This task code should be used when a road box is initially installed not in conjunction with drilling activities. Road boxes are considered 18-inches in diameter or less. Replacement of road boxes should be coded to Task Code 24.

Task Code 9.3.3.1 – Road Box Installation

This task code should be used when a road box is initially installed in conjunction with drilling activities. Road boxes are considered 18-inches in diameter or less. Replacement of road boxes should be coded to Task Code 24.

Task Code 9.3.4 – Manhole Installation

This task code should be used when a manhole is initially installed not in conjunction with drilling activities. Manholes are considered greater than 18-inches in diameter. Replacement of manholes should be coded to Task Code 24. Installation of manholes during trenching/remediation installations should be coded to Task Code 18.3/18.4.

Task Code 9.3.4.1 – Manhole Installation

This task code should be used when a manhole is initially installed in conjunction with drilling activities. Manholes are considered greater than 18-inches in diameter. Replacement of manholes should be coded to Task Code 24. Installation of manholes during trenching/remediation installations should be coded to Task Code 18.3/18.4.

Task Code 9.4 – Rock Coring

These task codes should be used for the rock coring and associated materials.

Task Code 9.5 and 9.5.1 – Vibratory/Slide hand-held hammer

These task codes include the cost for all labor, materials and equipment to collect soil, or groundwater samples, or install soil gas points.. Use task codes 9.3.2.1 - 9.3.2.4 for well materials. Travel for this task should be coded under task code 9.1.

Task Code 9.6 – Hand Augering

This task code includes labor and equipment for hand augering for soil sample collection or soil point installation.. Use task codes 9.3.2.1 - 9.3.2.4 for well materials. Travel for this task should be coded under task code 9.1.

Task Codes 9.7.1.1 and 9.7.1.2 - Unlicensed Surveying

These task codes shall be used when performing unlicensed surveying activity. Task Code 9.7.1.1 is used when 6 hours or less (including travel time) is applied to these activities. Task Code 9.7.1.2 is used when greater than 6.0 hours (including travel time) is applied to these activities.

Items covered under this task code include:

- Labor to coordinate and conduct survey event;
- Field preparation and breakdown;
- Mobilization/demobilization, travel time, and vehicle expenses; and
- Survey equipment.

Task Code 9.7.1.3 - Drafting for Unlicensed Survey

This task code shall be used when performing drafting activities associated with any unlicensed surveying event. This drafting is generally associated with site feature base maps (property lines, buildings, monitoring wells, borings, etc). Drafting associated with specific report requirements (water table maps, plume maps, etc.) shall be coded to the specific report in Task Code 2.0.

Task Code 9.7.2.1 and 9.7.2.2 – Professional Survey

These task codes shall be used when performing licensed professional surveying activity. Task Code 9.7.2.1 is used when 6 hours or less (including travel time) is applied to these activities. Task Code 9.7.2.2 is used when greater than 6 hours (including travel time) is applied to these activities. Oversight of subcontracted licensed professional surveyors should be coded to task code 4.1.

Items covered under this task code include:

- Labor to coordinate and conduct survey event;
- Field preparation and breakdown;
- Mobilization/demobilization, travel time, and vehicle expenses; and
- Survey equipment.

Task Code 9.7.2.3 - Drafting for Professional Survey

These task codes shall be used when performing professional licensed drafting activities that correspond to the professional surveying event. A document (usually a figure or drawing) stamped by a Professional Land Surveyor (PSL) and/or license of the PSL who performed the

survey shall be provided to support the charges claimed.

Task Code 9.8 - Professional Utility Survey

This task code shall be used to perform professional utility surveys of above and underground utilities, inverts, reference to the most current industry-accepted datum, and drafting. A PLS stamped drawing shall be provided to support the charges claimed. Oversight of subcontracted utility surveyor activities should be coded to task code 4.1.

Items covered under this task code include:

- Labor to coordinate and conduct survey event;
- Field preparation and breakdown;
- Mobilization/demobilization, travel time, and vehicle expenses; and
- Survey equipment.

Task Code 9.9 – Ground Penetrating Radar Survey & Report

This task code shall be used to perform a ground penetrating radar (GPR) survey to identify unregistered buried underground storage tanks. A separate GPR survey report shall be provided to support charges claimed. Note: GPR survey activities for identification of subsurface utilities should be coded to task code 4.4.

4.10 TASK CODE 10 – WELL DEVELOPMENT (TASK CODES 10.1 THROUGH 10.6)

These task codes shall be used when performing initial well development of newly installed wells, clearing of an obstructed well, and redevelopment of existing wells. This task code can not be used on a regular basis to remove water containing sediment prior to a sampling event. If well development tasks are used on the same day as a drilling event, the field notes must distinguish the well development/oversight activity from the drilling/oversight activity. The field notes and invoices must document labor hours worked to develop wells and must identify which wells were developed. All costs will be applied to the per hour maximums. The hourly rate includes all personnel, equipment and material associated with the task. All charges must be supported with time and materials backup (date of service, labor hours and labor rates, itemized equipment and materials breakdown).

Task Codes 10.1.1 and 10.1.2 – Equipment Mobilization/Demobilization

These task codes shall be used for equipment mobilization/demobilization and all travel costs for the development of all wells. Task Code 10.1.1 should be used when traveling 50 or fewer miles to the site. Task Code 10.1.2 should be used when traveling greater than 50 miles to the site.

Task Codes 10.2 to 10.6 – Well Development

These task codes may be used when performing well development activities for 2-inch through greater than 26-inch wells.

Items covered under this task code include:

- Coordination and labor to perform well development/clearing and oversight;
- Drill rig;

- Well development tools and materials; and
- Steam cleaner.

Items not covered under this task code include:

- Disposal of debris/liquids generated during well development (See task code 28.18.5)

4.11 TASK CODE 11 – GROUNDWATER GAUGING/BAILING AND SAMPLING (TASK CODES 11.1 THROUGH 11.6)

These task codes shall be used when performing groundwater well gauging, bailing, and sampling activities to monitor both on and off-site conditions. Coordination, preparation, materials, and equipment charges shall correspond to actual activity performed (e.g. gauging, bailing, sampling); only travel time and vehicle expenses should be applied to task code 11.1.1. Field notes shall include the identity of the wells sampled in addition to all data gathered from the sampling event. Effluent sampling of POET systems from the tap shall be reimbursed as task code 23.1. Groundwater sampling utilizing a pump in any capacity should be applied to TC 11.1.8. .

Items covered under these task codes include:

- Labor to coordinate and conduct groundwater well gauging, product bailing, and sampling event;
- Labor to install/place/inspect/remove passive skimmers (i.e. adsorbent boom/socks etc.) (Note: Cost of passive skimmer to be coded under Task Code 29)
- Field preparation and breakdown;
- Travel time and vehicle expenses;
- Sampling and gauging equipment;
- Sample jars;
- Sample logging;
- Sample storage;
- Transportation of sample to laboratory;
- Instruments; and
- Decontamination materials.

Task Code 11.2 – Safety Person

This task code should be used when an additional person is required for safety reasons, such as sampling in a road way, active parking lot, or other location/situation addressed in the site health and safety plan. Travel time for the extra person goes to task code 11.1.1, one task maximum per event.

4.12 TASK CODE 12 – AQUIFER PUMP TEST (TASK CODES 12.1 THROUGH 12.1.1.4)

These tasks codes shall be used when performing an aquifer pump test (DEP WSC 310-91). An aquifer pump test is a controlled procedure in which water is withdrawn from a well at a constant rate for a specified period of time. The water level in the well is measured at certain intervals before, during and after pumping and can be performed during 8, 12, 24 or 48-hour pump discharge tests. All charges (subcontractors included) must be supported with time and

materials backup (date of service, labor hours and labor rates, itemized equipment and materials breakdown). Field notes and associated documentation completed after the test shall also be provided to support charges claimed. The pump test results are usually included in other report(s) submitted to MassDEP. In this case, the claimant should indicate what report the documentation is included in.

Items covered under this task code include:

- Coordination and labor to conduct aquifer pump test (gauging of monitoring wells associated with testing is included);
- Field preparation and breakdown;
- Equipment mobilization/demobilization and decontamination;
- Travel and vehicle expenses;
- Equipment set-up and breakdown;
- Site cleanup;
- Materials and equipment; and
- Data evaluation, documentation, and report.

In addition, the following task codes shall be used as appropriate:

- Task Code 7.0, Portable Gas Chromatograph;
- Task Code 17.0, Permitting;
- Task Code 23.5, Carbon Purchase/Disposal;
- Task Code 27.0, Lab Analysis;
- Task Code 28.0, Fluids Disposal and Equipment Rental (i.e. trucks, blowers, pumps, treatment devices, frac tank rental).

4.13 TASK CODE 13 – RISING / FALLING HEAD (SLUG) TEST/LNAPL BAIL DOWN (TASK CODES 13.1.1 THROUGH 13.1.2)

These task codes shall be used when performing a rising/falling head (slug) test per DEP WSC 310-91 or LNAPL transmissivity testing per ASTM E2856. Task Code 13.1.1 is used when 6 hours or less (including travel time) are applied to the testing activity. Task Code 13.1.2 is used when greater than 6.0 hours (including travel time) are applied to the testing activity. The effort, equipment and materials to conduct a product bail-down test, slug test and LNAPL transmissivity test are similar and , therefore, it is also permissible to us this task code when performing a product bail down/recovery test or LNAPL transmissivity test. Field notes and associated documentation completed after the test shall be provided to support charges claimed. The slug test results are usually included in other report(s) submitted to MassDEP. In this case, the claimant should indicate what report the documentation is included in.

Items covered under this task code include:

- Coordination and labor to conduct rising or falling head (slug) test (gauging of monitoring wells associated with testing is included) or transmissivity test requirements per ASTM E2856;
- Field preparation;
- Equipment mobilization/demobilization and decontamination;

- Travel and vehicle expense;
- Equipment set-up and breakdown;
- Site cleanup;
- Materials and equipment (including data logger, if necessary); and
- Data evaluation, documentation, and report.

In addition, the following task codes shall be used as appropriate:

- Task Code 2.7.5, Micro/Macro scale NAPL evaluation
- Task Code 23.5, Carbon Purchase/Disposal;
- Task Code 27.0, Lab Analysis;
- Task Code 28.0, Fluids disposal and equipment rental (i.e. trucks, blowers, pumps, treatment devices, frac tank rental).

4.14 TASK CODE 14 – SOIL VAPOR EXTRACTION (SVE)/AIR SPARGE (AS) PILOT TESTING (TASK CODES 14.1 THROUGH 14.1.4)

These task codes are used when performing Soil Vapor Extraction/Air Sparge pilot testing (SVE/AS testing). All charges (subcontractors included) must be supported with time and materials backup (date of service, labor hours, labor rates, itemized equipment and materials breakdown). The specific pilot test task codes are determined by the technology and presence of air emissions treatment activity. Only one pilot test per technology per site is allowed. If delays occur between the coordination efforts and the actual event, reasons for the delay and a revised schedule for the event shall be provided. Field notes and associated documentation completed after the test shall be provided to support charges claimed. The pilot test results are usually included in other report(s) submitted to MassDEP. In this case, the claimant should indicate what report the documentation is included in. Note that fluids extracted via vacuum shall be reimbursed as task code 28.18.4.3.

Items covered under this task code include:

- Coordination and labor to conduct SVE/AS testing (gauging of monitoring wells associated with testing is included);
- Field preparation;
- Equipment mobilization/demobilization and decontamination;
- Travel and vehicle expenses;
- Equipment set-up and breakdown;
- Equipment and materials;
- Site cleanup; and
- Data evaluation, documentation, and report.

In addition, the following task codes shall be used as appropriate:

- Task Code 17.0, Permitting;
- Task Code 23.5, Carbon Purchase/Disposal;
- Task Code 27.0, Lab Analysis;
- Task Code 28.0, Fluids Disposal and Equipment Rental (i.e. trucks, blowers, pumps, treatment devices).

4.15 TASK CODE 15 – REMEDIAL FEASIBILITY STUDIES (TASK CODES 15.1.1 AND 15.1.2)

Task Codes 15.1.1 and 15.1.2 – Net Present Value

Reimbursement shall be made for the preparation of studies including calculation of equipment cost, installation cost, operating and maintenance expenses, utility expenses, salvage value, and determination of the net present values of alternative remediation strategies/equipment investments. The net present value (NPV) method is a method of ranking investment alternatives. The NPV is equal to the present value of future returns, discounted at the cost of capital, plus the present value of the cost of the investment, minus the salvage value of the equipment at the end of the project.

The remediation strategy/equipment investment with the lowest NPV should be selected if this alternative is expected to achieve MassDEP required cleanup standards. For example, two alternative strategies are available for the treatment of off-gas from an air tray stripper. The first alternative provides for the treatment of off-gas via catalytic incineration for a period of four years. The cost of the catalytic incinerator is $25,000. It will cost $10,000 to install the catalytic incinerator and $15,000 per year for operating and maintenance expenses, including electricity.

The second alternative is to treat the off-gas via vapor phase granular activated carbon. It will cost $5,000 to purchase the equipment and $5,000 to install it. Annual operating and maintenance expenses, including replacement carbon, are projected to be $25,000.
Therefore, assuming the equipment will be needed for a period of four (4) years, the NPV of the alternative remediation strategies/equipment investments are calculated as follows:

CATALYTIC INCINERATOR				VAPOR PHASE CARBON		
Year	**Net Cash Flow**	**PVIF (10%)**	**PV of Cash Flow**	**Net Cash Flow**	**PVIF (10%)**	**PV of Cash Flow**
1	$15,000	0.9091	$13,637	$25,000	0.9091	$22,728
2	$15,000	0.8624	$12,936	$25,000	0.8624	$21,560
3	$15,000	0.7513	$11,270	$25,000	0.7513	$18,783
4	$15,000	0.6830	$10,245	$25,000	0.6830	$17,075
PV of Outflows			$48,088			$80,146
Plus Equipment & Installation Costs			$35,000			$10,000
Subtotal:			$83,088			$90,146
Less Salvage Value of Equipment at End of Project:						
	$2,000	0.6830	($1,366)	$0	0.6830	$0
Net Present Value:			$81,722			$90,146

Note: PVIF => Present Value Interest Factor

Therefore, the alternative strategy/remediation equipment with the lowest NPV represents the least cost alternative for treating the air stripper off-gas. Thus, catalytic incineration would be selected to treat the air stripper off-gas.

In the example presented above, the cost of capital was assumed to be ten (10%) percent. For future analyses, the prime lending rate in effect at the time of the analysis shall be used as the cost of capital.

4.16 TASK CODE 16 – LEASE/PURCHASE ANALYSIS AND BID REQUEST PREPARATION (TASK CODES 16.1 AND 16.2)

These task codes shall be used to prepare studies to determine the feasibility of leasing remediation equipment vs. the purchase of remediation equipment and to prepare bid specifications and requests.

Task Code 16.1 - Lease vs. Purchase Analysis

This task code shall be used to determine the feasibility of leasing remediation equipment vs. the purchase of remediation equipment. The term "lease" and "rental" are interchangeable.

503 CMR 2.11(2)(f)1 states, "The Claimant shall determine whether purchase is more cost-effective than a lease and the Claimant shall, upon request of the Board, furnish supporting documentation to the Board of its determination;". The following guidance is provided to facilitate the purchase vs. lease decision:

a) Six (6) months of lease payments claimed will be allowed and not count towards the purchase price when remediation equipment is leased. A cost-benefit analysis shall be conducted after the six (6) month lease payments. .
b) Whether it is determined that it is more cost-effective to purchase or lease the remediation equipment, the 21J Fund will reimburse the Claimant not more than the purchase price, exclusive of the first 6 months of lease, sales tax, and freight, of the remediation equipment .
c) Note that Sale Tax does enter into the calculations as it is reimbursed at cost under task code 30.
d) Note that freight does not enter into the calculations as it is reimbursed at cost under task code 31.
e) If a lease option is selected, a copy of the quote showing the purchase price of the leased remediation equipment shall be provided to the Board with the cost-benefit analysis. At a minimum, the quote shall be of sufficient detail, with major components itemized, to evaluate the purchase price of the system.
f) Three (3) bids/quotes for comparable equipment are required for all components which exceed $5,000.00 per component and $25,000.00 in the aggregate.

Task Code 16.2 - Bid Specification Preparation

This task code shall be used when preparing the specifications for equipment and/or mechanical and electrical scopes of work and sending the bid specifications to a minimum of three prospective bidders. [Note that Task Code 22.4 requires a minimum of 3 bids *received* if the bidding option is used, therefore it is strongly recommended that the bid specification is

solicited to more than three vendors. In all cases, all bids received must be submitted as backup.] Backup to support the bid preparation charges claimed should include the actual specifications sent to the bidders and verification that they were sent to at least three bidders. Costs are only reimbursed if charges are submitted as a bid and the lowest bid will be the amount reimbursed.

Items covered under this task code include:

- Preparation of the bid specification;
- Sending identical bid specification to at least three prospective bidders; and
- Communication with the prospective bidders.

Bid Requests should include:

- Equipment/mechanical/electrical specifications and/or scope of work;
- System design figures, drawings, and/or site maps; and
- Bid Forms with units of measure and estimated quantities for each item.

The subsequent invoice should correlate with each line item listed on the bid specification. Non-biddable items should either be listed on the bid as a separate line item or not be included in the bid.

4.17 TASK CODE 17 – REMEDIATION PERMITTING AND REPORTING (TASK CODE 17.1 THROUGH 17.1.6)

These task codes shall be used when performing activities associated with obtaining local, state, and federal permits, dewatering activities, and discharge monitoring report preparation. All permitting related activities (e.g. communication with permit authorities and preparation of applications) are included in the reimbursement rate. Permit fees to federal, state, or local governmental agencies are not reimbursable by the program; however, the efforts to obtain these permits are. Utility permitting should be coded under Task Code 20.

Task Codes 17.1.1. to 17.1.1.6 - Discharge Permits

These task codes shall be used when performing activities associated with obtaining local, state, and federal discharge permits to install, operate and maintain a remediation system.

Task Code 17.1.1.7 to 17.1.1.7.3 – Discharge Monitoring Reports

These task codes should be used when preparing Discharge Monitoring Reports required in the discharge permit. To be reimbursed for USEPA Remediation General Permit monitoring reports, a copy of the report must be submitted with the claim.

Task Code 17.1.1.8.1 - Permitted Dewatering Oversight

This task code shall be used when performing activities associated with mobilizing/demobilizing, operating, and monitoring a dewatering system in accordance with USEPA requirements.

Items covered under this task code include:

- All coordination and labor to conduct dewatering activities, including pre mobilization

coordination;

- Coordination of dewatering activities is limited to one (1) hour of office time to each full (8 hours) of dewatering activity.
- Field preparation;
- Travel and vehicle expenses; and
- Equipment and materials (e.g. PID, oxygen explosion meter, toxic gas monitoring equipment, sample jars, sampling incidentals).

Note: Oversight of non-permitted dewatering activities associated with soil excavation excavation should be coded to Task Codes 6.1.1 - 6.1.2.

In addition, the following task codes shall be used as appropriate:

- Task Code 23.1.1 and 23.1.2, Equipment mobilization/demobilization and decontamination, Equipment set-up and breakdown
- Task Code 23.5 carbon purchase/disposal
- Task Code 27.0, lab analysis; and
- Task Code 28.0, fluids disposal and equipment rental (e.g. pumping wells, pumps, generators, storage tanks, carbon filters, air strippers, etc).

Task Codes 17.1.2-17.1.6 - General Permits

These task codes shall be used when performing activities associated with obtaining local and state required permits(e.g local building department permits for treatment sheds, fire department permits for storage of compressed gas cylinders, local sidewalk permits, local trenching permits , local and state road opening permits etc), Note: the permit fees and any 'bonding fees" (if required) are ineligible, however, the costs associated with obtaining the permit(s) are eligible and all charges to obtain permits (subcontractors included) must be supported with time and materials backup and a copy of the permit obtained (date of service, labor hours and labor rates).

4.18 TASK CODE 18 – TRENCHING AND INSTALLATION OF UNDERGROUND PIPING AND EQUIPMENT, AREA/ENCLOSURE FOR SVE, AS AND/OR GROUNDWATER EXTRACTION SYSTEM (TASK CODES 18.1 THROUGH 18.6.12.3)

These task codes shall be used when performing trenching and installation of underground piping and equipment for remediation systems. All charges (subcontractors included) must be supported with time and materials backup (date of service, labor hours and labor rates, itemized equipment and materials breakdown). Charges may be submitted as a bid, see Task code 16.2.

Task Codes 18.1 and 18.2 - Installation Oversight

These task codes shall be used when performing oversight of trenching and installation of underground piping and equipment area/enclosure for remediation systems. Task Code 18.1 is used when greater than 6 hours (including travel time) is applied to these activities. Task Code 18.2 is used when 6.0 hours or less (including travel time) is applied to these activities.

Items covered under this task code include:

- Labor to conduct oversight of trenching and installation of underground piping and

equipment area/enclosure for remediation systems;
- Equipment and materials (e.g. PID, oxygen explosion meter, toxic gas monitoring equipment, sample jars and sampling incidentals);
- Field preparation and breakdown; and
- Travel time and vehicle expense.

Task Code 18.3 - Mechanical Installation Crew

This task code is for the labor (e.g. operator, foreman, laborer) required to conduct the actual trenching and installation of underground piping and equipment area/enclosure for remediation systems. Backfill material costs should be coded under task code 18.4. Equipment should be coded to Task Code 28 without operator. The equipment, operator and/or laborer costs should be clearly distinguished on the invoice. All consultant charges (subcontractors included) must be supported with backup. Backup for subcontractor invoices must include equipment rates, equipment hours, labor rates, labor hours, and itemized materials breakdown. Evidence in the form of lab data for soil samples collected from the excavated area must be provided to document excavation to remove soils impacted by petroleum release.

Items covered under this task code include:
- Labor to conduct the actual trenching and installation of underground piping and equipment area/enclosure for remediation systems;
- Field preparation, mobilization and breakdown;
- Travel time; and
- Site restoration activities.

Items not covered under this task include:
- Materials, see task code 18.4; and
- Excavation equipment and vehicles, see Task Code 28.

Task Code 18.4 - Remediation System Materials

This task code is shall be used for costs associated with the purchase of the remediation system materials. All material charges must be supported with an itemized materials breakdown.

The materials include but are not limited to:
- Pipe;
- Fittings and adapters;
- Glue and primer;
- Manholes, vaults;
- Backfill Material;
- Asphalt, concrete, and cement; and
- Valves, gauges, etc.

Items not covered under this task include:
- Sheds, see task code 18.5;
- Equipment pads, see task code 18.5; and
- Fencing, see task code 18.5.

4.19 TASK CODE 20 – INSTALLATION OF UTILITIES FOR REMEDIATION SYSTEMS ONLY (TASK CODES 20.1 THROUGH 20.4)

These task codes are associated with remediation costs incurred by utility companies' installation of their utility services to the site. All utility connections for remediation equipment must be metered separately from other site utility connections to be eligible for reimbursement.

Task Code 20.1 – Coordination of Utility Services for Remediation Systems

This task code shall be used when coordinating for a utility company to install their utility on site.

Items covered under this task code include:

- Coordination and communication with utility company to install utility.

Items not covered under this task code include:

- Site visit to meet utility company to install utility, see task code 4.2.

Task Code 20.2 – Utility Company Installation Cost

This task code shall be used for the costs charged by the utility to install the service from the street to the utility meter. Federal, state or local governmental fees are not reimbursable.

Task Code 20.3 - Electrical Installation Crew

This task code is only for labor costs (task maximum based on two individuals, number of people on site may vary) and shall be used when an electrical installation crew installs and completes the electrical service and the remedial system component wiring for powering, operating, and controlling the system. Materials inclusive of electrical conduit, wire, panel boxes are to go under task code 20.4. Backup for electrical subcontractor labor costs consists of labor hours and labor rates.

Items covered under this task code include:

- Coordination and labor to install the remedial system component wiring to power the system and electrical controls and safety interlocks;
- Field preparation and breakdown; and
- Travel time and vehicle charges.

Task Code 20.4 - Remediation System Electrical Materials

This task code shall be used for costs associated with the purchase of the remediation system electrical materials. All material charges must be supported with an itemized materials breakdown.

The materials include but are not limited to:

- Pipe;
- Fittings and adapters;

- Glue and primer;
- Wires;
- Panels;
- Sockets; and
- Breakers.

4.20 TASK CODE 22 – PURCHASE AND INSTALLATION OF REMEDIATION SYSTEMS (I.E. GROUNDWATER AND NAPL, SOIL VAPOR EXTRACTION AND AIR SPARGING)

These task codes shall be used when performing the purchase, installation or reinstallation of groundwater, non-aqueous phase liquid pumping, soil vapor extraction and air sparging remediation systems. All charges (subcontractors included) must be supported with time and materials backup (date of service, labor hours and labor rates, itemized equipment and materials breakdown). Charges may be submitted as a bid, refer to task code 16.2.

Task Code 22.1 – Removal and reinstallation of remediation systems from original site of installation to another site, or refurbishment of equipment

This task code shall be used for relocating a remediation system from one site to another. Costs allowed are a site maximum and include all costs associated with the removal and reinstallation, including labor, equipment, materials, and travel. All associated costs should be claimed under the receiving facilities UST Eligible Release Number. Refurbishment of existing equipment also allowed under this task code.

Task Code 22.2 – Remove and/or store remediation equipment

This task code shall be used for removing remediation system equipment and temporary storage (e.g. winterization, system shut down). Costs allowed are a site maximum and include all costs associated with the removal and/or storage of remediation system equipment, including labor, equipment, materials, tools, travel time, and vehicle expenses.

Task Code 22.3 – Installation Crew

This task code shall be used for the labor (task maximum based on two individuals, number of people on site may vary) to install remediation system equipment associated with Task Code 22.4. This task code includes labor, equipment, materials, tools, travel time, and vehicle expenses.

Task Code 22.4 – Remediation System Equipment Purchase

This task code shall be used for the initial purchase of remediation system equipment/components. For Task code 22.4, a minimum of three competitive bids must be obtained (not just solicited) for all individual components with a value greater than $5,000 or if the total system value exceeds $25,000. Labor to install the system at the site shall be claimed under Task code 22.3.

The value of a component or system is defined as the purchase price from a published catalog or standard rate sheet and is assumed to include the labor required to manufacture the component or system.

For Claimant's contractors or consultants that choose to assemble the system components and build-out the treatment system, the total system value shall include the labor costs for design, procurement, and assembly. In this case, the labor costs shall not exceed 20 percent of the purchase price of the component(s). For example, if a consultant chooses to purchase the components for a groundwater extraction/carbon treatment system and the purchase price of all the components and miscellaneous material fittings, wiring, etc. cost $15,000, the maximum labor costs allowed for design, procurement, and assembly would be $3,000. Similarly, if the purchase price of the components, miscellaneous materials, and allowed labor costs exceed $25,000, three bids are required. System costs over $25,000 will only be allowed if they were competitively bid.

4.21 TASK CODE 23 – REMEDIATION SYSTEMS OPERATION & MAINTENANCE (TASK CODES 23.1 THROUGH 23.7)

These task codes shall be used when performing operation and maintenance (O&M) of remediation systems, system repair, carbon regeneration, carbon disposal, and liquid, solid, and mixed media disposal, as well as for the costs incurred for utility charges and carbon purchase. All charges (subcontractors included) must be supported with time and materials backup (date of service, labor hours and labor rates, itemized equipment and materials breakdown).

Task Codes 23.1.1 and 23.1.2 - General O&M of Remedial Systems

These task codes shall be used when performing general O&M of remedial systems. Task Code 23.1.1 is used when greater than 6 hours (including travel time) is applied to these activities. Task Code 23.1.2 is used when 6.0 hours or less (including travel time) is applied to these activities. Project management time is not considered in the determination of the half or full day rate, but is included in the rate maximum.

Items covered under this task code include:

- Coordination of general O&M of remedial systems;
- Subcontractor coordination;
- Labor to obtain operational measurements of systems, collect vapor and liquid samples, and routine system component maintenance;
- Labor to remove and replace activated carbon (in bulk or drums) for treatment system components;
- Field preparation;
- Travel and vehicle expenses;
- Sample preparation, logging, storage transportation of samples to laboratory; and
- Equipment and materials (e.g. PID/FID, pitot tube/rotameter, hand pump, sample jars, sampling incidentals, field screening of samples)

In addition, the following task codes shall be used as appropriate:

- Task Code 11, Groundwater Monitoring, Gauging, Sampling
- Task Code 23.5.1, Carbon Purchase
- Task Code 23.5.2 Carbon Disposal

Items not covered under this task code include:

- Carbon Purchase/Disposal, see task code 23.5.1; and
- Contaminated waste removal and disposal, see task code 23.6.

Task Code 23.1.3 – Extra Person

This task code should be used when an additional person is required to accomplish labor intensive tasks. This task code can only be claimed for the hours actually utilized for the labor intensive task. Remaining time for the extra person should be rolled into the half day or full day rate claimed by the primary technician. Back-up/field notes should clearly detail the labor intensive task being completed. Travel time for the extra person should be included under the 23.1.3 task code.

Task Code 23.1.4 - Non-Incidental O&M Materials

This task code shall be used for the purchase of non-incidental materials used during O&M activities.

The materials include but are not limited to:

- Filter elements (e.g. particulate, cartridges, bags);
- Oil;
- Sequestering agents; and
- Chemical additives.

The materials not included in this task code include:

- Carbon Purchase see task code 23.5.1

Task Code 23.3 – Remediation System Repair

This task code is associated with repair or replacement of system components (e.g. pumps, blowers, motors, compressors, flow meters, etc.) including miscellaneous fittings, adapters, wiring, freight/shipping, and labor to remove/install the component. Repair of rented or leased equipment is not eligible. Back-up/field notes must clearly detail the necessity of the repair or replacement of the component and also include the manufacturer's recommendation or other supporting documentation supporting component replacement rather than repair (e.g. cost analysis, diagnostic report, phone logs, etc). Three competitive bids are required for any component that exceeds $5,000 in value.

Other items covered under this task code include:

- Coordination of repair of the remedial system component;
- Subcontractor coordination and costs;
- Field preparation;
- Travel and vehicle expenses;
- Testing equipment and tools.

Task Codes 23.4 to 23.4.2.2 - Air Stripper Maintenance

These task codes are used for the purchase and disposal of packing material for high profile air strippers and for the purchase and disposal of an acid wash for a low profile air stripper. Labor

to conduct these activities should be coded to the 23.1 task codes.

Task Codes 23.5. – Replacement Carbon/Carbon Vessels (<200 lbs) Purchase

These task codes are used for the purchase of replacement activated, or reactivated carbon in bulk, or the purchase of carbon containing vessels of less than 200 lbs. Initial carbon purchase should be coded to task code 21.4. Field notes must be provided to support the use of carbon/carbon vessels claimed.

Labor costs for activated carbon or carbon vessel (<200lbs) replacement should be coded to task code 23.1.1 or 23.1.2. If subcontractor labor is used for activated carbon or carbon vessel (<200lbs) replacement, then the subcontractor's invoice should adequately support labor, DOS, equipment etc.

Task Codes 23.6 to 23.6.6.1 – Contaminated Waste Removal and Disposal

These task codes are used for the removal and disposal of contaminated waste. This includes labor, equipment, transportation and disposal. Labor to conduct these activities should not be coded to the 23.1 task codes.

23.7 Piping and Instrumentation Drawing

The Piping and Instrumentation Drawing (P&ID) can be claimed once for each system used on the site. The P&ID is expected to be submitted with a report, typically an IRA or Phase IV report

4.22 TASK CODE 24 – WELL PAD/ROAD BOX/MANHOLE REMOVAL/REPLACEMENT AND REPAIR (TASK CODES 24.1 THROUGH 24.1.5)

These task codes shall be used when performing repair, removal, and replacement of concrete pads, road boxes or manholes (DEP WSC 310-91). The repair of roadboxes or replacement of well parts (well plugs, well covers with O-rings) must be performed with another field event (e.g. pad replacement, sampling event or O&M event, etc). All charges (subcontractors included) must be supported with time and materials backup (date of service, labor hours and labor rates, itemized equipment and materials breakdown). An explanation for the need to repair, remove, or replace pads, road boxes or manholes is required.

Task Code 24.1 through 24.1.3 - Remove and Replace Concrete Pad and/or Road box/Manhole

Items covered under these task codes include:

- Coordination and labor to conduct repair/removal/replacement of concrete pads/road boxes/manholes;
- Field preparation;
- Equipment mobilization/demobilization;
- Travel and vehicle expenses;
- Equipment set-up and breakdown; and
- Equipment and associated costs (e.g. jackhammer, compressors, concrete, cement).

4.23 TASK CODE 25 – WELL ABANDONMENT (TASK CODES 25.1 THROUGH 25.5)

These task codes shall be used when performing well abandonment (DEP WSC 310-91) activities. All charges (subcontractors included) must be supported with time and materials backup (date of service, labor hours and labor rates, itemized equipment and materials breakdown).

Task Code 25.1.1 and 25.1.2 - Equipment Mobilization/Demobilization for Well Abandonment

These task codes shall be used to mobilize and demobilize well abandonment equipment.

Items covered under this task code include:

- Equipment mob/demob; and
- Equipment set-up and breakdown.

Task Code 25.2 – Well Abandonment Oversight

This task code shall be used when performing well abandonment oversight activities. Task Code 25.2.1 is used when greater than 6 hours (including travel time) is applied to the oversight of the well abandonment event. Task Code 25.2.2 is used when 6 hours or less (including travel time) is applied to the oversight of the abandonment event.

Items covered under this task code include:

- Labor to oversee and document abandonment event;
- Field preparation and breakdown;
- Travel time and vehicle expenses; and
- On site coordination.

Task Code 25.3 and 25.4 - Well Abandonment

These task codes shall be used when performing well abandonment by pressure grouting or drill and grout. Supporting documentation should include field notes and total depth of each well abandoned as measured on the day of abandonment

Items covered under this task code include:

- Labor to conduct well abandonment;
- Field preparation;
- Clean up;
- Equipment; and
- Material costs (e.g. concrete, cement).

Task Code 25.5 – DCR Well Abandonment Report

This task code shall be used for preparing the Well Abandonment Report required by the Department of Conservation and Recreation. A complete copy of the report must be viewable online, or submitted as backup.

4.24 TASK CODE 26 – MASSDEP REQUIRED MEETINGS AND TRAVEL (TASK CODES

26.1 THROUGH 26.2)

These task codes shall be used when performing activities associated with MassDEP requests or meetings/ site visits. Documentation (e.g. Notice of Audit Findings, field notes, phone logs) to verify that the request/meeting took place is required to support charges claimed. Charges to gather information and respond to the MassDEP requests shall be supported by communications with MassDEP (e.g. letters, phone logs or e-mails) or Audit Follow-up Reports. If an audit results in a Notice of Non-Compliance, the Notice shall be provided and approvals will be granted on a case by case basis.

Items covered under these task codes include:

- Labor to communicate, coordinate, and attend MassDEP requested meeting;
- Travel and vehicle expenses;
- Labor to gather and prepare information as requested by the MassDEP; and
- Labor to prepare necessary Audit Follow-up Reports.

Supporting documentation includes:

- Correspondence (emails, telephone logs, letters etc,) from MassDEP requesting that the Consultant be present at a Site Meeting;

Task Code 26.2 Licensed Site Professional (LSP) Site Visit

This task code is used for the LSP of Record to perform site visit activities (up to two (2) visits per year) as required per 310 CMR 40.0000. Task maximum includes any required coordination, performed by the LSP. LSP visits are not to be claimed on days when other field activities are occurring. Supporting documentation (field notes, etc.) is required.

4.25 TASK CODE 27 – LABORATORY ANALYSES (TASK CODES 27.1 THROUGH 27.10.3)

These task codes are used for the laboratory analyses of water, soil, and air and include parameters related to the assessment, evaluation, and abatement of petroleum products discharges and releases from an underground storage tank system. All analytical methods must be the most current EPA-approved methods and/or in accordance with the most recent version of MassDEP's *Compendium of Quality Control Requirements and Performance Standards for Selected Analytical Protocols (the "CAM").* The laboratory analyses include general chemistries, microbiology (i.e. bioremediation parameters), metals & minerals, gas chromatography, RCRA waste characterization, drinking water organics, and lab add-ons (e.g. groundwater sample filtration and sample compositing). The laboratory invoice, chain of custody, If there is no applicable task code for the analyte, laboratory rate sheets may be provided from three laboratories in lieu of specific bid documents. It is necessary for the claimant to submit the applicable rate sheets with each subsequent submittal.

Standard laboratory turnaround times of 7-10 business days apply to all laboratory analyses and

prices. Surcharges for expedited laboratory turnaround are not eligible for reimbursement by the Board. Includes sample containers, chain of custody forms, drop-off and pick-up of sample containers. Sample shipping costs should be coded to the applicable 11.1 task codes.

Task Code 27.4.27 – DEP EPH

To be reimbursable, costs must be related to eligible petroleum products that include gasoline and diesel fuel. Eligible petroleum products, however, do not include many other types of petroleum products typically found at dispensing facilities, such as heating oil, lubricating oil, and waste oil. When conducting site characterization or response actions, it is important to note that the 21J program will only reimburse costs that are directly related to the eligible release, and not necessarily all costs required to meet the requirements of the MCP.

When conducting an investigation or response action at a site with spilled gasoline and/or diesel products, the costs associated with EPH sampling and analyses will be reimbursable in the following cases:

1. **Eligible Diesel Fuel Release:**
    a. Costs associated with EPH analyses are reimbursable for samples collected during site characterization, response actions, and for ongoing site monitoring activities conducted in response to an eligible release of diesel fuel.

2. **Eligible Gasoline Release**:
    a. Facility with known current or historical diesel fuel storage: Costs associated with EPH analyses are reimbursable for the first round of site characterization samples collected as follows:
        i. if the initial EPH analytical results indicate reportable concentrations of diesel-range petroleum hydrocarbons, then future costs associated with EPH analyses will be reimbursable if the source is an eligible Petroleum Product.
    b. Facility with no recorded history of storing diesel fuel or diesel releases: Since historical UST records are not always accurate or complete, the costs associated with EPH analyses are reimbursable for the first round of site characterization samples collected. If reportable concentrations of diesel-range petroleum hydrocarbons are detected and the source is not identified, then the costs for future or additional EPH analyses will not be reimbursable until the source of the release is identified and determined to be eligible.

As noted above, EPH analyses may be required to assess other releases or sources such as historic heating oil or waste oil that are not eligible for reimbursement under M.G.L. c.21J. You are strongly encouraged to review 503 CMR 2.00 to become familiar with the eligibility requirements for reimbursable costs.

4.26 TASK CODE 28 – EQUIPMENT RENTAL (CODES 28.1 THROUGH 28.27)

These task codes shall be used when renting construction vehicles, equipment, systems, and components during response activities. Rental rate limits are set for hourly, daily, weekly, and monthly time periods. The type of rental and rental period determine the proper task code. Except for task code 28.18.4, the rental rates are for equipment only and do not include labor costs. Refer to Task Codes 1.0 for labor rates for equipment operator, laborer and truck driver. Laborer is only allowed when needed to support heavy equipment operation. Remediation systems and/or components may be rented for up to six months before a lease versus purchase analysis must be performed. Refer to task code 16.1 for additional guidance.

Task Code 28.18.4.1 and 28.18.4.2 Vactor Solids Excavator with Operator and Trailer Mounted Air Excavator

These task codes shall be used when performing air-knifing activities for pre-clearing soil boring or vacuum excavation for response activities. These task codes include labor and travel time. Field notes and/or drill logs to support logged soil types or collected samples are required.

Task Code 28.18.4.3 - Enhanced Fluid Recovery (EFR)

This task code shall be used when performing Enhanced Fluid Recovery (EFR) activities. EFR is defined as total fluids extraction, i.e. extraction of soil vapor gas, groundwater and non-aqueous phase liquid (NAPL), or some combination of the three. EFR consists of applying vacuum, generally greater than 15 inches of mercury, to a wellhead to enhance the flow and recovery of petroleum fluids from a well(s) so that they can be removed and recovered from the subsurface. It is generally appropriate for NAPL recovery from small isolated contaminated areas. Labor, equipment, and materials for gauging and/or sampling of wells not receiving injections or extractions or are to be reimbursed as task code 11.1.2 through 11.5, (labor and equipment for travel on the same day as an EFR event are to be reimbursed under Task Code 28.18.4.3). Expenses incurred to perform EFR remediation may be claimed for multiple events in a month. The task maximum is per event.

Items covered under this task code include:

- Coordination and labor to plan, coordinate and conduct the all EFR activities; both subcontractor and consultant (gauging of extraction wells included);
- Travel time and vehicle expenses;
- Labor, equipment, and materials to gauge and/or sample wells receiving injections on the day of injection or being extracted on the day of extraction;
- Equipment (e.g. all trucks, blowers, pumps, treatment devices, etc.); and
- Materials (e.g. PIDs, LEL meters, multi-meters, etc).

Number of EFR Events Allowed

1) If EFR is implemented and is not part of an IRA, RAM, or Phase IV, there is a lifetime site maximum of two events.

2) When EFR remediation has been implemented as part of a Phase IV Remedy Implementation Plan, the number of EFR events is unlimited. The Phase III Remedial Action Plan shall document the appropriateness and cost benefit of EFR in accordance with 310 CMR 40.0850 and 40.0860 when compared to other available

technologies. Costs associated with such evaluations shall be reimbursed as task code 2.4, Phase III, and task code 2.7.4, Feasibility of Permanent Solutions/ Feasibility of Restoration to Background; OR

3) When EFR is implemented as part of an IRA or RAM (i.e. prior to or not part of the Phase IV), the number of EFR events is limited to the task maximum of 2 events per month, for up to a total of six months. After six months of EFR events have been conducted, a cost benefit analysis using data from the completed events shall be prepared and submitted with the reimbursement application to determine if EFR should be continued or if an alternative petroleum remediation technique should be employed. Charges for the cost benefit analysis shall be claimed under task code 15; OR

4) If EFR is added as a remedial technology after the Phase IV RIP Completion Statement has been submitted or during implementation of the Phase V and/or OM&M Plan, without the benefit of a revised Phase III/IV, the number of EFR events is limited to the task maximum of two events per month, for up to a total of six months. The claimant may then seek pre-approval from the Board to continue EFR events. In this case, a cost benefit analysis supporting the proposed use of EFR to shorten the remediation timeframe using data from the completed events shall be prepared and submitted to the Board for review.

SUMMARY OF ALLOWABLE EFR EVENTS

CONDITION	# of EFR EVENTS ALLOWED
1. EFR performed as a general response action not specified in an IRA, RAM or Phase IV RIP	2 events lifetime max
2. EFR is included in Phase IV	Unlimited with a Max. of 2 events per month
3. EFR is included in an IRA or RAM	6 months with a Max. of 2 events per month
4. RIP enhancement per Phase V-OM&M revision	6 months with a Max. of 2 events per month – May seek pre-approval from the Board for future events

Task Code 28.18.6 and 28.18.7 - Mobile Groundwater Treatment Trailers

These task codes shall be used when renting a mobile groundwater treatment trailer. There are two different types of mobile groundwater treatment trailers. Both consist of an oil/water separator, liquid phase granular activated carbon vessels (up to 50 gallons per minute), transfer pump, heater and electrical controls. The second mobile groundwater treatment trailer (Task Code 28.18.7) has the added feature of a soil vapor extraction module for 100 cubic feet per minute flow rate (with vapor phase granular activated carbon vessels). The specifications of the system components are required to support the charges claimed.

4.27 TASK CODE 29 – MISCELLANEOUS MATERIALS (TASK CODES 29.1 THROUGH 29.11)

These task codes should be used for the reimbursement of miscellaneous materials used for the completion of Response Actions when not included under other applicable task codes. All charges (subcontractors included) must be supported with time and materials backup (date of service, itemized equipment and materials breakdown).

4.28 TASK CODE 30 – STATE SALES TAX

Task Code 30.1- State Sales Tax

This task code may be used when a sales tax listed on any invoice, receipt, or utility bill as a separate line item is claimed. The sales tax shall be reimbursed at actual cost. Sales tax on ineligible equipment and materials charges (other than exceeding a task code maximum) is not reimbursable.

4.29 TASK CODE 31 - FREIGHT

Task Code 31.1 – Freight/Delivery

This task code may be used when a freight/delivery charge listed on any invoice or receipt as a separate line item is claimed. The freight charge shall be reimbursed at actual cost. Note that the freight/delivery charge shall only be claimed if the associated equipment/components/materials are also claimed.

4.30 TASK CODE 32 –

This section is reserved for Board use only.

5.0 ACRONYMS

=>	Implies
>	Greater than
<	Less than
21J	Underground Storage Tank Petroleum Product Cleanup Fund, MGL c. 21J
APH	Air Petroleum Hydrocarbons
API	American Petroleum Institute
AS	Air Sparging
ASTM	American Society of Testing Materials
AUL	Activity and Use Limitation
BIO	Bioremediation
BOARD	Underground Storage Tank Petroleum Cleanup Fund Administrative Review Board
BOH	Board of Health
BTEX	Benzene, Toluene, Toluene, Ethyl Benzene and Xylenes
CFM	Cubic Feet per Minute
CHEMOX	Chemical Oxidation
CMO	Chief Municipal Officer
CMR	Code of Massachusetts Regulations
CU/YD	Cubic Yard
DAI	Direct Aqueous Injection
DOHS	(U.S.) Department of Occupation Health & Safety
DPS	Downgradient Property Status
EFR	Enhanced Fluids Recovery i.e. groundwater/NAPL and soil vapor gas
EPA	(U.S.) Environmental Protection Agency
EPH	Extractable Petroleum Hydrocarbons
GCFID	Gas Chromatography Flame Ionization Detector
GCMS	Gas Chromatography Mass Spectrophotometry
GPM	Gallons per Minute
GW-1	Groundwater Category for Current or Potential Drinking Water Source
GW-2	Groundwater Category - Source of Volatiles to Indoor Air
GW-3	Groundwater Category - Everywhere else
Hg	Mercury
HR	Hour
IH	Imminent Hazard
ISCO	In Situ Chemical Oxidation
IWPA	Interim Wellhead Protection Area
LB	Pound
LEL	Lower Explosive Limit
LF	Linear Feet
LNAPL	Light Non-Aqueous Phase Liquid
LRA	Limited Removal Action
LS	Lump Sum
LSP	Licensed Site Professional

LTBI Location to be Investigated
LUST Leaking Underground Storage Tank
MassDEP Massachusetts Department of Environmental Protection
MCL Maximum Contaminant Level
MCP Massachusetts Contingency Plan
MEPA Massachusetts Environmental Policy Act
MGL Massachusetts General Law
MH Manhole
MNA Monitored Natural Attenuation
MOHML Massachusetts Oil & Hazardous Material List
MTBE Methyl Tertiary Butyl Ether
MWRA Massachusetts Water Resources Authority
NAPL Non-Aqueous Phase Liquid
NEC National Electrical Code
NFPA National Fire Protection Association
NON Notice of Noncompliance
NOR Notice of Responsibility
NPDES National Pollutant Discharge Elimination System
NPL National Priority List
NRS Numerical Ranking System
NTE Not to Exceed
O&M Operation and Maintenance
OHM Oil and Hazardous Material
P&ID Piping and Instrumentation Diagram
PE Registered Professional Engineer
PID Photoionization Detector
PIP Public Involvement Plan
POE Petroleum Operations Engineer
POTW Publicly Owned Treatment Works
PPB Parts Per Billion
PPD Proposed Permit Decision
PPM Parts Per Million
PRP Potentially Responsible Party
PSIG Pounds per Square Inch Gauge
RADDS Remedial Action Design Documents
RAM Release Abatement Measure
RC Reportable Concentration
RCGW-1 Reportable Concentration for Groundwater Category 1
RCGW-2 Reportable Concentration for Groundwater in Category 2
RCRA Resource Conservation and Recovery Act
RCS-1 Reportable Concentration for Soil in Category 1
RCS-2 Reportable Concentration for Soil in Category 2
REDUA Representativeness Evaluations and Data Usability Assessment
RFI Request for Information
RP Responsible Party
RQ Reportable Quantity (for sudden releases)

S-1	Soil Category - High Exposure Potential
S-2	Soil Category - Medium Exposure Potential
S-3	Soil Category - Low Exposure Potential
SCAA	Spill Control Association of America
SF	Square Feet
SHE	Substantial Hazard Evaluation
SRM	Substantial Release Migration
SVE	Soil Vapor Extraction
T&M	Time and Material
TOR	Threat of Release
TPH	Total Petroleum Hydrocarbon
UCL	Upper Concentration Limit
UOM	Unit of Measure
URAM	Utility-related Abatement Measure
UST	Underground Storage Tank
VES	Vapor Extraction System
VOC	Volatile Organic Compound
VPH	Volatile Petroleum Hydrocarbons

6.0 REFERENCES

Provided below is a list of references which provide statutes, regulations, policies, national codes, guidelines, industry standards, and recognized references which shall be followed when applicable at the time, while conducting response, assessment, remediation, and response action outcome activities for which reimbursement of such activities will be sought under the Underground Storage Tank Petroleum Product Cleanup Fund, 503 CMR 21.00. This list of references is provided as a minimum and is not intended to be all inclusive.

1. The Massachusetts Oil and Hazardous Materials Release Prevention and Response Act, M.G.L. 21E
2. M.G.L. c. 21A, & 16 and 19-19J, M.G.L. c. 30A, & 2 and 3
3. Board of Registration of Hazardous Waste Site Professionals, 309 CMR 1.00 - 8.00
4. Board of Registration of Professional Engineers and Land Surveyors, 250 CMR 1.00 - 6.00
5. Massachusetts Environmental Policy Act, 301 CMR 11.00; and areas of critical concern, 301 CMR 12.00
6. Commonwealth of Massachusetts Department of Public Works, Application for Permit to Access State Highway
7. Department of Environmental Protection Regulations & Policies:
8. The Massachusetts Contingency Plan, 310 CMR 40.000 and 40.0000
9. The Massachusetts Hazardous Waste Regulations, 310 CMR 30.000
10. Massachusetts Drinking Water Quality Standards, 310 CMR 22.00
11. Wetlands Protection Act Regulations, 310 CMR 10.00
12. The Massachusetts Underground Storage Tank Regulations 310 CMR 3.80
13. MA Discharge Regulations, 314 CMR 7.00
14. 21E Related Revisions to 310 CMR 4.00, Timely Action Schedule and Fee Revisions, MassDEP, July 30, 1993
15. Massachusetts Air Quality Standards, 310 CMR 6.00
16. Massachusetts Surface Water Quality Standards, 314 CMR 4.00
17. Bureau of Waste Prevention (BWP) BRP WP 42, Groundwater Reclamation Projects Permit
18. Policy for Discharges to Groundwater in Support of Remedial Actions Conducted in Accordance with M.G.L. c. 21E, MassDEP #Policy-91-001
19. Interim Guidance Manual for Petroleum Contaminated Media, July 1992
20. Construction/Excavation Related to Underground Storage Tanks at Motor Vehicle Fueling Facilities, MassDEP
21. Policy #WSC-132-90
22. Management Procedures for Excavated Soils Contaminated with Virgin Petroleum Oils, MassDEP Policy
23. #WSC-89-001
24. DRAFT Addendum to Management Procedures for Excavated Soils Contaminated with Virgin Petroleum
25. Oils, MassDEP Policy #WSC-89-0019. Policy for the Investigation, Assessment, and Remediation of Petroleum
26. Releases, MassDEP Publication #WSC-401-91

27. Fact Sheet for Underground Storage Tanks Storing Waste Oil, 310 CMR 30.325(1)(h) and 527 CMR 9.29
28. Guidance for Disposal Site Risk Characterization - In Support of the Massachusetts Contingency Plan,
29. DEP, July 28, 1995, Interim Final Policy #WSC/ORS-95-11.
30. Guide to the Regulation of Toxic Chemicals in Massachusetts Waters, MassDEP, December 1990
31. Public Involvement Plan Interim Guidance For Waiver Sites, MassDEP, January 1991, Interim Policy #
32. WSC-800-90
33. Minimum Standards for Analytical Data for Remedial Response Actions Under M.G.L.c.21E, MassDEP, January
34. 19, 1989, Policy #WSC-300-89
35. Making No Further Action Decisions at Waiver Sites, MassDEP Policy # WSC-120-90
36. Suggested Outline, Content and Format for Phase II Human Health Risk Assessment Scope of Work, MassDEP Policy # WSC-140-91
37. Risk Assessment Short Form - Residential Scenario, MassDEP Policy # WSC/ORS-142-92
38. Minimum Standards for Analytical Data for Remedial Response Actions Under M.G.L. c. 21E, MassDEP Policy # WSC-300-89
39. Background Documentation for the Development of the MCP Numerical Standards, MassDEP, April 1994
40. MASSACHUSETTS Solid Waste Management Regulations, 310 CMR 19.000
41. Previously Non-participating and Newly Identified PRPs Who Wish to Assume Responsibility for Response Actions, MassDEP Policy # WSC-601-90
42. MCP Questions and Answers, Volume 1, Number 1, MassDEP, November 5, 1993
43. MCP Questions and Answers, Volume 1, Number 2, MassDEP, December 1993/January 1994
44. MCP Questions and Answers, Volume 1, Number 3, MassDEP, February/March 1994
45. MCP Questions and Answers, Volume 1, Number 4, MassDEP, April/May 1994
46. MCP Questions and Answers, Special Edition No. 1, May 1994
47. MCP Questions and Answers, Volume 1, Number 5, MassDEP June/July 1994
48. MCP Questions and Answers, Special Edition No. 2, June 1994
49. MCP Questions and Answers, Special Edition No. 3, September 1994
50. MCP Questions and Answers, Special Edition No. 4, February 1995
51. MCP Questions and Answers, Volume 2, Number 1, MassDEP July 1995
52. MCP Questions and Answers, Volume 3, Number 1, June 1996
53. MCP Questions and Answers, Volume 3, Number 2, December 1996
54. MCP Questions and Answers, Master Q&A, March 25, 1999
55. MCP Questions and Answers, Volume 7, Number 1, January 2001
56. Underground Storage Tank Closure Assessment Manual, MassDEP Policy #WSC-402-96, April 9, 1996.
57. Standard Reference for Monitoring wells, MassDEP Publication #WSC-310-91
58. Water Supply Protection Overlays, MA MassDEP

59. DRAFT Remedial Action Design Document RADD-0: Project Description/Cover Sheet
60. DRAFT Remedial Action Design Document RADD-1: Packed-Tower Air Stripper
61. DRAFT Remedial Action Design Document RADD-2: Aqueous Phase Granular Activated Carbon Adsorption
62. Off-Gas Treatment of Point Source Remedial Air Emissions Pursuant to MGL c.21E, MassDEP Policy #WSC-94-150
63. Certification and Operation of Environmental Analysis Laboratories, 310 CMR 42.00
64. Preservation Techniques for Volatile Organic Compound(VOC) Soil Sample Analyses, MassDEP Policy WSC #99-415
65. Method for the Determination of Volatile Petroleum Hydrocarbons (VPH), January 1998 and subsequent revisions.
66. Characterizing Risks posed by Petroleum Contaminated Sites: Implementation of the MassDEP VPY/EPH
67. Approach, Final Draft, June 2001, and subsequent final policy and revisions.
68. Feasibility of Approaching Background, Pre-Final Draft, June 20, 1997, and subsequent Final policy and revisions.
69. Guidance on Implementing Activity and Use Limitations, Draft dated January 22, 1998, and subsequent final policy and revisions.
70. Interim Remediation Waste Management Policy for Petroleum Contaminated Soils, MassDEP Policy #WSC-94- 400.
71. Guidance from Differentiating Disposal Sites from Spills, MassDEP Policy #WSC-89-002.
72. Short Term Measures Policy, MassDEP Policy #WSC-130-90
73. Interim Measures Policy, MassDEP Policy #WSC-131-90
74. Previously Non-participating and Newly Identified Parties Potentially Responsible #WSC-601-90.
75. Guidance on Implementing Activity and Use Limitations, Draft dated January 22, 1998 and subsequent final policy and revisions.
76. Construction of Buildings in Contaminated Areas, January 2000, MassDEP Policy #WSCO-00-425
77. Draft Indoor Air sampling and Evaluation Guide, February 1, 2001.
78. Federal Statutes, Regulations, Policies & Publications:
79. Short Term methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Fresh Water Organism, US EPA, EPA-600/4-89-001
80. "US EPA Region 1 Biomonitoring Protocol", US EPA Region 1, Boston, MA Letter dated July 1, 1990
81. Methods for Measuring the Acute Toxicity of Effluents to Freshwater and Marine Organisms, latest edition,
82. US EPA, EPA-600/4-90/027
83. Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 40 CFR 300-399
84. Resource Conservation and Recovery Act, 40 CFR 190-299
85. Toxic Substances Control Act, 40 CFR 700-END
86. Clean Water Act, 40 CFR 100-149 and 40 CFR 400-699
87. Superfund Amendments and Reauthorization Act, 40 CFR 300-399

88. Clean Air Act, 40 CFR 1-89
89. Test Methods for Evaluating Solid Waste, EPA Publication SW-846, Latest Edition
90. National Pollutant Discharge Elimination System, 40 CFR Part 110
91. Spill Prevention Control & Countermeasure Plans, 40 CFR Part 112
92. USGS Bedrock Geologic Map of Massachusetts, Department of the Interior, U.S. Geological Survey
93. Society in cooperation with the Commonwealth of Massachusetts, E-an Zen, Editor, 1983
94. USGS Topographic May, Appropriate Quandrangle(s)
95. National Climatic Data Center, Local Climatological Data, Annual Summary and Comparative Data, Asheville, NC, 1992
96. "Element Concentrations in Soil and Other Surficial Materials of the Conterminous United States", U.S.
97. Geological Survey Professional Paper 1270, U.S. Government Printing Office, Washington, D.C., 1984
98. Time Lag and Soil Permeability in Groundwater Observations, Hvorslev, M.J., U.S. Army Corps of Engineers, Waterways Experimental Station Bulletin 36, Vicksburg, MS
99. Superfund Public Health Evaluation Manual, USEPA, EPA 540/1-86/060, 1986
100. Drinking Water and Health, NRC, Volume 9, National Academy Press, 1989
101. US EPA Region 1 Biomonitoring Protocol Letter dated July 1, 1990. US EPA Region 1 Offices, Boston, Massachusetts, US EPA, 1990.
102. Methods for Measuring the Acute Toxicity of Effluents to Freshwater and Marine Organics, US EPA. 1991, Fourth Edition. EPA-600/4-90/027
103. OSHA Safety and Health Standards, 29 CFR 1926/1919, Latest Edition
104. Standard Methods for Examination of Water and Wastewater, APHA. 1989, 17th Edition. Washington D.C.
105. Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Fresh Water Organisms, EPA-600/4-89/001
106. How to Evaluate Alternative Cleanup Technologies for Underground Storage Tank Sites, EPA 510-B-95-007 National Recognized Codes & Standards:
107. Flammable and Combustible Liquids Code, ANSI/NFPA, Latest Edition
108. Automotive and Marine Services Station Code, ANSI/NFPA Code 30A, Latest Edition
109. Flammable and Combustible Liquids Code Handbook, NFPA, Latest Edition
110. National Electrical Code, NFPA 70, Latest Edition
111. Handling Underground Releases of Flammable and Combustible Liquids, NFPA 329, Latest Edition
112. Recommended Practices for Installation of Underground Liquid Storage Systems, Petroleum Equipment Institute, Publication No. PEI/RP100-87
113. Specifications for Concrete Aggregates, ASTM Standard C33-85, Latest Edition
114. American Petroleum Institute Publications:
115. Installation of Underground Storage Systems, API Recommended Practice 1615, Latest Edition
116. Removal and disposal of Used Underground Storage Tanks, API Recommended Practice 1632, Latest Edition

117. Cathodic Protection of Underground Petroleum Storage Tank and Piping Systems, API Publication 2015, Latest Edition
118. Cleaning Petroleum Storage Tanks, API Publication 2015, Latest Edition
119. Management of Underground Petroleum Product Storage Systems at Marketing and Distribution Facilities, API Recommended Practice 1635, Latest Edition
120. Underground Spill Cleanup Manual, API Bulletin 1628, Latest Edition
121. A Guide to the Assessment and Remediation of Underground Petroleum Releases, API Publication 1628, Latest Edition
122. Feasibility Studies on the Use of Hydrogen Peroxide to Enhance Microbial Degradation of Gasoline, API Publication 4389, May 1985 109. Beneficial Stimulation of Bacterial Activity in Groundwater Containing Petroleum Products, API Publication 4427, March 1975
123. Enhancing the Microbial Degradation of Underground Gasoline by Increasing Available Oxygen, API Publication 4428, February 1982
124. Field Application of Subsurface Biodegradation of Gasoline in Sand Formation, API Publication 4430, August 1978
125. Field Study of Enhances Subsurface Biodegradation of Hydrocarbons Using Hydrogen Peroxide as an Oxygen Source, API Publication 4448, 1987
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129. Cost Model for Selected Technologies for Removal of Gasoline Components in Groundwater, API Publication 4422, February 1986
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131. Forced Venting to Remove Gasoline for a Large-Scale Model Aquifer, API Publication 4431, January 1984
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133. Groundwater, API Publication 4471, June 1988
134. Phase Separated Hydrocarbon Contaminant Modeling for Corrective Action, API Publication 4474, October 1988
135. Rehabilitation of Groundwater: Removal of Petroleum Contamination through Soil Application, API Publication 4475, February 1989
136. Cost-Effective, Alternative Treatment Technologies for Reducing the Concentration of Ethers and Alcohols in Groundwater, API Publication 4479, May 1991
137. Technological Limits of Groundwater Remediation: A Statistical Evaluation Method, API Publication 4510, June 1991
138. A Compilation of Field-Collected Cost and Treatment Effectiveness for the Removal of Dissolved Gasoline Components from Groundwater, API Publication 4525, November 1990

139. User's Manual for Regress: Statistical Evaluation of Asymptotic Limits of Groundwater Remediation, API Publication 4543, April 1992
140. Pump and Treat: The Petroleum Industry Perspective, API Publication 4561, December 1992
141. Detection of Hydrocarbons in Groundwater by Analysis of Shallow Soil/Gas Vapor, API Publication 4394, May 1985
142. Field Evaluation of Well Flushing Procedures, API Publication 4405, June 1985
143. Proceedings: Sampling and Analytical Methods for Determining Petroleum Hydrocarbons in Groundwater and Soil, API Publication DR 214, 1984
144. An Evaluation of Soil Gas and Geophysical Techniques for Detection of Hydrocarbons, API Publication 4509, August 1991
145. Sampling and Analysis of Gasoline Range Organics in Soil, API Publication 4516, October 1991 General References:
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154. Handbook of Environmental Fate and Exposure Data for Organic Chemicals, Volumes I and II, Lewis Publishers, Howard, Phillip, 1990
155. Handbook of Toxic and Hazardous Chemicals, Sittig, M., Noyes Publications, 1981
156. Health Aspects of the Disposal of Waste Chemicals, Grisham, J.W., Pergammon Press, 1986
157. Hawley's Condensed Chemical Dictionary, Lewis, R.J., Van Nostrand Reinhold Company, 1993
158. Dangerous Properties of Industrial Materials, Sax, I.J., Lewis, R.J., Van Nostrand Reinhold Company, 1989
159. Handbook on Environmental Data on Organic Chemicals, Verschuren, K., Van Nostrand Reinhold Company, 1983
160. The Soil Chemistry for Hazardous Materials, Dragun, J., Hazardous Material Research Institute, 1988
161. Contaminant Hydrogeology, Fetter, C.W., Macmillan Publishing Company, 1992
162. Handbook of Environmental Degradation Rates, Howard, P.H., Borthling, R.S., Jarvis, W.F., Maylan, W.M., Michalenko, E.M., Lewis Publishers, 1991

163. Standard Methods for Examination of Water and Wastewater, Latest Edition, American Public Health Association, Washington, DC

TASKS			ITEM DESCRIPTION	UOM	MAXIMUM ALLOWED
1			**LABOR CATEGORIES - Refer to Labor Qualifications and Descriptions**		
1.1			Principal	Per Hour	$0
1.2			Licensed Site Professional/ Licensed Professional Engineer	Per Hour	$145
1.3			Project Manager	Per Hour	$125
1.4			Senior Scientist/Senior Engineer/Senior Geologist	Per Hour	$125
1.5			Staff Scientist/Engineer/Geologist/Hydrogeologist II	Per Hour	$105
1.6			Scientist/Geologist/Hydrogeologist I	Per Hour	$80
1.7			Permits/Health & Safety Coordinator	Per Hour	$70
1.8			Construction Foreman	Per Hour	$90
1.9			Senior Technician/Technician III	Per Hour	$75
1.10			Technician II	Per Hour	$65
1.11			Technician I	Per Hour	$50
1.12			CADD Operator Including CADD Time	Per Hour	$65
1.13			Draftsperson	Per Hour	$50
1.14			Administrative Support	Per Hour	$50
1.15			Heavy Equipment Operator	Per Hour	$65
1.16			Truck Driver (multi-axle or tractor)	Per Hour	$50
1.17			Laborer	Per Hour	$50

2			**REPORT PREPARATION**		
2.1			Phase 1 Report per 310 CMR 40.0480 - Project disciplines include labor to conduct site review, background research, state and municipal file review, travel time, travel expenses, environmental database review, review of aerial photography, data evaluation and report preparation. Report to include site maps, groundwater contour map, boring/monitoring well logs, summary tables of analytical data, laboratory sheets with chain of custody, and other requirements as specified in 310 CMR 40.0480. Excludes file review fees.	NTE	$7,741
	2.1.1		File Review Fees charged by State Agency or Local Municipality	Actual	<$201
2.2			Phase II Scope of Work per 310 CMR 40.0834	NTE	$4,638
2.3			Phase II per 310 CMR 40.0830	NTE	$14,033
	2.3.1		Phase II Supplemental Addendum	Each	$4,280
2.4			Phase III per 310 CMR 40.0850	NTE	$7,618
	2.4.1		Phase III Supplemental Addendum	Each	$3,264
2.5			Phase IV per 310 CMR 40.0870	NTE	$8,935
	2.5.1		Phase IV Status Report per 310 CMR 40.0877	Each	$3,885
	2.5.2		Phase IV As Built Construction Report per 310 CMR 40.0875	Each	$1,284
	2.5.3		Phase IV Final Inspection Report per 310 CMR 40.0878	Each	$2,611
	2.5.4		Phase IV Supplemental Addendum Report	Each	$3,959
2.6			Phase V per 310 CMR 40.0890		
	2.6.1		Phase V Status Report, Remedy Operation Status Report, or Phase V Completion Statement per 310 CMR 40.0893 for an Active Remedial System	Each	$3,329
		2.6.1.1	Phase V Status Report, Remedy Operation Status Report, or Phase V Completion Statement per 310 CMR 40.0892 for an Active Remedial Monitoring Program	Each	$2,205
	2.6.3		Temporary Solution Status Report per 310 CMR 40.0897	Each	$3,329
2.7			Risk Assessment per 310 CMR 40.0900		
	2.7.1		Method 1 per 310 CMR 40.0973	Each	$4,039
	2.7.2		Method 2 per 310 CMR 40.0980	Each	$9,352
	2.7.3		Method 3 per 310 CMR 40.0990	Each	$30,000
	2.7.4		Feasibility of Permanent Solutions; Feasibility of Restoration to Background per 310 CMR 40.0860 & 40.1020.	Each	$1,642
	2.7.5		Micro/Macro NAPL Evaluation 310 CMR 40.1003(7)	Each	$1,642
2.8			Permanent/Temporary Solutions per 310 CMR 40.1000		
	2.8.1		Permanent Solution with No Conditions	NTE	$5,248
	2.8.3		Permanent Solution with Conditions	NTE	$5,248
		2.8.3.1	Permanent Solution with Conditions Annual Filing 310 CMR 40.1025(7)	NTE	$500
	2.8.8		Temporary Solution (Permanent Solution is Not Feasible)	NTE	$4,280
	2.8.9		Temporary Solution (Permanent Solution is Feasible)	NTE	$4,280
	2.8.10		LSP 5-Year Periodic Review of Temporary Solution & Opinion per 310 CMR 40.1050(4)(b)	Each	$1,969
2.10			Complete Tier 1 Permit Application per 310 CMR 40.0500	Each	$3,617
	2.10.1		Tier I Permit Extension per 310 CMR 40.0560(7)	Each	$1,798
	2.10.2		Minor Permit Modification per 310 CMR 40.0725	Each	$1,027
	2.10.3		Major Permit Modification per 310 CMR 40.0707	Each	$3,617
2.11			Tier II Permit Modification	Each	$1,027
	2.11.1		Tier II Extension Submittal	Each	$1,541
2.12			Release Abatement Measure Plan per 310 CMR 40.0444	Each	$2,579
	2.12.1		Release Abatement Measure Plan Addendum per 310 CMR 40.0444	Each	$1,284
	2.12.2		Release Abatement Measure Status Report per 310 CMR 40.0445	Each	$3,103
	2.12.3		Release Abatement Measure Plan Completion Report per 310 CMR 40.0446	Each	$4,077
	2.12.4		Release Abatement Measure Plan Design Specification	Each	$3,210
2.13			3885	Each	$3,114

TASKS			ITEM DESCRIPTION	UOM	MAXIMUM ALLOWED
	2.13.1		Immediate Response Action Plan Addendum per 310 CMR 40.0424	Each	$1,284
	2.13.2		Immediate Response Action Plan Status Report per 310 CMR 40.0425	Each	$3,103
	2.13.3		Immediate Response Action Plan Completion Report per 310 CMR 40.0427	Each	$4,077
	2.13.4		Immediate Response Action Plan Design Specification	Each	$3,210
	2.13.5		Combined Immediate Response Action Plan and Completion Report per 310 CMR 40.0427	Each	$5,746
2.14			Imminent Hazard Evaluation per 310 CMR 40.0426	Each	$3,852
	2.14.1		Substantial Hazard Evaluation per 310 CMR 40.0956	Each	$3,852
2.15			LSP Opinion to remove off gas controls	Each	$1,284
2.16			Activity and Use limitations per 310 CMR 40.1000	Each	$5,832
	2.16.1		Amendment to Activity and Use Limitations per 310 CMR 40.1000	Each	$1,969
2.17			Legal Fees for Activity and Use Limitations per 310 CMR 40.1000	Each	$0
2.18			Consultant/Client Project Review Per Year	T&M	$0
2.19			Public Involvement per 310 CMR 40.1400	T&M	$25,680
2.20			Police Detail	T&M	$0
2.21			Prepare Monitoring Well & Boring Logs	Per Log	$80
2.22			Prepare Remedial Monitoring Form per 310 CMR 40.0000	Each	$535
3			**HEALTH AND SAFETY PLAN**		
3.1			Prepare a site specific health and safety plan	Each	$193
3.2			Update Health and Safety Plan	Each	$128
3.3			Level A Personal Protective Equipment	Per Person / Per Hour	$50
	3.3.1		Level A Fully Encapsulated Suit and Self Contained Breathing Apparatus	Per Day	$193
3.4			Level B Personal Protective Equipment	Per Person / Per Hour	$33
3.5			Level C Personal Protective Equipment	Per Person / Per Hour	$17
3.6			Confined Space Entry Equipment	Per Day	At Cost
3.7			Air monitoring for petroleum product derived air contaminants. Project disciplines include labor to conduct air monitoring, field screening and supervision. Includes PID, oxygen/explosion meter, toxic gas monitoring and/or sampling equipment (air pump and calibrator) sample jars or Tedlar bags, sampling incidentals, color metric sampling equipment, sample collection, sample preparation, sample logging, sample storage, transportation of samples to laboratory, subcontractor coordination, field preparation, travel time and vehicle expense.		
	3.7.1		Full Day (greater than 6 hours including travel)	Per Day	$1,284
	3.7.2		Half Day (up to 6 hours including travel)	Per ½ Day	$963
4			**PRE-FIELD AND PROJECT IMPLEMENTATION ACTIVITIES (for site**		
4.1			Pre-field coordination activities. Project disciplines include the scheduling of field activities with personnel conducting field work and any other support operations, e.g. drillers, subcontractors, inspectors, and site owner/operator. Excludes obtaining soil boring/monitoring well permits due to variations in requirements set forth by different state and local agencies. See additional guidance.	Per Field Event	$514
4.2			Pre-field activity site visit, Dig Safe site and mark all utilities. To include site visit to verify markings, if necessary.	Per Field Event	$321
4.3			Post-field activity site Visit - See additional guidance	Per Field Event	$385
4.4			Utility / Buried Equipment Location Survey - (using GPR, magnetometer,..)	Per site	$1,500
5			**OBTAIN PROPERTY ACCESS**		
5.1			Obtain property access - Project disciplines to include all labor, material, and documentation required for obtaining right of entry permits. To include contacting the property owner, local and/or state agencies by telephone with a maximum of four attempts, to coordinate off-site access. Submit a standard access agreement letter and plan depicting proposed locations to the property owner, local and/or state agency. Provide standard installation guidelines and details for the proposed work. Provide copy(ies) of letters of denial to third parties when access denied. See Task code 17 for Road Opening Permits	Per Agreement or Addendum	$770
6			**EXCAVATED SOILS MONITORING/HANDLING/REPORTING,**		
6.1			Excavated Soil Field Monitoring - Project disciplines include labor to monitor excavated soils per 310 CMR 40.0000. Includes PID, oxygen/explosion meter, toxic gas monitoring equipment, sample jars, sampling incidentals, field screening of soil samples, sample collection, sample preparation, sample logging, sample storage, transportation of samples to laboratory, subcontractor coordination, field preparation, travel time, and vehicle expense. To include shoring oversight by PE or competent equivalent.		
	6.1.1		Full Day monitoring (greater than 6 hours including travel expense)	Per Day	$1,284
	6.1.2		Half Day monitoring (up to 6 hours including travel expense)	Per ½ Day	$963

TASKS			ITEM DESCRIPTION	UOM	MAXIMUM ALLOWED
	6.1.3		Soil Excavation Labor (refer to Task code 1 for applicable hourly labor maximums, Task code 28-series for vehicles and heavy equipment, and Task code 6.6 for backfill materials.	Per Day	$2,247
6.2			Disposal Management - Review laboratory results for waste characterization, prepare Manifest/Bill of Lading, LSP Certification, and contractor/client coordination.	NTE Per BOL	$642
6.3			Soil Disposal/Hot Recycling and transportation (max 8,000 tons) NOTE: 1 cuyd equals approx. 1.5 tons of soil. A minimum of 3 BIDS required or a maximum of $48/ton will be allowed. (see Workbook)	Actual	At Cost
6.4			Soil Disposal/Cold Recycling and transportation (max 8,000 tons) NOTE: 1 cuyd equals approx. 1.5 tons of soil. A minimum of 3 BIDS required or a maximum of $48/ton will be allowed. (see Workbook)	Actual	At Cost
6.5			Soil Disposal/Lined landfill and transportation (max 8,000 tons) NOTE: 1 cuyd equals approx. 1.5 tons of soil. A minimum of 3 BIDS required or a maximum of $48/ton will be allowed. (see Workbook)	Actual	At Cost
	6.5.1		Soil Disposal/Unlined landfill and transportation	Per Ton	$0
6.6			Backfill materials, including loam, sand, stone, etc. delivered to Site. See additional guidance. NOTE: 1 cubic yard equals approximately 1.5 tons of soil.	Actual	At Cost
6.7			Bioremediation - Ex or In-Situ Treatment includes all labor, material, equipment, bacteria, nutrients, water and other ingredients necessary for the bioremediation application. Project disciplines includes labor to conduct the bioremediation application, site supervision, subcontractor coordination, purchase of bioremediation application materials, e.g., bacteria, water, and nutrients, field preparation time and travel time. Volume of soil and/or groundwater to be treated is calculated on a cubic yard basis. See additional guidance. NOTE: 1 cubic yard equals approximately 1.5 tons of soil.	CU/YD	$23
	6.7.1		Bioremediation or chemical application feasibility bench scale evaluation and report for groundwater.	NTE	$3,210
	6.7.2		Bioremediation or chemical application feasibility bench scale evaluation and report for groundwater and soil.	NTE	$5,136
6.8			Oxygen Filter Socks for Monitoring Wells		
	6.8.1		Oxygen Filter Socks for 2" diameter Monitoring Wells	Per Foot	$30
	6.8.2		Oxygen Filter Socks for 4" diameter Monitoring Wells	Per Foot	$45
	6.8.3		Oxygen Filter Socks for 8" diameter Monitoring Wells	Per Foot	$78
	6.8.4		Labor to replace/install Oxygen Filter Sock	Per Well	$50
6.9			Oxygen Release Powder in Bulk		
	6.9.1		Oxygen Release Powder in Bulk	Per LB	At Cost
6.10			Oxygen Cylinder	Actual	At Cost
	6.10.1		Oxygen/nitrogen gas	Actual	At Cost
6.11			Oxidant Injections, includes travel time and equipment (excludes all chemicals see 6.11.3) (See Task Code 3 for Health & Safety Equipment) (See Workbook for drilling codes)		
	6.11.1		Full Day (greater than 6 hours including travel up to and including 10 hours)	Per Day	$2,700
	6.11.3		Chemicals	Actual	At Cost
6.12			Surfactant Injection, includes travel time and equipment (See Task code 3 for Health & Safety Equipment)		
	6.12.1		Full Day (greater than 6 hours including travel)	Per Day	$2,700
	6.12.2		Half Day (up to 6 hours including travel)	Per ½ Day	$2,140
	6.12.3		Chemicals	Actual	At Cost

7			**PORTABLE G.C.**		
7.1			Portable G.C. for use on site, including operator and equipment incidentals, e.g. sample jars, standards, syringes, printer, carrier gas, regulator, etc. Includes travel time and vehicle expense. Analyses limited to total volatile hydrocarbons or aromatics in air, water or soil. All sample techniques and methods per MassDEP Policy WSC 310-91. Provide report containing all printed data, QA/QC procedure, GC calibration records, and field notes.		
	7.1.1		Half Day Rate (6 hours or less including travel expenses)	Per Day	$877
	7.1.2		Full Day Rate (Greater than 6 hours including travel expenses)	Per Day	$1,428
	7.1.3		Weekly Rate (5 or more >6-hour days on site)	Per Week	$6,420
	7.1.4		Analysis/Sampling Report	Each	$1,027
	7.1.5		Tedlar Bags		
		7.1.5.1	1 Liter	Each	$19
		7.1.5.2	3 Liter	Each	$23
		7.1.5.3	5 Liter	Each	$25
7.2			Passive Soil Gas Sensors, e.g. Gore Sorber or equivalent	Each	At Cost

9			**DRILLING ACTIVITIES. Three (3) competitive bids may be obtained for work and/or materials covered by this task in place of or used in conjunction with the unit price(s) below.**		

TASKS			ITEM DESCRIPTION	UOM	MAXIMUM ALLOWED
9.1			Equipment mobilization/demobilization (same for all drilling types, includes travel for drill rig, support vehicles and personnel). Based on 8 hours on-site.		
	9.1.1		1 - 50 Miles (radius)	Each	$360
	9.1.2		>50 Miles (radius)	Each	$480
	9.1.3		Overtime (Over 8 hours on site inclusive of drill rig, support vehicles, and drilling personnel, not for oversight labor).	Per Hour	$300
9.2			Inspector oversight of field work including: Vacuum Excavation, Drilling, Rock Coring, Groundwater Monitoring Well, Recovery Well, SVE Well, and AS Point Installation and Soil Sampling - Project Disciplines include labor to conduct borehole logging, field screening, and site supervision. Includes PID, oxygen/explosion meter, toxic gas monitoring equipment, sample jars, sampling incidentals, field screening of soil samples, sample collection, sample preparation, sample logging, sample storage, transportation of samples to laboratory, subcontractor coordination, field preparation, travel time, and vehicle expense.		
	9.2.1		Full Day (greater than 6 hours including travel)	Per Day	$1,284
	9.2.2		Half Day (up to and including 6 hours including travel)	Per ½ Day	$963
9.3			Soil Borings, Sampling, and Monitoring, Recovery, SVE, AS well installation and completion. All labor and equipment are included under Task Codes 9.3.1.1 to 9.3.1.5. All materials for the construction of PVC wells / points are included under Task Codes 9.3.2.1 to 9.3.2.5. Air compressor and drums are not included. Refer to guidance for special materials not included.		
	9.3.1		All labor and equipment [inclusive of drill rig and support vehicle(s)] required for the performance of soil borings, soil sampling, installation and completion of Monitoring, Recovery, SVE, and AS wells, and soil gas sampling points (day rates include well development, sawcutting, temporary groundwater well head make-up and pad labor, drumming labor, decontamination procedures, and general site restoration (per DEP WSC 310-91). Does not include grout pump and materials, see Task Code 9.3.5 or air compressor for air rotary drilling, see Task code 28.		
		9.3.1.1	Direct Push	Per Day	$1,500
		9.3.1.3	Hollow Stem Auger	Per Day	$1,600
		9.3.1.4	Air Hammer Bit Wear	Per foot	$20
		9.3.1.6	Drilling ½-day rate	Per ½ Day	$800
	9.3.2		Except as noted, materials include all types of PVC riser and screen pipe, j-plugs, bentonite, and sand (excludes manholes/roadboxes) .		
		9.3.2.1	Direct push acetate liners (up to 5' in length)	Each	$12
		9.3.2.2	<2" Monitoring, Injection, AS, SVE, Recovery Well	Per Foot	$9
		9.3.2.3	2" to <4" Monitoring, Injection, AS, SVE, Recovery Well	Per Foot	$12
		9.3.2.4	4" to <6" Monitoring, Injection, AS, SVE, Recovery Well	Per Foot	$17
		9.3.2.5	6" Monitoring, Injection, AS, SVE, Recovery Well	Per Foot	$28
		9.3.2.6	Bedrock Casing 6" or less	Per Foot	$46
	9.3.3		Monitoring, SVE, AS, Recovery well roadbox (Installation not done in conjunction with drilling task), includes concrete pad, traffic-rated roadbox, and installation labor.	Per Well	$300
		9.3.3.1	Monitoring, SVE, AS, Recovery well roadbox (Installation done in conjunction with drilling task), includes concrete pad, traffic-rated roadbox, and installation labor.	Per Well	$225
	9.3.4		Monitoring, SVE, AS, Recovery well manhole (Installation not done in conjunction with drilling task), includes concrete pad, traffic-rated manhole, and installation labor.	Per Well	$400
		9.3.4.1	Monitoring, SVE, AS, Recovery well manhole (Installation done in conjunction with drilling task), includes concrete pad, traffic-rated manhole, and installation labor.	Per Well	$325
	9.3.5		Grouting (inclusive of pump and grout materials) labor included in 9.3.1.1 to 9.3.1.5.	Per Foot	$12
9.4			Rock Coring/Sampling to assess competency of and classify bedrock (includes drill rig, materials, labor, grouting, drums, drumming labor, restoration of work area to original and decontamination procedures; saw cutting included in per foot cost, units are per boring and including steam cleaner).		
	9.4.1		HQ 2 7/8" or equivalent.	Per Foot	$20
	9.4.2		PQ 3 7/8" or equivalent.	Per Foot	$36
	9.4.5		Tripod Rig	Per Day	At Cost
	9.4.6		Concrete coring		At Cost
9.5			Vibratory/Slide Hand-held Hammer - Includes the cost for all labor and equipment to install soil, soil gas and groundwater sample collection points.	Per Day	$706
	9.5.1		Non well materials for soil, soil gas and groundwater sample collection points by vibrating/slide hand-held hammer.	Actual	At Cost
9.6			Hand Auger for sample collection point installation or sample collection.	Per Day	$642
9.7			Well surveying		
	9.7.1		Surveying (un-licensed)		

TASKS			ITEM DESCRIPTION	UOM	MAXIMUM ALLOWED
		9.7.1.1	Half Day (6 hours or less including travel)	Per ½ Day	$1,065
		9.7.1.2	Full Day (greater than 6 hours including travel)	Per Day	$1,685
		9.7.1.3	Drafting - See additional guidance	Per Event	$669
	9.7.2		Licensed Professional Survey		
		9.7.2.1	Half Day (6 hours or less including travel)	Per ½ Day	$1,338
		9.7.2.2	Full Day (greater than 6 hours including travel)	Per Day	$2,568
		9.7.2.3	Drafting - See additional guidance	Per Event	$1,070
9.8			Professional Utility Survey - includes above and underground utilities, inverts, reference to most current datum and drafting.	NTE	$3,100
9.9			Ground Penetrating Radar Survey & Report	NTE	$2,675

10			MONITORING/RECOVERY WELL DEVELOPMENT		
10.1			Equipment mobilization/demobilization (includes oversight, drill rig, labor, materials, travel and steam cleaner) See Task code 28 for liquids disposal.		
	10.1.1		Equipment mobilization/demobilization 1-50 miles (radius)	Each	$360
	10.1.2		Equipment mobilization/demobilization > 50 miles (radius)	Each	$480
10.2			2" Well Development	Per Hour	$104.00
10.3			4" Well Development	Per Hour	$104.00
10.4			6-10" Well Development	Per Hour	$321
10.5			12"-26" Well Development	Per Hour	$366

11			GROUNDWATER GAUGING/BAILING AND SAMPLING		
11.1			Labor and equipment to perform inspection, gauging, sampling of wells and product bailing (if required), all sampling equipment, all gauging equipment, sample jars, sampling incidentals, sample preparation, sample logging, sample storage, transportation of samples to laboratory, travel time and vehicle expenses, instruments, and decontamination materials. Do not combine Task Codes for sites with multiple monitoring wells. For example, if 15 monitoring wells are purged and sampled, use Task Code 11.1.3.2 for all 15 monitoring wells; not 11.1.3.1 for 10 and 11.1.3.2 for the other 5 monitoring wells. POET System sampling should be coded under Task code 23.		
	11.1.1		Includes all disciplines/equipment and travel	NTE/Event	$455
	11.1.2		Well gauging (include all related costs)	Per Well	$31
	11.1.3		Well purging and sampling using hand bailer (incremental cost over gauging; include all related costs)<35' deep	Per Well	$68
	11.1.4		Well purging and sampling using hand bailer (incremental cost over gauging; include all related costs)> 35' deep	Per Well	$74
	11.1.5		Hand Bail NAPL	Per Well	$64
	11.1.6		Field Filtration of Groundwater Sample	Per Sample	$43
	11.1.7		Field Measurements (DO, pH, Turbidity, Conductivity, Temperature)	Per Well	$25
	11.1.8		Well sampling using pump (incremental cost OVER gauging; include all related costs) <35' deep	Per Well	$82
	11.1.9		Well sampling using pump (incremental cost over gauging; include all related costs)>35' deep	Per Well	$108
11.2			Additional Person to Sample Monitoring Wells Due to Traffic Considerations	NTE/Hour	$80
11.3			Disposable Bailer with VOC Sampler	Each	$10
11.4			Surface Water and/or Sediment Sampling		
	11.4.1		Labor	Per Event	$2,400
	11.4.2		Equipment	Actual	At Cost
	11.4.3		Catch Basin Sampling	Per Event	$540
11.5			Potable Well/Tap Sampling	Per Sample	$71
11.6			Adsorbent Boom/Passive Skimmer Placement and/or Removal – Labor Only. Material cost of passive skimmer/ boom or sock should be coded under Task code 29.	Per hour	$75

12			AQUIFER PUMP TEST		
12.1			Perform an 8 hour step and/or a 12, 24 or 48-hour constant discharge pumping test: Subtasks shall include the following: • 2 Personnel to be on site at all times • Maximum of 10 data points to be evaluated • All equipment, materials and supplies • Equipment mobilization/demobilization • Disciplines travel • Field preparation (inc. all material and equipment) • 8 hour step discharge test • 12/24/48-hour constant discharge test with recovery • Coordinate storage of extracted groundwater (if required) • Test analysis, documentation and report • Project disciplines cost NOTE: For storage, disposal, or treatment operation of extracted water, refer to other pertinent Task codes. See additional guidance.		
	12.1.1		Aquifer Pump Test		
		12.1.1.1	Step discharge (up to 8 hours)	NTE	$2,889

TASKS			ITEM DESCRIPTION	UOM	MAXIMUM ALLOWED
		12.1.1.2	12 hour constant discharge	NTE	$3,745
		12.1.1.3	24 hour constant discharge	NTE	$5,778
		12.1.1.4	48 hour constant discharge	NTE	$10,486

13			RISING OR FALLING HEAD (SLUG) TEST / LNAPL BAIL DOWN TEST		
13.1			Perform rising or falling head (slug) test;		
	13.1.1		Full Day (Greater than 6 hours on site)	Per Day	$2,461
	13.1.2		Half Day (6 hours or less on site)	Per Day	$1,498

14			SOIL VAPOR EXTRACTION / AIR SPARGING TESTING		
14.1			Labor and equipment to perform VES and/or air sparge testing;		
	14.1.1		Conduct extraction test with air emissions treatment (<10" Hg)	NTE	$4,927
	14.1.2		Conduct high vacuum extraction test with air emissions treatment (>10" Hg)	NTE	$6,163
	14.1.3		Conduct sparge test in conjunction w/SVE test with air emissions treatment	NTE	$5,184
	14.1.4		Conduct sparge test only w/existing SVE system	NTE	$3,750

15			REMEDIATION FEASIBILITY STUDIES (NET PRESENT VALUE)		
15.1			Feasibility study - See additional guidance.		
	15.1.1		NPV analysis on 2 options	NTE	$514
	15.1.2		NPV analysis for each additional item	NTE	$193

16			LEASE/PURCHASE ANALYSIS & BID SPECIFICATIONS		
16.1			Lease vs. Purchase analysis per 503 CMR 2.10(c) - See additional guidance.	NTE	$385
16.2			Bid Specification Preparation Time - See additional guidance.	Each	$3,852

17			REMEDIATION PERMITTING		
17.1			Permit preparation, acquisition, and monitoring. Permit fees to governmental agencies are not reimbursable. Refer to Task code 20 for utility permits		
	17.1.1		Discharge Permits		
		17.1.1.1	NPDES - Permit Exclusion	Each	$535
		17.1.1.2	NPDES - Formal Application/Remediation General Permit	Each	$2,675
		17.1.1.3	MADEP - Surface Water Discharge Permit	Each	$1,798
		17.1.1.4	Industrial discharge/POTW/MWRA Permit	Each	$2,311
		17.1.1.5	Local Discharge Permit	Each	$1,070
		17.1.1.6	Air Emissions Permit	Each	$1,027
		17.1.1.7	Discharge Monitoring Reports		
		17.1.1.7.1	Initial Discharge Monitoring Report	Each	$444
		17.1.1.7.2	Monthly Discharge Monitoring Report	Each	$353
		17.1.1.7.3	Quarterly Discharge Monitoring Report	Each	$444
		17.1.1.8	Permitted Remediation Dewatering - project disciplines include labor to monitor groundwater remediation pumping and treatment equipment per Permit requirements. Includes PID, oxygen explosion meter, toxic gas monitoring equipment, sample jars, sampling incidentals, field screening of water samples, and transportation of samples to laboratory, subcontractor coordination, field preparation and travel time.		
		17.1.1.8.1	Full Day (up to and including 25.5 hours of labor on site with 1/2 hour overlap between shifts)	Per Day	$2,500
	17.1.2		Building Permit	Each	$856
	17.1.3		Wetlands Approval and/or Rivers Protection Act - Includes DEP required sign	Each	$4,366
	17.1.4		Road Opening Permit / Trenching Permit	Each	$770
		17.1.4.1	Prepare and Submit Traffic Plan to the State Department of Public Works	Each	$1,284
	17.1.5		Other required permit	Each	$257
	17.1.6		Dye Test to Confirm Outfall Location	Each	$428

18			TRENCHING AND INSTALLATION OF UNDERGROUND PIPING AND		
18.1			Project disciplines cost - Full Day (greater than 6 hours including travel time) (supervision and oversight)	Per Day	$1,284
18.2			Project disciplines cost - Half Day (6 hours or less including travel time) (supervision and oversight)	Per ½ Day	$963
18.3			Installation Crew, Up to and including 8 hours on site and inclusive of travel time. To be utilized in conjunction with other applicable Task codes 28-series. Use for all tasks associated with installation of underground piping, remediation infrastructures (i.e. shed and vaults), and site restoration activities.	Per Day	$2,568
18.4			Remediation system materials, including but not limited to pipe, fittings and adapters, glue, primer, backfill materials, asphalt, concrete and cement, final roadbox/manhole installation, etc.	Actual	At Cost
18.5			Remediation equipment compound and/or shed, including explosion proof lights & heater. For electrical installation, refer to Task 20.4		
	18.5.1		<80 Square foot - flat roof	Per Shed	$7,687.50

TASKS			ITEM DESCRIPTION	UOM	MAXIMUM ALLOWED
	18.5.2		<80 Square foot - gable roof	Per Shed	$7,775
	18.5.3		80 - 120 Square foot - flat roof	Per Shed	$8,312.50
	18.5.4		80 - 120 Square foot - gable roof	Per Shed	$8,718.75
	18.5.5		121 - 150 Square foot - flat roof	Per Shed	$8,968.75
	18.5.6		121 - 150 Square foot - gable roof	Per Shed	$9,218.75
	18.5.7		151 - 240 Square foot - flat roof	Per Shed	$10,475
	18.5.8		151 - 240 Square foot - gable roof	Per Shed	$10,850
	18.5.9		>240 Square foot - flat roof	Per Shed	$12,675
	18.5.10		>240 Square foot - gable roof	Per Shed	$13,150
	18.5.11		Equipment pad		
		18.5.11.1	Concrete slab (6" deep, reinforced with wire mesh)		
		18.5.11.1.1	<80 Square foot	SF	$10.00
		18.5.11.1.2	80 - 120 Square foot	SF	$7.25
		18.5.11.1.3	121 - 150 Square foot	SF	$6.00
		18.5.11.1.4	151 - 240 Square foot	SF	$5.00
		18.5.11.1.5	>240 Square foot	SF	$4.75
		18.5.11.2	Cast in place footing (1' x 1' reinforced concrete deadman)	LF	$18
		18.5.11.3	Concrete berm (where required)	LF	$30
	18.5.12		Equipment compound fencing - installed		
		18.5.12.1	Fencing - 6 foot high stockade	LF	At Cost
		18.5.12.2	Fencing - 6 foot high chain link	LF	At Cost
		18.5.12.3	Fencing - Gates	LF	At Cost

20			**INSTALLATION OF UTILITIES FOR REMEDIATION SYSTEMS ONLY**		
20.1			Coordination of utility installation, including phone calls, permit applications and associated paperwork. Remediation systems to be metered separately from all other uses. Reimbursement per utility. Monthly utility bills are coded under 23.2. Site visits may also be included under task code 4.2	Per Utility	$642
20.2			Utility installation costs from street to meter excluding federal, state or local governmental fees.	Actual	At Cost
20.3			Electrical Installation Crew to complete the electrical service and the remediation system installation, including labor for electrical work related to equipment components identified in Task codes 21 and 22. Three (3) competitive bids may be obtained for work and/or materials covered by this task in place of or used in conjunction with the unit price(s).	Per Day	$1,600
20.4			Remediation System Electrical installation materials. (e.g. conduit, wire, breakers, service panel, mast for meter, etc) Purchase of Remediation System electrical control panel should be coded to 21.4 or 22.4	Actual	At Cost

22			**PURCHASE AND INSTALLATION OF SURFACE COMPONENTS OF REMEDIATION SYSTEMS (INCLUDING PORTABLE, SKID-MOUNTED AND STAND ALONE SYSTEM COMPONENTS) NOTE: Three (3) competitive bids may be obtained for work and/or materials covered by these Task Codes in place of the unit price(s), or in conjunction with the unit price(s). Three (3) bids may be required for task code 22.4. See additional guidance.**		
22.1			Removal and reinstallation of surface components of remediation systems (including portable, skid-mounted and stand alone system components).	NTE	$12,840
22.2			Removal and/or storage of remediation equipment (including portable, skid mounted and stand alone system components).	NTE	$3,852
22.3			Installation crew, travel time and vehicle expense	Per Day	$1,712
22.4			Remedial System Equipment Purchase - Surface Components of Remediation Systems. This task code can only be used for single components <=$5,000 with a $25,000 system aggregate. Three bids are required for components >$5,000 and systems >$25,000. See additional guidance.	Actual	At Cost
23			**SVE AND GROUNDWATER REMEDIATION SYSTEMS OPERATION AND MAINTENANCE**		
23.1			General O&M of Remedial Systems - Project Disciplines include labor to obtain operational measurements of system, vapor and liquid sample collection, and routine system component maintenance. Includes PID/FID, pitot tube/rotameter, hand pump, sample jars, sampling incidentals, field screening of samples, sample preparation, sample logging, sample storage, transportation of samples to laboratory, subcontractor coordination, field preparation, travel time, and vehicle expenses (excludes labor and materials associated with groundwater monitoring, gauging, sampling, which are to use the task codes in Task code 11).		
	23.1.1		Full Day is greater than 6 hours inclusive of travel time and expense. One hour total of project management/administrative time is allowed under this task code and is included in the day rate.	Per Day	$1,284
	23.1.2		Half Day is up to 6 hours inclusive of travel time and expense. One hour total of project management/administrative time is allowed under this task code and is included in this half day rate.	Per ½ Day	$963

TASKS			ITEM DESCRIPTION	UOM	MAXIMUM ALLOWED
	23.1.3		Extra Person on site to accomplish labor intensive tasks (i.e. Air stripper cleaning, air stripper packing replacement, moving equipment, etc) - Reason for extra person required with submission.	Per Hour	$65
	23.1.4		Non-incidental operation and maintenance materials (filter elements, sequestering agents, chemical additives, etc.) This code is only for operation and maintenance materials	Actual	At Cost
23.2			Utilities - Metered separately from all other uses.	Actual	At Cost
23.3			Repair of system per year from system start-up, per year, including labor, see additional guidance	NTE	$8,560
23.4			Cleaning Air Stripper Trays or Towers - (materials and disposal.)		
	23.4.1		Packing replacement/disposal	Actual	At Cost
	23.4.2		Acid wash air stripper tray or tower	Actual	At Cost
23.5			Carbon treatment system		
	23.5.1		Carbon or <200 lbs Carbon vessel replacement (liquid or vapor phase / virgin or regenerated)	Actual	At Cost
	23.5.2		Carbon or <200 lb Carbon vessel - Disposal/reactivation	Actual	At Cost
23.6			Contaminated liquid removal and disposal		
	23.6.1		Contaminated Water Disposal-Bulk - Includes labor	Per Gallon	$1.93
	23.6.2		NAPL and Disposal	Per Gallon	$2.25
	23.6.3		Sludge and Disposal-Bulk	Per Gallon	$11.24
	23.6.4		Contaminated Water Disposal - 6 Drums Maximum	Per 55 Gal Drum	$257
		23.6.4.1	Transportation of Drum(s)	Per Event	$385
	23.6.5		Mixed Media Disposal/Nonrecyclable or Characteristic Hazardous Waste - 10 Drums Maximum	Per 55 Gal Drum	$1,440
		23.6.5.1	Transportation of Drum(s)	Per Event	$1,200
	23.6.6		Virgin Petroleum Oil Contaminated Soil - 10 Drums Maximum	Per 55 Gal Drum	$161
		23.6.6.1	Transportation of Drum(s)	Per Event	$385
	23.7		Piping & Instrumentation Diagram (P&ID)	Per system	$1,300

24			CONCRETE WELL PAD/ROAD BOX/MANHOLE REMOVAL AND REPLACEMENT/REPAIR		
24.1			Remove and replace concrete pad/manhole/road box/standpipe		
	24.1.1		Pad replacement (old and new pad elevation shall remain consistent, if appropriate) Task maximum for this activity is inclusive of travel time and equipment.		
		24.1.1.1	1 - 3 Pads	Per Pad	$353
		24.1.1.2	> 3 Pads	Per Pad	$316
	24.1.2		Replace traffic-rated roadbox or standpipe (<18" diameter) and pad (Includes pad replacement)		
		24.1.2.1	1 - 3 Roadbox	Each	$417
		24.1.2.2	>3 Roadbox	Each	$385
	24.1.3		Replace traffic-rated manhole (>=18" diameter) and pad (Includes pad replacement)		
		24.1.3.1	Manholes	Actual	At Cost
	24.1.4		Locking Monitoring Well Plugs as Replacement		
		24.1.4.1	2" Diameter	Each	$20
		24.1.4.2	4" Diameter	Each	$30
		24.1.4.3	6" Diameter	Each	$40
	24.1.5		Replacement monitoring well covers with O-rings		
		24.1.5.1	4" Diameter	Each	$30
		24.1.5.2	6" Diameter	Each	$35
		24.1.5.3	8" Diameter	Each	$38
		24.1.5.4	12" Diameter	Each	$55
		24.1.5.5	Well cover repair	Each	$50

25			WELL ABANDONMENT		
25.1			Equipment mobilization/demobilization (includes equipment travel)		
	25.1.1		Equipment mobilization/demobilization 1-50 miles (radius)	Each	$360
	25.1.2		Equipment mobilization/demobilization > 50 miles (radius)	Each	$480
25.2			Inspector oversight of field work including: Project Disciplines include labor to oversee well abandonment including subcontractor coordination, field preparation, travel time, and vehicle expense.		
	25.2.1		Full Day (greater than 6 hours including travel)	Per Day	$1,284
	25.2.2		Half Day (up to and including 6 hours including travel)	Per ½ Day	$963
25.3			Well abandonment by pressure grouting		
	25.3.1		2" Diameter well	Per Foot	$17
	25.3.2		4" Diameter well	Per Foot	$20
	25.3.3		6" Diameter well	Per Foot	$23
	25.3.4		8" Diameter well	Per Foot	$29
25.4			Well abandonment by drill out and grout method (all per foot costs include restoration of work area, clean-up)		
	25.4.1		2" Diameter well	Per Foot	$17

TASKS			ITEM DESCRIPTION	UOM	MAXIMUM ALLOWED
	25.4.2		4" Diameter well	Per Foot	$23
	25.4.3		6" Diameter well	Per Foot	$29
	25.4.4		8" Diameter well	Per Foot	$35
25.5			DEP Report submitted by Licensed Driller	NTE	$270

26			DEP AND MCP REQUIRED MEETINGS AND OUT OF SCOPE TRAVEL		
26.1			All disciplines: labor, equipment, and travel cost (including all related hrs.) for DEP/MCP meetings. See additional guidance.		
	26.1.1		0 - 50 Miles (radius)	NTE/Per Event	$326
	26.1.2		51 - Maximum 100 Miles (radius)	NTE/Per Event	$439
	26.1.3		DEP Requested Meetings	Each	$1,284
		26.1.3.1	DEP Information Gathering & Response	NTE/Per Event	$1,284
		26.1.3.2	Audit Follow-Up Plan per 310 CMR 40.1160	NTE/Per Event	$2,311
		26.1.3.3	Audit Follow-Up Plan Completion Statement per 310 CMR 40.1170	NTE/Per Event	$3,210
	26.1.4		Post RAO DEP Audit	NTE	$1,284
26.2			LSP Site Visit (includes labor, travel time and vehicle) Up to 2 visits per year.	Per Year	$1,284
27			LABORATORY ANALYSIS	UOM	PRICE
27.1			**GENERAL CHEMISTRY**		
	27.1.3		Oil & Grease	Each	$57.00
	27.1.5		pH	Each	$14.00
	27.1.6		Total Organic Carbon	Each	$45.00
	27.1.8		Turbidity	Each	$14.00
		27.1.8.1	Total Dissolved Solids.	Each	$15.00
		27.1.8.2	Total Suspended Solids	Each	$16.00
		27.1.8.3	Total Settleable Solids.	Each	$16.00
	27.1.10		Salinity	Each	$17.00
	27.1.11		Total Kjeldahl Nitrogen	Each	$35.00
	27.1.12		Nitrogen, Nitrate	Each	$18.00
	27.1.13		Nitrogen, Nitrite	Each	$16.00
	27.1.14		Nitrogen Ammonia	Each	$22.00
	27.1.15		Total Phosphorous	Each	$25.00
	27.1.16		Percent Moisture	Each	$11.00
	27.1.17		Sulfate US EPA Method 375.40 (Groundwater Only)	Each	$17.00
	27.1.18		Chloride US EPA Method 325.1 or Standard Methods 4500-CLB (Groundwater Only)	Each	$16.00
	27.1.20		MBAS (Surfactants)	Each	$50.00
	27.1.21		Sulfide	Each	$26.00
	27.1.25		Phenolics	Each	$34.00
	27.1.27		Total Residual Chlorine	Each	$19.00
	27.1.28		Specific Conductance	Each	$12.00
	27.1.29		CTAS Surfactants	Each	$132.00
27.2			**MICROBIOLOGY**		
	27.2.1		Bioremediation parameters		
		27.2.1.1	Total Viable Organisms (HTPC)	Each	$60.00
		27.2.1.5	Petroleum & BTEX Degraders	Each	$108.00
		27.2.1.6	Biological Oxygen Demand	Each	$29.00
		27.2.1.7	Chemical Oxygen Demand	Each	$25.00
		27.2.1.8	CO2 (Carbon Dioxide)	Each	$31.00
27.3			**METALS & MINERALS**		
	27.3.1		Aluminum	Each	$13.00
	27.3.2		Antimony	Each	$13.00
	27.3.3		Arsenic	Each	$13.00
	27.3.4		Barium	Each	$13.00
	27.3.5		Beryllium	Each	$13.00
	27.3.6		Boron	Each	$13.00
	27.3.7		Cadmium	Each	$13.00
	27.3.8		Calcium	Each	$13.00
	27.3.9		Chromium, Total	Each	$13.00
	27.3.10		Chromium, Hexavalent	Each	$32.00
	27.3.10.1		Chromium, Trivalent	Each	$72.00
	27.3.12		Copper	Each	$13.00
	27.3.13		Total Iron (Total FE)	Each	$21.00
		27.3.13.1	Ferrous Iron (FE2)	Each	$31.00
		27.3.13.2	Ferric Iron (FE3)	Each	$61.00
	27.3.14		Lead	Each	$18.00
		27.3.14.1	Tetra-ethyl Lead. This is an additional method applicable to water only. Method ASTM E3341-91M	Each	$130.00
	27.3.16		Magnesium	Each	$13.00
	27.3.17		Manganese	Each	$13.00
	27.3.18		Mercury	Each	$13.00
	27.3.19		Molybdenum	Each	$13.00
	27.3.20		Nickel	Each	$13.00
	27.3.21		Potassium	Each	$13.00
	27.3.22		Selenium	Each	$13.00

TASKS			ITEM DESCRIPTION	UOM	MAXIMUM ALLOWED
	27.3.23		Silver	Each	$13.00
	27.3.24		Sodium	Each	$13.00
	27.3.29		Zinc	Each	$13.00
	27.3.30		RCRA 8 Metals - AS/BA/CD/CR/PB/HG/SE/AG *	Each	$95.00
	27.3.31		Priority Pollutant Package (13) AS/SB/BE/CD/CR/CU/NI/PB/HG/SE/AG/TL/ZN	Each	$131.00
	27.3.32		MCP 13 Metals	Each	$143.00
	27.3.33		MCP 14 Metals	Each	$164.00
27.4			**GAS CHROMATOGRAPHY**		
	27.4.2		Purgeable Aromatics	Each	$68.00
	27.4.4		BTEX & MTBE	Each	$75.00
	27.4.5		Volatile Organic Analysis & MTBE/GCMS	Each	$240.00
	27.4.6		Methanol	Each	$14.00
		27.4.6.1	Oxygenates (DIPE, ETBE, TBA, TAME)	Each	$150.00
		27.4.6.2	Ethanol	Each	$160.00
		27.4.6.2.1	Ethanol Add on	Each	$12.00
		27.4.7.1	Methane, Ethane & Ethene (ME&E) US EPA Method 8015/RSKERR	Each	$150.00
	27.4.8		Semi-volatile organic analysis	Each	$300.00
		27.4.8.1	Methylphenol (Add On)		
		27.4.8.2	Semi-volatile MCP List	Each	$300.00
	27.4.9		Semi-Volatile Petroleum Hydrocarbons/GCFID (Diesel Range)	Each	$73.00
	27.4.10		GCFID Fingerprint	Each	$75.00
	27.4.11		Pesticides (Priority Pollutant)	Each	$93.00
	27.4.12		PCB's	Each	$81.00
	27.4.14		BTEX, Ethers (MTBE, DIPE) Add on	Each	$72.00
	27.4.15		Polynuclear Aromatic Hydrocarbons (PAH)	Each	$113.00
		27.4.15.1	Polynuclear Aromatic Hydrocarbons (PAH) By SIM	Each	$128.00
	27.4.16		**AIR SAMPLE ANALYSIS**		
		27.4.16.1	BTEX & MTBE	Each	$87.00
		27.4.16.2	Volatile Petroleum Hydrocarbons/ Gasoline Range & Methane	Each	$107.00
		27.4.16.3	Polynuclear Aromatic Hydrocarbons by GC/MS	Each	$226.00
		27.4.16.4	Petroleum Hydrocarbons/Diesel Fuel Range	Each	$114.00
	27.4.17		**AIR SAMPLE ANALYSIS - INDOOR AIR QUALITY**		
		27.4.17.1	BTEX & MTBE - includes Summa Canister	Each	$480.00
		27.4.17.1.2	TO15 (TO14 + 15 TICS)	Each	$279.00
		27.4.17.2	Volatile Petroleum Hydrocarbons/ Gasoline Range		
		27.4.17.2.2	Includes Summa Canister	Each	$279.00
		27.4.17.3	DEP Air Petroleum Hydrocarbons (Draft Method)		
		27.4.17.3.1	SUMMA Canister - DEP Method - Normal Turnaround	Each	$324.00
		27.4.17.3.3	Tenax Tubes - DEP Method - Normal	Each	$390.00
	27.4.18		DEP VPH	Each	$105.00
		27.4.18.1	Method 5035 -Soil Preservation Kit for Unknown or Low Level Concentrations	Each	$7.00
		27.4.18.3	Method 5035 - Soil Preservation Kit for Medium Level Concentrations	Each	$9.00
	27.4.27		DEP EPH	Each	$152.00
	27.4.28		Methane (US EPA Method 8015M/EP18/TO3)	Each	$143.00
27.5			**RCRA WASTE CHARACTERIZATION**		
	27.5.1		Ignitability (flash point)	Each	$27.00
	27.5.2		Corrosivity (as pH)	Each	$10.00
	27.5.3		Cyanide Reactivity	Each	$52.00
	27.5.4		Sulfide Reactivity	Each	$50.00
	27.5.5		Paint Filter	Each	$15.00
	27.5.6		TCLP Extraction-Add on	Each	$47.00
	27.5.7		Zero Headspace Extraction	Each	$48.00
	27.5.8		Metal Extraction	Each	$30.00
	27.5.9		Alkalinity	Each	$15.00
	27.5.10		TCLP Metals	Each	$76.00
27.6			**DRINKING WATER ORGANICS**		
	27.6.4		Ethylene Dibromide/1,2 Dibromo-3-Chloropropane	Each	$80.00
	27.6.9		Volatile Organic Analysis	Each	$112.00
	27.6.10		Semi-Volatile Organic Analysis	Each	$284.00
			PETROLEUM HYDROCARBONS		
	27.8.1		Total Petroleum Hydrocarbons (TPH)	Each	$76.00
27.9			**GEOTECHNICAL ANALYSES**		
	27.9.1		Sieve/Hydrometer Grain Size Analysis (gradation)	Each	$93.00
	27.9.2		Bulk Density	Each	$100.00
	27.9.3		Flexible Wall Permeability	Each	$280.00
27.10			Laboratory Add On		
	27.10.1		Groundwater Sample Filtration	Each	$12.00
	27.10.3		MCP Data Package	Each	$50.00

28	**EQUIPMENT RENTAL: Equipment can be rented/leased for up to six (6) months without conducting a purchase/lease analysis. A purchase/lease analysis must be conducted by the end of 6 months.**	**UOM**	**PRICE**

TASKS			ITEM DESCRIPTION	UOM	MAXIMUM ALLOWED
28.1			Soil Vapor Extraction Module with vacuum blower, moisture separator and controls.		
	28.1.1		100-150 scfm		
		28.1.1.1	Daily		$75
		28.1.1.3	Monthly		$900
	28.1.2		150-250 scfm		
		28.1.2.3	Monthly		$1,500
	28.1.3		250-400 scfm		
		28.1.3.1	Daily		$200
		28.1.3.3	Monthly		$2,400
	28.1.4		400-550 scfm		
		28.1.4.3	Monthly		$3,000
28.2			Portable Air Compressor, Diesel or Gasoline Powered (includes fuel)		
	28.2.1		100 - 299 scfm		
		28.2.1.1	Daily		$250
		28.2.1.3	Monthly		$2,250
	28.2.2		300 - 750 scfm		
		28.2.2.1	Daily		$400
	28.2.3		751-900 scfm		
		28.2.3.1	Daily		$500
		28.2.3.2	Weekly		$2,000
		28.2.3.3	Monthly		$4,800
	28.2.4		901-1,400 scfm		
		28.2.4.1	Daily		$750
28.3			Backhoe/Loader, rubber tire		
	28.3.1		Hourly		$45
	28.3.2		Daily		$350
	28.3.3		Weekly		$1,400
28.4			Excavator, track		
	28.4.1		Hourly		$110
	28.4.2		Daily		$880
	28.4.3		Weekly		$3,520
28.5			Exhaust Fan, 10" Explosion Proof		
	28.5.1		Daily		$25
	28.5.2		Weekly		$100
	28.5.3		Monthly		$300
28.6			Exhaust Fan, 20" Explosion Proof		
	28.6.1		Daily		$65
	28.6.3		Monthly		$300
28.7			Equipment Enclosure 8' x 20'		
	28.7.2		Monthly		$800
28.9			Generator (Excluding fuel)		
	28.9.1		3.5 kw		
		28.9.1.1	Daily		$100
		28.9.1.2	Weekly		$400
	28.9.2		6.5 kw		
		28.9.2.1	Daily		$125
		28.9.2.3	Monthly		$1,500
	28.9.3		10 to 24 kw		
		28.9.3.1	Daily		$200
		28.9.3.2	Weekly		$800
	28.9.4		25 to 49 kw		
		28.9.4.1	Daily		$300
		28.9.4.2	Weekly		$1,200
		28.9.4.3	Monthly		$3,600
	28.9.6		Fuel	Actual	At Cost
	28.9.7		Motor Oil	Actual	At Cost
28.10			Jack Hammer, pneumatic 90 lb.		
	28.10.1		Hourly		$15
	28.10.2		Daily		$75
28.11			Discharge Hose		
	28.11.1		3/4" X 50'		
		28.11.1.3	Monthly		$36
	28.11.2		2" X 50'		
		28.11.2.1	Daily		$8
		28.11.2.2	Weekly		$32
		28.11.2.3	Monthly		$96
	28.11.3		3" X 50'		
		28.11.3.1	Daily		$12
		28.11.3.2	Weekly		$48
28.12			Skid Steer Loader or Mini Excavator		
	28.12.1		Skid Steer Loader (with bucket/blade)		
		28.12.1.1	Daily		$350
		28.12.1.2	Weekly		$1,400
		28.12.1.3	Monthly		$4,200
		28.12.1.4	Hydraulic attachment (e.g. hammer, excavator, sweeper)	Per Day	$300
	28.12.2		Mini Excavator (up to 9 metric tons)		
		28.12.2.1	Daily		$600

TASKS			ITEM DESCRIPTION	UOM	MAXIMUM ALLOWED
		28.12.2.3	Monthly		$7,200
28.13			3 to 4 Yard Loader, Front-end		
	28.13.1		Daily		$900
	28.13.2		Weekly		$3,600
28.14			Mounted LEL Sensor		
	28.14.1		Daily		$35
	28.14.3		Monthly		$230
28.15			Pump, Construction/Dewatering		
	28.15.1		1 hp		
		28.15.1	Daily		$40
		28.15.2	Weekly		$160
		28.15.3	Monthly		$480
	28.15.2		2 hp		
		28.15.2.1	Daily		$60
		28.15.2.2	Weekly		$240
		28.15.2.3	Monthly		$720
	28.15.3		3 hp		
		28.15.3.1	Daily		$75
		28.15.3.2	Weekly		$300
		28.15.3.3	Monthly		$900
	28.15.4		5 hp		
		28.15.4.1	Daily		$80
		28.15.4.2	Weekly		$320
		28.15.4.3	Monthly		$415
	28.15.5		10 hp		
		28.15.5.1	Daily		$250
		28.15.5.2	Weekly		$750
		28.15.5.3	Monthly		$2,250
28.16			Oil/Water Separator/Storage Tank		
	28.16.1		0-50 gpm w/ 280 Gallon Storage		
		28.16.1.3	Monthly		$1,800
		28.16.1.4	Coalescing Pack	Actual	At Cost
	28.16.2		51-100 gpm w/ 550 Gallon Storage		
		28.16.2.3	Monthly		$2,400
		28.16.2.4	Coalescing Pack	Actual	At Cost
	28.16.3		>100 gpm w/ 1,000 Gallon or Greater Storage		
		28.16.3.2	Weekly		$1,000
		28.16.3.3	Monthly		$3,000
		28.16.3.4	Coalescing Pack	Actual	At Cost
	28.16.4		Mobile Tanker (separator 5,000-8,800 gallons)		
		28.16.4.1	Daily		$250
		28.16.4.3	Monthly		$1,800
28.17			Internal Combustion Engine		
	28.17.1		Daily		$400
	28.17.3		Monthly		$4,800
	28.17.4		Fuel	Actual	At Cost
	28.17.5		Thermal Oxidizer		
		28.17.5.3	Monthly		$4,800
	28.17.6		Thermal Oxidizer/Catalytic Converter		
		28.17.6.3	Monthly		$6,000
	28.17.7		Tractor, truck		
		28.17.7.1	Daily		$280
		28.17.7.3	Monthly		$2,800
	28.17.8		Trailer/Low bed		
		28.17.8.1	Daily		$120
		28.17.8.3	Monthly		$1,200
	28.17.9		Water Tanker		
		28.17.9.3	Potable, Spring or Well Water	Actual	At Cost
	28.17.10		Truck, (6 Wheel) 2 to 10 Yard Dump		
		28.17.10.1	Daily		$320
		28.17.10.2	Weekly		$1,280
		28.17.10.3	Monthly		$3,840
		28.17.10.4	Hourly		$40
	28.17.11		Truck, (10 Wheel) 20 Yard Dump		
		28.17.11.1	Daily		$400
		28.17.11.4	Hourly		$50
	28.17.13		General vehicle (Pickup Truck, passenger vehicle, van)		
		28.17.13.1	Daily		$125
		28.17.13.2	Weekly		$500
	28.17.14		Truck, Maintenance/Boom/Bucket		
		28.17.14.1	Daily		$760
		28.17.14.3	Monthly		$7,200
	28.17.15		Truck, Mobile Shop/Box - vehicle only		
		28.17.15.1	Daily		$200
28.18			Treatment Systems		
	28.18.1		Air Stripper with associated piping, flow controls, and flow meter		
		28.18.1.1	0 - 25 gpm		
		28.18.1.1.1	Daily		$100

TASKS			ITEM DESCRIPTION	UOM	MAXIMUM ALLOWED
		28.18.1.1.3	Monthly		$1,200
		28.18.1.2	26 - 50 gpm		
		28.18.1.2.3	Monthly		$1,800
		28.18.1.3	> 50 gpm		
		28.18.1.3.1	Daily		$250
		28.18.1.3.2	Weekly		$1,000
	28.18.2		Liquid Phase Carbon Canisters excluding granular activated carbon, unless otherwise noted. See Task code 23 for carbon.		
		28.18.2.1	55 Gallon drum, 5 psig max design pressure, 0-10 gpm, up to 185 lbs of carbon included.		
		28.18.2.1.3	Monthly - one month maximum reimbursement		$360
		28.18.2.2	Pressure vessel, 150 psig max design pressure, 0-25 gpm, 125-200 lbs of carbon required to fill vessel		
		28.18.2.2.3	Monthly		$600
		28.18.2.3	Pressure vessel, 150 psig max design pressure, 0-35 gpm, 400-600 lbs of carbon required to fill vessel		
		28.18.2.3.3	Monthly		$750
		28.18.2.4	Pressure vessel, 75 psig max design pressure, 0-50 gpm, 800-1200 lbs of carbon required to fill vessel		
		28.18.2.4.1	Daily		$100
		28.18.2.4.2	Weekly		$500
		28.18.2.4.3	Monthly		$1,750
		28.18.2.5	Pressure vessel, 75 psig max design pressure, 0-75 gpm, 1500-2000 lbs of carbon required to fill vessel		
		28.18.2.5.2	Weekly		$750
		28.18.2.5.3	Monthly		$2,500
	28.18.3		Vapor phase carbon canisters offgas treat system excluding granular activated carbon unless otherwise noted. See Task code 23		
		28.18.3.1	55 Gallon drum, 5 psig design pressure, 0-100 cfm of air flow		
		28.18.3.1.1	Daily		$20
		28.18.3.1.3	Monthly - one month maximum reimbursement		$560
		28.18.3.2	Pressure vessel, 15 psig design pressure, 0-300 cfm of air flow, 300-500 lbs of carbon required to fill vessel		
		28.18.3.2.3	Monthly		$600
		28.18.3.3	Pressure vessel, 15 psig design pressure, 0-500 cfm of air flow, 800-1000 lbs of carbon required to fill vessel		
		28.18.3.3.3	Monthly		$720
		28.18.3.4	Pressure vessel, 15 psig design pressure, 0-1000 cfm of air flow, 1800-2000 lbs of carbon required to fill vessel		
		28.18.3.4.1	Daily		$70
		28.18.3.4.3	Monthly		$840
		28.18.3.5	Pressure vessel, 15 psig design pressure, 0-1500 cfm of air flow, 2200-2500 lbs of carbon required to fill vessel		
		28.18.3.5.2	Weekly		$320
		28.18.3.5.3	Monthly		$960
		28.18.3.6	Pressure vessel, 29.9 inches vacuum of mercury max, 0-1000 cfm of air flow, 1800-2000 lbs of carbon required to fill vessel		
		28.18.3.6.1	Daily		$80
		28.18.3.6.2	Weekly		$320
		28.18.3.6.3	Monthly		$960
	28.18.4	28.18.4	Liquid Vacuum Truck with Operator	Per Hour	$150
		28.18.4.1	Vactor Solids Excavator with Operator	Per Hour	$187
		28.18.4.2	Trailer Mounted Air Excavator with Operator	Per Hour	$118
		28.18.4.3	Monthly EFR-Up to 2 Events per month for a maximum of 6 months -	Per Event	$3,500
	28.18.5		Liquid Disposal	Per Gallon	$2
		28.18.5.1	Frac Tanks (21,000 Gallon)		
		28.18.5.1.1	Daily		$125
		28.18.5.1.2	Weekly		$500
		28.18.5.1.3	Monthly		$1,800
		28.18.5.1.4	Mob or DeMob Per Tank	NTE	$600
		28.18.5.1.5	Decontamination of Frac Tank	T & M/NTE	$3,000
	28.18.6		Mobile Groundwater Treatment Trailer with oil/water separator, liquid phase granular activated carbon vessels, transfer pump, heater and electrical controls. Up to 50 gallons per minute.		
		28.18.6.1	Daily		$250
		28.18.6.2	Weekly		$1,000
		28.18.6.3	Monthly		$3,000
	28.18.7		Mobile Groundwater Treatment Trailer with oil/water separator, liquid		
		28.18.7.1	Daily		$400
		28.18.7.2	Weekly		$1,600
		28.18.7.3	Monthly		$4,800
	28.18.8		30 cfm butane injector panel with air compressor and includes installation	Monthly	$3,200
		28.18.8.1	Butane	Actual	At Cost
28.19			Turbine Meters - Combined totalizer and flow rate		
	28.19.1		1/2" Diameter Turbine Meter		
		28.19.1.1	Daily		$30
		28.19.1.3	Monthly		$90

TASKS			ITEM DESCRIPTION	UOM	MAXIMUM ALLOWED
	28.19.2		1" Diameter Turbine Meter		
		28.19.2.3	Monthly		$90
	28.19.3		1 1/2" Diameter Turbine Meter		
		28.19.3.3	Monthly		$95
	28.19.4		2" Diameter Turbine Meter		
		28.19.4.3	Monthly		$100
28.20			10 Ton Vibratory Roller or equivalent		
	28.20.1		Daily		$750
	28.20.2		Weekly		$3,000
28.21			Portable Vibratory Plate Compactor		
	28.21.1		Daily		$250
	28.21.2		Weekly		$1,000
28.22			Traffic Controls		
	28.22.1		Daily		$750
	28.22.2		Weekly		$3,750
	28.22.3		Monthly		$15,750
	28.22.4		Fuel	Actual	At Cost
	28.22.5		Delivery & Pick-up of Traffic Controls	Each	$300
28.23			Electric or Pneumatic Submersible Pump Rental with Controls		
	28.23.1		Daily		$50
	28.23.2		Weekly		$200
	28.23.3		Monthly		$600
28.24			Electric or Pneumatic Non-Aqueous Phase Liquid Pump Rental with Controls		
	28.24.3		Monthly		$600
28.25			Air Sparging Compressor Rental with Controls up to 30 cfm @ 15 psi		
	28.25.3		Monthly		$600
28.26			Air Sparging Compressor Rental with Controls up to 50 cfm @ 15 psi		
	28.26.2		Weekly		$300
	28.26.3		Monthly		$900
28.27			Asphalt/Concrete Cutting Saw, self-propelled (includes blade wear)	Per Day	$450
28.28			Trench Box/Pnuematic Shoring (includes mobilization/demobilization)	Actual	At Cost
28.29			Roll-off container (includes liner, cover, mobilization)	Actual	At Cost

29			MISCELLANEOUS MATERIALS		
29.1			Passive Skimmers/Absorbent Booms/Socks	Actual	At Cost
29.2			Absorbent Pads	Actual	At Cost
29.3			Drums, 55-Gallon (incl gaskets, bolts, seals, bungs, etc)	Each	$60
29.4			Drums, 35-Gallons (incl gaskets, bolts, seals, bungs, etc)	Each	$45
29.5			Drum Liners	Each	$25
29.6			85-95 Gallon Overpack Drum	Each	$245
29.7			Granular Absorbent (excludes activated carbon)	Actual	At Cost
29.8			Barrier Tape	100'	$6
29.9			Orange Safety Fence 30"-48" high with posts	100'	$250
29.10			Hay Bales	Each	$6
29.11			Poly sheeting for stockpile	Actual	At Cost
29.12			Double-staked hay bale with silt fence, installed	per foot	At Cost
29.13			Straw wattle - 12-inch diameter, installed	per foot	At Cost
29.14			Replacement of damaged padlocks	Actual	At Cost

30			SALES TAX		
30.1			State Sales Tax	Actual	At Cost

31			FREIGHT		
31.1			Freight	Actual	At Cost

32			FIRMS AND EQUIPMENT NOT APPROVED		
			Reserved		
			NOTE: Gaps in task code number sequencing indicates the missing task code has either been eliminated or reassigned		