

*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, 2007

Revisions
June 30, 2008
September 25, 2008
April 1, 2009
December 1, 2009
September 27, 2012

**APPENDIX 3 – REIMBURSEMENT FEE SCHEDULE
(SEPTEMBER 1, 2007 VERSION)**

SUMMARY OF REVISIONS

June 30, 2008

- Section 4.27: Task Code 27.4.27; DEP EPH Analysis: Presents new guidance on the eligibility of EPH analytical costs.

September 25, 2008

- Section 4.1: Task Code 1-Labor Categories: Labor classification definitions were revised.

April 1, 2009

- Section 4.4: Task Code 4 – Language was added to the introductory paragraphs to provide clarification on the eligibility of MassDEP-required work.

December 1, 2009

- Section 4.2: Task Code 2 – Submittal of copies of completed reports with the reimbursement request is not required if the report is available in its entirety on MassDEP's file viewer website.
- Section 4.6: Task Codes 6.3 to 6.5 – The requirement that that three bids must be obtained prior to conducting the work was re-emphasized.

September 27, 2012

- Section 2: Proof of Payment – Added credit card receipt as proof of payment.
- Section 4.1: Task Code 1.0 Labor Categories – Provided an example of when Task Codes 1.2 through 1.17 could be appropriately used/claimed.
- Section 4.1: Task Code 1.3 Project Manager: Provided examples of eligible and ineligible project management charges.
- Section 4.2: Task Code 2 (Reports): Added text and acronym for Representativeness Evaluations and Data Usability Assessments (REDUA)
- Section 4.4: Task Code 4.2 (Digsafe)-Eliminated thirty (30) day window/requirement associated with digsafe/utility markout activities
- Section 4.6: Task Codes 6.3 to 6.5 (Soil Disposal)- Provided alternative means of reimbursement for soil disposal and transportation when claimant/consultant did not provide the three (3) required bids for soil disposal and transportation.
- Section 4.6: Task Code 6.11 (Chemical Oxidation)-Provided guidance/direction on use of drill rigs and geoprobes during pressurized oxidant injection activities.
- Section 4.9: Task Code 9.8 (Professional Utility Survey)-Removed reference to NGVD datum and replaced with currently accepted industry standard datum.

Revisions
June 30, 2008
September 25, 2008
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- Section 4.11: Task Code 11 (Groundwater Sampling task codes)-Added clarifications on low flow sampling, field measurements, and charges related labor to inspect/install/remove passive skimmers (i.e. absorbent socks/booms)
- Section 4.27: Task Code 27 (Laboratory Analysis): Removed references to specific test methods
- Section 4.30: Task Code 30 (Sales Tax): Added line for Task Code 30.1 and amended text.
- Section 4.31: Task Code 31 (Freight): Added line for Task Code 31.1
- Section 5.0: Acronyms: Added to existing list.

Revisions

June 30, 2008
September 25, 2008
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503 CODE OF MASSACHUSETTS REGULATIONS 2.00
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UNDERGROUND STORAGE TANK PETROLEUM PRODUCT CLEANUP FUND
REIMBURSEMENT FEE SCHEDULE POLICY
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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 for Appendix 4) with the Listing of Costs, Expenses and Obligations. As many Listing of Costs, Expenses and Obligations Forms as necessary may be submitted to list the tasks completed for which reimbursement is requested. 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. Site Plan
- B. Consultant Time and Expense Sheets;
- C. Material Vendor Invoices;

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

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. In addition, the Board may reimburse those costs and activities that exceed the limits established in the Reimbursement Fee Schedule in cases where MassDEP requires the work. However, reimbursement will depend on the reason(s) why MassDEP required the particular actions.

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, 21 and 22, 23, 24, 25, 27, and 28 in place of the unit price(s), or in conjunction with the unit price(s). Note that Task Codes 6.3, 6.4, 6.5, 21.4, and 22.4 require that a minimum of three bids must be received and submitted.

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) is 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 requested. 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.

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)
- 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, Class A through Class C Response Action Outcome (RAO) 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 submitted with the reimbursement request unless the report is 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;
- MassDEP Transmittal forms and/or certified mail receipt indicating the report was sent to the MassDEP;
- A copy of the MassDEP Transmittal Document and proof of delivery is required. One of the following items should be provided:
 - A copy of the transmittal document bearing a MassDEP "received" date stamp;
 - Return Receipt from US Mail or proof of delivery from other type of courier service
 - Electronic receipt verification from the MassDEP; and
 - Screen print of report status utilizing the MassDEP database;
 - Documentation must reflect the MassDEP Release Tracking Number;
- 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 and Feasibility of Restoration to Background or Permanent Solution 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, 2.7.3, and/or task code 2.7.4.

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

An Addendum to a previously written Phase II, III, or IV Report may be submitted for each new release (e.g. new Release Tracking Number) at a site from an eligible source.

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, 2.6.2, 2.6.2.1 and 2.6.3 - Phase V, ROS, and Post Class C 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.

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 RAO 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 Class A-2 or Class A-3 RAO Statement will be reimbursed as task code 2.7.4.

Task Code 2.8 - Response Action Outcomes

Up to two permanent solution RAO Statements (310 CMR 40.1000) may be reimbursed provided that the second RAO is an upgrade in RAO Classification (e.g. from a Class A-3 RAO to a Class A-2 RAO).

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.

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 and the decommissioning of 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 to 9.3.1.5 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.

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). It is usually developed from a general H&S Plan and modified for site specific conditions as well as the activities to be performed at the site. Although the H&S Plan may be included within the Phase II or Phase III Reports, it is usually generated as its own document. 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 Monitoring

Air monitoring of petroleum product-derived air contaminants shall be applied to this task code (soil gas sampling is included). 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.

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 6.1.3)

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 for soil samples collected from the excavated area must be provided to document excavation to remove soils impacted by petroleum release. Charges may be submitted as a bid; refer to task code 16.2.

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. 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

This task code is associated with any type of backfill material (e.g. loam, sand, stone, 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 would constitute landscaping and is not eligible for reimbursement. It is encouraged to take pre and post construction photos of surface finishes to document compliance.

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 impacted area, not just a hot spot that may be targeted for limited remediation.

Task Codes 6.7.1 and 6.7.2 - Bioremediation 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 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 bench scale test;
- Materials and equipment for the test;
- Cost of bacteria, nutrients, water, and other materials/supplies necessary for the bioremediation 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. Task Code 6.11.1 is used when greater than 6 hours (including travel time) is applied to the oxidant application event. Task Code 6.11.2 is used when 6 hours or less (including travel time) is applied to the oxidant application event. 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;
- Field preparation and breakdown;
- Travel time and vehicle expenses; and
- Materials and equipment.

Note: Oxidation injection activities that utilize a drill rig or geoprobe for pressurized oxidant injection activities should claim the drill rig/geoprobe at the appropriate drilling task codes (i.e. TCs 9.1.1, 9.1.2, 9.3.1.1 through 9.3.1.4, or 9.3.1.6).

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;
- 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, 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 on site 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, etc. Air knifing activities to pre-clear boring locations should be coded to task code 28.18.4.1. 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 18.4.

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 18.4.

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 perform soil, soil gas and groundwater sample collection. 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. 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.

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. Costs for low flow sampling should be applied to the appropriate well purging and sampling method used (TC 11.1.8 or 11.1.9) and TC 11.1.7 Field Measurement task code.

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.

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 OR FALLING HEAD (SLUG) TEST (TASK CODES 13.1.1 THROUGH 13.1.2)

These task codes shall be used when performing a rising or falling head (slug) test (DEP WSC 310-91). 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 is similar in scope to a slug test and, therefore, it is also permissible to use this task code when performing a product bail down/recovery 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);
- 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 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:

Year	CATALYTIC INCINERATOR			VAPOR PHASE CARBON			
	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	PV of Outflows			\$80,146
Plus Equipment & Installation Costs			<u>\$35,000</u>	Plus Equipment & Installation Costs			<u>\$10,000</u>
Subtotal:			\$83,088	Subtotal:			\$90,146
Less Salvage Value of Equipment at End of Project:							
	\$2,000	0.6830	<u>(\$1,366)</u>	\$0	0.6830	<u>\$0</u>	
Net Present Value:			\$81,722	Net Present Value:			\$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 Codes 21.4 and 22.4 require 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

This task code 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 operating and monitoring a dewatering system in accordance with USEPA requirements.

Items covered under this task code include:

- Coordination and labor to conduct dewatering activities;
- Field preparation;
- Equipment mobilization/demobilization and decontamination;
- Travel and vehicle expenses;
- Equipment set-up and breakdown; and
- Equipment and materials (e.g. PID, oxygen explosion meter, toxic gas monitoring equipment, sample jars, sampling incidentals).

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

- 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. Although the permit fee itself is ineligible, the costs associated with obtaining the permit 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 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 19 – INSTALLATION AND SOIL SAMPLING OF SVE AND AS WELLS

Task Codes 19.1.1 through 19.8.1 are no longer applicable. All tasks previously performed and submitted under Task Code 19 are now to be submitted under Task Code 9, Drilling Activities.

4.20 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 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.

4.21 TASK CODE 21 – PURCHASE AND INSTALLATION OF GROUNDWATER AND NAPL REMEDIATION SYSTEMS

These task codes shall be used when performing the purchase, installation or reinstallation of groundwater and non-aqueous phase liquid pumping 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 21.1 – Removal and reinstallation of groundwater and NAPL remediation systems from original site of installation to another site

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.

Task Code 21.2 – 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 21.3 – Installation Crew

This task code shall be used for the labor to install remediation system equipment associated with Task Code 21.4. This task code includes labor, equipment, materials, tools, travel time, and vehicle expenses.

Task Code 21.4 – Remediation System Equipment Purchase

This task code shall be used for the initial purchase of groundwater and NAPL 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 21.3.

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.

4.22 TASK CODE 22 – PURCHASE AND INSTALLATION OF SVE AND AS REMEDIATION SYSTEMS

These task codes shall be used when performing the purchase, installation or reinstallation of soil vapor extraction (SVE) and air sparge (AS) 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 groundwater and NAPL remediation systems from original site of installation to another site

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.

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 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 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 SVE and AS 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 21.3.

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 SVE 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.

4.23 TASK CODE 23 – REMEDIATION SYSTEMS OPERATION & MAINTENANCE (TASK CODES 23.1 THROUGH 23.6.9)

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;
- 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

Items not covered under this task code include:

- Carbon replacement/regeneration, see task code 23.5; 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.

Items not covered under this task code include:

- Carbon replacement/regeneration, see task code 23.5.

Task Code 23.1.4 - Non-Incidental O&M Materials

This task code shall be used for the purchase of non-incidentals 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, see task code 23.5.

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. 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 to 23.5.2.3.4 – Carbon Replacement/Reactivation

These task codes are used for the replacement or reactivation of activated carbon and include labor costs. Initial carbon purchase should be coded to task codes 21.4 or 22.3. Final disposal of liquid or vapor phase carbon at remedial system deactivation should be coded to task code 23.5.1.2.5.

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.

4.24 TASK CODE 24 – WELL PAD/ROAD BOX/MANHOLE REMOVAL AND REPLACEMENT (TASK CODES 24.1 THROUGH 24.1.4.4)

These task codes shall be used when performing repair, removal, and replacement of concrete pads, road boxes or manholes (DEP WSC 310-91). The 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, and replacement of concrete pads, road boxes, and 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).

4.25 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.

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 copy of the report must be submitted as backup.

4.26 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. 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.

4.27 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, definitive assays, Enzyme Immune Assay (EIA) screening analysis, and lab add-ons (e.g. groundwater sample filtration and sample compositing). The laboratory invoice, chain of custody, and analytical data is required to support the charges claimed. 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 unless the source is determined to be ineligible (e.g. heating oil tank or waste oil tank).
 - ii. if the initial EPH analytical results indicate that there are no reportable concentrations of diesel-range petroleum hydrocarbons detected, then future costs associated with additional EPH analyses will not be reimbursable unless site conditions change or EPH data are necessary to complete a risk characterization analyses (see MassDEP Policy WSC-02-411 for more information).
- 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.

4.28 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 - Vector 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 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, and up to two events are allowed per month.

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).

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.

When EFR is implemented as part of an IRA or RAM (i.e., not 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.

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.

4.29 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).

4.30 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.

4.31 TASK CODE 31 - FREIGHT

Task Code 31.1 - Freight

This task code may be used when a freight 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 charge shall only be claimed if the associated equipment/components are also claimed.

4.32 TASK CODE 32 – FIRMS AND EQUIPMENT NOT APPROVED

This section is reserved for Board use only.

5.0

ACRONYMS

=>	Implies
>	Greater than
<	Less than
21C	Massachusetts Hazardous Waste Management Act, MGL c. 21C
21E	The Massachusetts Oil and Hazardous Materials Release Preventions and Response Act, MGL C.21E
21J	Underground Storage Tank Petroleum Product Cleanup Fund, MGL c. 21J
AC-1	First Administrative Completeness Review
AC-2	Second Administrative Completeness Review
ACEC	Area of Critical Environmental Concern
AEG	Association of Engineering Geologists
AIPG	American Institute of Petroleum Geologists
APH	Air Petroleum Hydrocarbons
API	American Petroleum Institute
AS	Air Sparging
ASCE	American Society of Civil Engineers
ASPOE	American Society of Petroleum Operations Engineers
AST	Aboveground Storage Tank
ASTM	American Society of Testing Materials
AUL	Activity and Use Limitation
AWQC	Ambient Water Quality Criteria
BIO	Bioremediation
BOARD	Underground Storage Tank Petroleum Cleanup Fund Administrative Review Board
BOH	Board of Health
BRAMA	Best Response Action Management Approach
BRP	Bureau of Resource Protection
BTEX	Benzene, Toluene, Toluene, Ethyl Benzene and Xylenes
BWP	MassDEP Bureau of Waste Prevention
BWSC	MassDEP Bureau of Waste Site Cleanup
CERCLA	(U.S.) Comprehensive Environmental Response, Compensation, & Liability Act of 1980
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
DAQC	MassDEP Division of Air Quality Control
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
GFFT	Glass Fiber Filter Tube
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
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
PC-1	Initial Public Comment Period
PC-2	Public Comment Period (only for proposed permit decision)
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
PUF	Polyurethane Foam
RADDs	Remedial Action Design Documents
RAM	Release Abatement Measure
RAO	Response Action Outcome (Classes A, B, & C)
RC	Reportable Concentration
RCGW-1	Reportable Concentration for Groundwater Category 1 (groundwater resource areas)
RCGW-2	Reportable Concentration for Groundwater in Category 2 (everywhere, except RCGW-1)
RCRA	Resource Conservation and Recovery Act
RCS-1	Reportable Concentration for Soil in Category 1 (high exposure potential)
RCS-2	Reportable Concentration for Soil in Category 2 (everywhere, except RCS-1)
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
SRM	Substantial Release Migration
SVE	Soil Vapor Extraction
T-1	Technical Review
T-2	Supplemental Technical Review (to review response to NON)
T&M	Time and Material
TAG	Technical Assistance Grant
TOR	Threat of Release
TPH	Total Petroleum Hydrocarbon
UCL	Upper Concentration Limit
UL	Underwriter's Laboratories
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. Massachusetts Board of Fire Prevention Regulations, 527 CMR 9.00, Tanks and Containers
7. Commonwealth of Massachusetts Department of Public Works, Application for Permit to Access State Highway
8. Department of Environmental Protection Regulations & Policies:
9. The Massachusetts Contingency Plan, 310 CMR 40.000 and 40.0000
10. The Massachusetts Hazardous Waste Regulations, 310 CMR 30.000
11. Massachusetts Drinking Water Quality Standards, 310 CMR 22.00
12. Wetlands Protection Act Regulations, 310 CMR 10.00
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 Map, Appropriate Quadrangle(s)
95. National Climatic Data Center, Local Climatological Data, Annual Summary and Comparative Data, Asheville, NC, 1992
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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
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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
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145. Sampling and Analysis of Gasoline Range Organics in Soil, API Publication 4516, October 1991 General References:
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156. Health Aspects of the Disposal of Waste Chemicals, Grisham, J.W., Pergamon 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
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TASKS		ITEM DESCRIPTION	UOM	MAXIMUM ALLOWED	RSRVD
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	\$135	
1.3		Project Manager	Per Hour	\$105	
1.4		Senior Scientist/Senior Engineer/Senior Geologist	Per Hour	\$105	
1.5		Staff Scientist/Engineer/Geologist/Hydrogeologist II	Per Hour	\$85	
1.6		Scientist/Geologist/Hydrogeologist I	Per Hour	\$75	
1.7		Permits/Health & Safety Coordinator	Per Hour	\$65	
1.8		Construction Foreman	Per Hour	\$80	
1.9		Senior Technician/Technician III	Per Hour	\$70	
1.10		Technician II	Per Hour	\$60	
1.11		Technician I	Per Hour	\$45	
1.12		CADD Operator Including CADD Time	Per Hour	\$60	
1.13		Draftsperson	Per Hour	\$45	
1.14		Administrative Support	Per Hour	\$45	
1.15		Heavy Equipment Operator	Per Hour	\$60	
1.16		Truck Driver (multi-axle or tractor)	Per Hour	\$45	
1.17		Laborer	Per Hour	\$45	
2		REPORT PREPARATION			
2.1		Phase I 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	\$7,235	
	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	\$4,335	
2.3		Phase II per 310 CMR 40.0830	NTE	\$13,115	
	2.3.1	Phase II Supplemental Addendum	Each	\$4,000	
2.4		Phase III per 310 CMR 40.0850	NTE	\$7,120	
	2.4.1	Phase III Supplemental Addendum	Each	\$3,050	
2.5		Phase IV per 310 CMR 40.0870	NTE	\$8,350	
	2.5.1	Phase IV Status Report per 310 CMR 40.0877	Each	\$3,700	
	2.5.2	Phase IV As Built Construction Report per 310 CMR 40.0875	Each	\$1,200	
	2.5.3	Phase IV Final Inspection Report per 310 CMR 40.0878	Each	\$2,440	
	2.5.4	Phase IV Supplemental Addendum Report	Each	\$3,700	
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	\$3,170	
	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	\$2,100	
	2.6.3	Post Class C RAO Status Report per 310 CMR 40.0897	Each	\$3,170	
2.7		Risk Assessment per 310 CMR 40.0900			
	2.7.1	Method 1 per 310 CMR 40.0973	Each	\$3,775	
	2.7.2	Method 2 per 310 CMR 40.0980	Each	\$8,740	
	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	\$1,535	
2.8		Response Action Outcomes (RAO) per 310 CMR 40.1000			
	2.8.1	Class A1 per 310 CMR 40.1035	NTE	\$4,905	
	2.8.2	Class A2 per 310 CMR 40.1035	NTE	\$4,905	
	2.8.3	Class A3 per 310 CMR 40.1035	NTE	\$4,905	
	2.8.4	Class A4 per 310 CMR 40.1035	NTE	\$4,905	
	2.8.5	Class B1 per 310 CMR 40.1045	NTE	\$3,480	
	2.8.6	Class B2 per 310 CMR 40.1045	NTE	\$3,480	
	2.8.7	Class B3 per 310 CMR 40.1045	NTE	\$3,480	
	2.8.8	Class C1 per 310 CMR 40.1050	NTE	\$4,000	
	2.8.9	Class C2 per 310 CMR 40.1050	NTE	\$4,000	
	2.8.10	LSP 5-Year Periodic Review of Class C RAO & Opinion per 310 CMR 40.1051(3)(b)	Each	\$1,840	
2.9		Numerical Ranking System (NRS) Scoresheet per 310 CMR 40.1500	NTE	\$1,820	
	2.9.1	NRS (rescoring)	Each	\$1,020	
2.10		Complete Tier 1 Permit Application per 310 CMR 40.0700	Each	\$3,380	
	2.10.1	Tier I Permit Extension per 310 CMR 40.0706	Each	\$1,680	
	2.10.2	Minor Permit Modification per 310 CMR 40.0725	Each	\$960	
	2.10.3	Major Permit Modification per 310 CMR 40.0707	Each	\$3,380	
2.11		Tier II Permit Modification	Each	\$960	
	2.11.1	Tier II Extension Request	Each	\$1,440	

TASKS		ITEM DESCRIPTION	UOM	MAXIMUM ALLOWED	RSRVD
2.12		Release Abatement Measure Plan per 310 CMR 40.0444	Each	\$2,410	
	2.12.1	Release Abatement Measure Plan Addendum per 310 CMR 40.0444	Each	\$1,200	
	2.12.2	Release Abatement Measure Status Report per 310 CMR 40.0445	Each	\$2,955	
	2.12.3	Release Abatement Measure Plan Completion Report per 310 CMR 40.0446	Each	\$3,810	
	2.12.4	Release Abatement Measure Plan Design Specification	Each	\$3,000	
2.13		Immediate Response Action Plan per 310 CMR 40.0424	Each	\$2,910	
	2.13.1	Immediate Response Action Plan Addendum per 310 CMR 40.0424	Each	\$1,200	
	2.13.2	Immediate Response Action Plan Status Report per 310 CMR 40.0425	Each	\$2,955	
	2.13.3	Immediate Response Action Plan Completion Report per 310 CMR 40.0427	Each	\$3,810	
	2.13.4	Immediate Response Action Plan Design Specification	Each	\$3,000	
	2.13.5	Combined Immediate Response Action Plan and Completion Report per 310 CMR 40.0427	Each	\$5,370	
2.14		Imminent Hazard Evaluation per 310 CMR 40.0426	Each	\$3,600	
	2.14.1	Substantial Hazard Evaluation per 310 CMR 40.0956	Each	\$3,600	
2.15		LSP Opinion to remove off gas controls	Each	\$1,200	
2.16		Activity and Use limitations per 310 CMR 40.1000	Each	\$5,450	
	2.16.1	Amendment to Activity and Use Limitations per 310 CMR 40.1000	Each	\$1,840	
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	\$24,000	
2.20		Police Detail	T&M	\$0	
2.21		Prepare Monitoring Well & Boring Logs	Per Log	\$35	
2.22		Prepare Remedial Monitoring Form per 310 CMR 40.0000	Each	\$500	
3		HEALTH AND SAFETY PLAN			
3.1		Prepare a site specific health and safety plan	Each	\$180	
3.2		Update Health and Safety Plan	Each	\$120	
3.3		Level A Personal Protective Equipment	Per Person/	\$47	
	3.3.1	Level A Fully Encapsulated Suit and Self Contained Breathing Apparatus	Per Day	\$180	
3.4		Level B Personal Protective Equipment	Per Person/	\$31	
3.5		Level C Personal Protective Equipment	Per Person/	\$16	
3.6		Confined Space Entry Equipment	Per Day	\$180	
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	\$1,200	
	3.7.2	Half Day (up to 6 hours including travel)	Per ½ Day	\$600	
4		PRE-FIELD AND PROJECT IMPLEMENTATION ACTIVITIES (for site assessment)			
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	\$300	
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	\$480	
4.3		Post-field activity site Visit - See additional guidance	Per Field Event	\$360	
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	\$720	
6		EXCAVATED SOILS MONITORING/HANDLING/REPORTING, BIOREMEDIATION, & IN-SITU CHEMICAL OXIDATION			
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	\$1,200	
	6.1.2	Half Day monitoring (up to 6 hours including travel expense)	Per ½ Day	\$600	
	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	\$2,100	
6.2		Disposal Management - Review laboratory results for waste characterization, prepare Manifest/Bill of Lading, LSP Certification, and contractor/client coordination.	NTE Per BOL	\$600	
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	

TASKS		ITEM DESCRIPTION	UOM	MAXIMUM ALLOWED	RSRVD
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)	Acutal	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)	Acutal	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 feasibility bench scale evaluation and report for groundwater.	NTE	\$3,000	
6.7.2		Bioremediation feasibility bench scale evaluation and report for groundwater and soil.	NTE	\$4,800	
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	\$45	
6.9		Oxygen Release Powder in Bulk			
6.9.1		Oxygen Release Powder in Bulk	Per LB	\$12	
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	\$1,500	
6.11.2		Half Day (up to 6 hours including travel)	Per ½ Day	\$750	
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	\$1,500	
6.12.2		Half Day (up to 6 hours including travel)	Per ½ Day	\$750	
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	\$820	
7.1.2		Full Day Rate (Greater than 6 hours including travel expenses)	Per Day	\$1,335	
7.1.3		Weekly Rate (5 or more >6-hour days on site)	Per Week	\$6,000	
7.1.4		Analysis/Sampling Report	Each	\$960	
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	
8		DRILLING, SAMPLING, GROUTING OF SOIL BORINGS. (Drilling codes under this Task code have been consolidated with Task code 9)			
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.			
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	\$230	
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			
9.2.1		Full Day (greater than 6 hours including travel)	Per Day	\$1,200	
9.2.2		Half Day (up to and including 6 hours including travel)	Per ½ Day	\$600	
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.			

TASKS		ITEM DESCRIPTION	UOM	MAXIMUM ALLOWED	RSRVD
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 (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 - Truck Mounted	Per Day	\$1,200	
	9.3.1.2	Direct Push - Track Mounted	Per Day	\$1,275	
	9.3.1.3	Hollow Stem Auger - Truck Mounted	Per Day	\$1,275	
	9.3.1.4	Hollow Stem Auger - ATV (Tire or Track) Mounted	Per Day	\$1,500	
	9.3.1.5	Air Rotary	Per Day	\$2,200	
	9.3.1.6	Drilling ½-day rate	Per ½ Day	\$600	
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	\$8	
	9.3.2.3	2" to <4" Monitoring, Injection, AS, SVE, Recovery Well	Per Foot	\$10	
	9.3.2.4	4" to <6" Monitoring, Injection, AS, SVE, Recovery Well	Per Foot	\$15	
	9.3.2.5	6" Monitoring, Injection, AS, SVE, Recovery Well	Per Foot	\$24	
	9.3.2.6	Bedrock Casing 6" or less	Per Foot	\$40	
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	
	9.4.3	Cone Penetrometer - Including decontamination, instrumentation, operator and field technician, data output and report describing equipment and field procedures.	Per Day	\$4,000	
	9.4.3.1	Materials, e.g. steel drive points, monitor well casing and screen, monitor well caps, sand, bentonite, etc.	Actual	At Cost	
	9.4.3.2	Mobilization/Demobilization for Cone Penetrometer.	Each	\$300	
	9.4.4	3 Dimensional plume and stratigraphy modeling.	NTE	\$1,000	
	9.4.5	Tripod Rig	Per Day	\$1,000	
	9.4.5.1	Materials	Actual	At Cost	
9.5		Vibratory/Slide Hand-held Hammer - Includes the cost for all labor and equipment to perform soil, soil gas and groundwater sample collection.	Per Day	\$660	
	9.5.1	Materials for soil, soil gas and groundwater sample collection for vibrating/slide hand-held hammer.	Actual	At Cost	
9.6		Hand Auger for soil sample collection. Includes labor. Use Task Codes 9.3.2.1 - 9.3.2.4 for well materials.	Per Day	\$600	
9.7		Well surveying			
	9.7.1	Surveying (un-licensed)			
	9.7.1.1	Half Day (6 hours or less including travel)	Per ½ Day	\$995	
	9.7.1.2	Full Day (greater than 6 hours including travel)	Per Day	\$1,575	
	9.7.1.3	Drafting - See additional guidance	Per Event	\$625	
	9.7.2	Licensed Professional Survey			
	9.7.2.1	Half Day (6 hours or less including travel)	Per ½ Day	\$1,250	
	9.7.2.2	Full Day (greater than 6 hours including travel)	Per Day	\$2,400	
	9.7.2.3	Drafting - See additional guidance	Per Event	\$1,000	
9.8		Professional Utility Survey - includes above and underground utilities, inverts, reference to most current datum and drafting.	NTE	\$2,900	
9.9		Ground Penetrating Radar Survey & Report	NTE	\$2,500	
10		MONITORING/RECOVERY WELL DEVELOPMENT (Per MassDEP WSC 310-91)			
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	\$97.20	
10.3		4" Well Development	Per Hour	\$97.20	
10.4		6-10" Well Development	Per Hour	\$300	
10.5		12"-26" Well Development	Per Hour	\$342	
10.6		>26" Well Development	Per Hour	420.99	

TASKS	ITEM DESCRIPTION			UOM	MAXIMUM ALLOWED	RSRVD
11	GROUNDWATER GAUGING/BAILING AND SAMPLING (per MassDEP WSC 310-91.6)					
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	\$425		
11.1.2		Well gauging (include all related costs)				
	11.1.2.1	1 to 10 Monitoring Wells	Per Well	\$30		
	11.1.2.2	1 to 25 Monitoring Wells	Per Well	\$28		
	11.1.2.3	1 to 40 Monitoring Wells	Per Well	\$27		
	11.1.2.4	1 to > 40 Monitoring Wells	Per Well	\$26		
11.1.3		Well purging and sampling using hand bailer (incremental cost over gauging; include all related				
	11.1.3.1	1 to 10 Monitoring Wells	Per Well	\$66		
	11.1.3.2	1 to 25 Monitoring Wells	Per Well	\$62		
	11.1.3.3	1 to 40 Monitoring Wells	Per Well	\$58		
	11.1.3.4	1 to > 40 Monitoring Wells	Per Well	\$55		
11.1.4		Well purging and sampling using hand bailer (incremental cost over gauging; include all related				
	11.1.4.1	1 to 10 Monitoring Wells	Per Well	\$72		
	11.1.4.2	1 to 25 Monitoring Wells	Per Well	\$67		
	11.1.4.3	1 to 40 Monitoring Wells	Per Well	\$62		
	11.1.4.4	1 to >40 Monitoring Wells	Per Well	\$57		
11.1.5		Hand Bail NAPL	Per Well	\$60		
11.1.6		Field Filtration of Groundwater Sample	Per Sample	\$40		
11.1.7		Field Measurements (DO, pH, Turbidity, Conductivity, Temperature)	Per Well	\$20		
11.1.8		Well sampling using pump (incremental cost OVER gauging; include all related costs) <35' deep				
	11.1.8.1	1 to 10 Monitoring Wells	Per Well	\$78		
	11.1.8.2	11 to 25 Monitoring Wells	Per Well	\$75		
	11.1.8.3	26 to 40 Monitoring Wells	Per Well	\$73		
	11.1.8.4	>40 Monitoring Wells	Per Well	\$70		
11.1.9		Well sampling using pump (incremental cost over gauging; include all related costs)>35' deep				
	11.1.9.1	1 to 10 Monitoring Wells	Per Well	\$102		
	11.1.9.2	11 to 25 Monitoring Wells	Per Well	\$99		
	11.1.9.3	26 to 40 Monitoring Wells	Per Well	\$97		
	11.1.9.4	>40 Monitoring Wells	Per Well	\$94		
11.2		Additional Person to Sample Monitoring Wells Due to Traffic Considerations	NTE/Hour	\$75		
11.3		Disposable Bailer with VOC Sampler	Each	\$7		
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	\$66		
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	\$60		
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				
12.1.1		Aquifer Pump Test				
	12.1.1.1	Step discharge (up to 8 hours)	NTE	\$2,700		
	12.1.1.2	12 hour constant discharge	NTE	\$3,500		
	12.1.1.3	24 hour constant discharge	NTE	\$5,400		
	12.1.1.4	48 hour constant discharge	NTE	\$9,800		

TASKS		ITEM DESCRIPTION	UOM	MAXIMUM ALLOWED	RSRVD
13		RISING OR FALLING HEAD (SLUG) TEST			
13.1		Perform rising or falling head (slug) test; Subtasks shall include the following: • Equipment mobilization/demobilization and decontamination • Equipment set-up and breakdown • Disciplines travel • Field preparation (inc. all material and equipment) • Site Cleanup • Data evaluation, documentation and report • Project disciplines cost			
	13.1.1	Full Day (Greater than 6 hours on site)	Per Day	\$2,300	
	13.1.2	Half Day (6 hours or less on site)	Per Day	\$1,400	
14		SOIL VAPOR EXTRACTION/AIR SPARGING TESTING			
14.1		Labor and equipment to perform VES and/or air sparge testing; Subtasks shall include the following: • Equipment mobilization/demobilization • Travel time and vehicle expense • Field preparation (inc. all material and equipment) • Data evaluation, documentation and report • Vapor transport modeling • Permitting • Project disciplines cost • Laboratory Analyses found under Task 27 • Equipment Rental found under Task 28 • Fluids disposal found under Tasks 28 See additional guidance			
	14.1.1	Conduct extraction test with air emissions treatment (<10" Hg)	NTE	\$4,605	
	14.1.2	Conduct high vacuum extraction test with air emissions treatment (>10" Hg)	NTE	\$5,760	
	14.1.3	Conduct sparge test in conjunction w/SVE test with air emissions treatment	NTE	\$4,845	
	14.1.4	Conduct sparge test only w/existing SVE system	NTE	\$3,505	
15		REMEDATION FEASIBILITY STUDIES (NET PRESENT VALUE)			
15.1		Feasibility study - See additional guidance.			
	15.1.1	NPV analysis on 2 options	NTE	\$480	
	15.1.2	NPV analysis for each additional item	NTE	\$180	
16		LEASE/PURCHASE ANALYSIS & BID SPECIFICATIONS			
16.1		Lease vs. Purchase analysis per 503 CMR 2.10(c) - See additional guidance.	NTE	\$360	
16.2		Bid Specification Preparation Time - See additional guidance.	Each	\$3,600	
17		REMEDATION 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	\$500	
	17.1.1.2	NPDES - Formal Application/Remediation General Permit	Each	\$2,500	
	17.1.1.3	MADEP - Surface Water Discharge Permit	Each	\$1,680	
	17.1.1.4	Industrial discharge/POTW/MWRA Permit	Each	\$2,160	
	17.1.1.5	Local Discharge Permit	Each	\$1,000	
	17.1.1.6	Air Emissions Permit	Each	\$960	
	17.1.1.7	Discharge Monitoring Reports			
	17.1.1.7.1	Initial Discharge Monitoring Report	Each	\$415	
	17.1.1.7.2	Monthly Discharge Monitoring Report	Each	\$330	
	17.1.1.7.3	Quarterly Discharge Monitoring Report	Each	\$415	
	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	\$1,800	
	17.1.2	Building Permit	Each	\$800	
	17.1.3	Wetlands Approval and/or Rivers Protection Act - Includes DEP required sign	Each	\$4,080	
	17.1.4	Road Opening Permit	Each	\$720	
	17.1.4.1	Prepare and Submit Traffic Plan to the State Department of Public Works	Each	\$1,200	
	17.1.5	Other required permit	Each	\$240	
	17.1.6	Dye Test to Confirm Outfall Location	Each	\$400	

TASKS	ITEM DESCRIPTION			UOM	MAXIMUM ALLOWED	RSRVD
18	TRENCHING AND INSTALLATION OF UNDERGROUND PIPING AND EQUIPMENT AREA/ENCLOSURE FOR VES, AIR SPARGING AND/OR GROUNDWATER EXTRACTION SYSTEM - Project Disciplines include labor to conduct 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. Three (3) competitive bids may be obtained for any work and/or materials covered by these tasks in place of the unit price(s), or used in conjunction with the unit price(s). See Task code 28-series for construction equipment and labor.					
18.1		Project disciplines cost - Full Day (greater than 6 hours including travel time) (supervision and oversight)		Per Day	\$1,200	
18.2		Project disciplines cost - Half Day (6 hours or less including travel time) (supervision and oversight)		Per ½ Day	\$600	
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	\$2,400	
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	
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	\$9.50	
	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				
	18.5.12.1	Fencing - 6 foot high stockade		LF	\$25	
	18.5.12.2	Fencing - 6 foot high chain link		LF	\$23	
	18.5.12.3	Fencing - Gates		LF	\$31	
19	INSTALLATION AND SOIL SAMPLING OF VAPOR EXTRACTION, GROUNDWATER EXTRACTION OR AIR SPARGING WELLS (Drilling codes have been consolidated with Task code 9)					
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	\$600	
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	

TASKS		ITEM DESCRIPTION	UOM	MAXIMUM ALLOWED	RSRVD
21		PURCHASE AND INSTALLATION OF GROUNDWATER AND NAPL PUMPING SYSTEMS. NOTE: Three (3) competitive bids may be obtained for work and/or materials covered by these tasks in place of the unit price(s), or used in conjunction with the unit price(s). Three (3) bids may be required for task code 21.4. See additional guidance.			
21.1		Removal and reinstallation of groundwater and NAPL pumping system from site of original installation to another site, includes transportation	NTE	\$9,000	
21.2		Remove and/or storage of remediation equipment, includes transportation (including portable, skid mounted and stand alone system components).	NTE	\$3,600	
21.3		Installation Crew, Travel Time and Vehicle Expense	Per Day	\$1,600	
21.4		Remedial System Equipment Purchase - Groundwater and NAPL Pumping 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	
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	\$12,000	
22.2		Removal and/or storage of remediation equipment (including portable, skid mounted and stand alone system components).	NTE	\$3,600	
22.3		Installation crew, travel time and vehicle expense	Per Day	\$1,600	
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	\$1,200	
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	\$600	
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	\$60	
23.1.4		Non-incidentual 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	\$8,000	
23.4		Cleaning Air Stripper Trays or Towers - (materials and disposal.)			
23.4.1		Packing replacement/disposal			
	23.4.1.1	Material	Actual	At Cost	
	23.4.1.2	Disposal	Actual	At Cost	
23.4.2		Acid wash air stripper tray or tower			
	23.4.2.1	Material	Actual	At Cost	
	23.4.2.2	Disposal	Actual	At Cost	
23.5		Carbon treatment system			
23.5.1		Carbon replacement - liquid phase			
	23.5.1.1	Virgin carbon including transportation, disposal, labor and equipment to re-bed carbon vessel			
	23.5.1.1.1	<200 LB	Per LB	\$3.90	
	23.5.1.1.2	201 - 500 LB	Per LB	\$3.05	
	23.5.1.1.3	501 - 2000 LB	Per LB	\$2.40	
	23.5.1.1.4	>2000 LB	Per LB	\$2.10	
	23.5.1.2	Reactivated carbon including transportation, re-activation, labor and equipment to re-bed carbon			
	23.5.1.2.1	<200 LB	Per LB	\$3.50	
	23.5.1.2.2	201 - 500 LB	Per LB	\$2.65	
	23.5.1.2.3	501 - 2000 LB	Per LB	\$2.05	
	23.5.1.2.4	>2000 LB	Per LB	\$1.70	
	23.5.1.2.5	Disposal/Regeneration off-site	Actual	At Cost	

TASKS		ITEM DESCRIPTION	UOM	MAXIMUM ALLOWED	RSRVD
23.5.2		Carbon replacement - vapor phase			
	23.5.2.1	Virgin carbon including transportation, disposal, labor, and equipment to re-bed carbon vessel			
	23.5.2.1.1	<200 Lbs	Per LB	\$4.75	
	23.5.2.1.2	201 - 500 Lbs	Per LB	\$3.90	
	23.5.2.1.3	501 - 2000 Lbs	Per LB	\$3.30	
	23.5.2.1.4	>2000 Lbs	Per LB	\$3.00	
	23.5.2.2	Regeneration/disposal (off-site) including transportation, re-activation, labor and equipment to re-bed carbon vessel			
	23.5.2.2.1	0 - 200 Lbs	Per LB	\$3.50	
	23.5.2.2.2	201 - 500 Lbs	Per LB	\$2.65	
	23.5.2.2.3	500 - 2,000 Lbs	Per LB	\$2.05	
	23.5.2.2.4	>2,000 Lbs	Per LB	\$1.70	
	23.5.2.3	Regeneration on-site (NOTE: Cost of regeneration equipment not included)			
	23.5.2.3.1	0 - 200 Lbs	Per Event	\$600	
	23.5.2.3.2	201 - 500 Lbs	Per Event	\$720	
	23.5.2.3.3	500 - 2,000 Lbs	Per Event	\$1,080	
	23.5.2.3.4	>2,000 Lbs	Per Event	\$1,320	
23.6		Contaminated liquid removal and disposal			
	23.6.1	Contaminated Water Disposal-Bulk - Includes labor	Per Gallon	\$1.80	
	23.6.2	NAPL and Disposal	Per Gallon	\$2.10	
	23.6.3	Sludge and Disposal-Bulk	Per Gallon	\$10.50	
	23.6.4	Contaminated Water Disposal - 6 Drums Maximum	Per 55 Gal Drum	\$240	
	23.6.4.1	Transportation of Drum(s)	Per Event	\$360	
	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	\$150	
	23.6.6.1	Transportation of Drum(s)	Per Event	\$360	
24		CONCRETE WELL PAD/ROAD BOX/MANHOLE REMOVAL AND REPLACEMENT			
24.1		Remove and replace concrete pad/manhole/road box			
	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	\$330	
	24.1.1.2	> 3 Pads	Per Pad	\$295	
	24.1.2	Replace traffic-rated roadbox (<18" diameter) and pad (Includes pad replacement)			
	24.1.2.1	1 - 3 Roadbox	Each	\$390	
	24.1.2.2	>3 Roadbox	Each	\$360	
	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	\$10	
	24.1.4.2	4" Diameter	Each	\$20	
	24.1.4.3	6" Diameter	Each	\$30	
	24.1.5	Replacement monitoring well covers with O-rings			
	24.1.5.1	4" Diameter	Each	\$20	
	24.1.5.2	6" Diameter	Each	\$25	
	24.1.5.3	8" Diameter	Each	\$30	
	24.1.5.4	12" Diameter	Each	\$75	
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	\$1,200	
	25.2.2	Half Day (up to and including 6 hours including travel)	Per 1/2 Day	\$600	
25.3		Well abandonment by pressure grouting			
	25.3.1	2" Diameter well	Per Foot	\$15	
	25.3.2	4" Diameter well	Per Foot	\$17	
	25.3.3	6" Diameter well	Per Foot	\$20	
	25.3.4	8" Diameter well	Per Foot	\$25	
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	\$15	
	25.4.2	4" Diameter well	Per Foot	\$20	
	25.4.3	6" Diameter well	Per Foot	\$25	
	25.4.4	8" Diameter well	Per Foot	\$30	
25.5		DEP Report submitted by Licensed Driller	NTE	\$270	

TASKS		ITEM DESCRIPTION	UOM	MAXIMUM ALLOWED	RSRVD
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	\$305	
	26.1.2	51 - Maximum 100 Miles (radius)	NTE/Per Event	\$410	
	26.1.3	DEP Requested Meetings	Each	\$1,200	
	26.1.3.1	DEP Information Gathering & Response	NTE/Per Event	\$1,200	
	26.1.3.2	Audit Follow-Up Plan per 310 CMR 40.1160	NTE/Per Event	\$2,160	
	26.1.3.3	Audit Follow-Up Plan Completion Statement per 310 CMR 40.1170	NTE/Per Event	\$3,000	
	26.1.4	Post RAO DEP Audit	NTE	\$1,200	
26.2		LSP Site Visit (includes labor, travel time and vehicle) Up to 2 visits per year.	Per Year	\$1,200	
27		LABORATORY ANALYSIS	UOM	PRICE	RSRVD
27.1		GENERAL CHEMISTRY			
	27.1.1	Hydrocarbons, Petroleum or Oil & Grease By IR	Each	\$130.00	
	27.1.2	Oil & Grease, Gravimetric	Each	\$72.00	
	27.1.3	Oil & Grease - Hexane Method	Each	\$95.00	
	27.1.4	Oxygen, Dissolved	Each	\$24.00	
	27.1.5	pH	Each	\$15.00	
	27.1.5.1	Acidity	Each	\$13.00	
	27.1.6	Total Organic Carbon	Each	\$48.00	
	27.1.7	Total Organic Halides	Each	\$84.00	
	27.1.8	Turbidity	Each	\$12.00	
	27.1.8.1	Total Dissolved Solids.	Each	\$24.00	
	27.1.8.2	Total Suspended Solids	Each	\$24.00	
	27.1.8.3	Total Settleable Solids.	Each	\$24.00	
	27.1.9	Temperature	Each	\$6.00	
	27.1.10	Salinity	Each	\$24.00	
	27.1.11	Total Kjeldahl Nitrogen	Each	\$36.00	
	27.1.12	Nitrogen, Nitrate	Each	\$36.00	
	27.1.13	Nitrogen, Nitrite	Each	\$36.00	
	27.1.14	Nitrogen Ammonia	Each	\$31.00	
	27.1.15	Total Phosphorous	Each	\$24.00	
	27.1.16	Percent Moisture	Each	\$12.50	
	27.1.17	Sulfate US EPA Method 375.40 (Groundwater Only)	Each	\$18.00	
	27.1.18	Chloride US EPA Method 325.1 or Standard Methods 4500-CLB (Groundwater Only)	Each	\$14.50	
	27.1.19	Hardness US EPA Methods 130.1 & 130.2 or Standard Methods 2340B (Groundwater Only)	Each	\$8.50	
	27.1.20	MBAS (Surfactants)	Each	\$75.00	
	27.1.21	Sulfide	Each	\$17.00	
	27.1.22	Free & Dissociable Cyanide	Each	\$27.00	
	27.1.23	Physiologically Available Cyanide	Each	\$43.00	
	27.1.24	Fluoride	Each	\$16.00	
	27.1.25	Phenolics	Each	\$25.00	
	27.1.26	Silica, Dissolved	Each	\$26.00	
	27.1.27	Total Residual Chlorine	Each	\$12.00	
	27.1.28	Specific Conductance	Each	\$11.00	
	27.1.29	CTAS Surfactants	Each	\$132.00	
27.2		MICROBIOLOGY			
	27.2.1	Bioremediation parameters			
	27.2.1.1	Total Viable Organisms	Each	\$60.00	
	27.2.1.2	Total & Non-Viable Organisms	Each	\$60.00	
	27.2.1.3	Fluorescent Pseudomonads	Each	\$60.00	
	27.2.1.4	Phenanthrene Degraders	Each	\$60.00	
	27.2.1.5	Petroleum & BTEX Degraders	Each	\$108.00	
	27.2.1.6	Biological Oxygen Demand	Each	\$35.00	
	27.2.1.7	Chemical Oxygen Demand	Each	\$35.00	
	27.2.1.8	CO2 (Carbon Dioxide)	Each	\$100.00	
27.3		METALS & MINERALS			
	27.3.1	Aluminum	Each	\$18.00	
	27.3.2	Antimony	Each	\$26.00	
	27.3.3	Arsenic	Each	\$26.00	
	27.3.4	Barium	Each	\$18.00	
	27.3.5	Beryllium	Each	\$18.00	
	27.3.6	Boron	Each	\$18.00	
	27.3.7	Cadmium	Each	\$18.00	
	27.3.8	Calcium	Each	\$18.00	
	27.3.9	Chromium, Total	Each	\$18.00	
	27.3.10	Chromium, Hexavalent	Each	\$38.00	

TASKS	ITEM DESCRIPTION	UOM	MAXIMUM ALLOWED	RSRVD
27.3.10.1	Chromium, Trivalent	Each	\$60.00	
27.3.11	Cobalt	Each	\$18.00	
27.3.12	Copper	Each	\$18.00	
27.3.13	Total Iron (Total FE)	Each	\$30.00	
27.3.13.1	Ferrous Iron (FE2)	Each	\$50.00	
27.3.13.2	Ferric Iron (FE3)	Each	\$50.00	
27.3.14	Lead	Each	\$36.00	
27.3.14.1	Tetra-ethyl Lead This is an additional method applicable to water only. Method ASTM E3341-91M	Each	\$130.00	
27.3.15	Lithium	Each	\$18.00	
27.3.16	Magnesium	Each	\$18.00	
27.3.17	Manganese	Each	\$18.00	
27.3.18	Mercury	Each	\$48.00	
27.3.19	Molybdenum	Each	\$18.00	
27.3.20	Nickel	Each	\$18.00	
27.3.21	Potassium	Each	\$18.00	
27.3.22	Selenium	Each	\$26.00	
27.3.23	Silver	Each	\$18.00	
27.3.24	Sodium	Each	\$18.00	
27.3.25	Tin	Each	\$26.00	
27.3.26	Titanium	Each	\$18.00	
27.3.27	Thallium	Each	\$26.00	
27.3.28	Vanadium	Each	\$18.00	
27.3.29	Zinc	Each	\$18.00	
27.3.30	RCRA 8 Metals - AS/BA/CD/CR/PB/HG/SE/AG *	Each	\$190.00	
27.3.31	Priority Pollutant Package (13) AS/SB/BE/CD/CR/CU/NI/PB/HG/SE/AG/TL/ZN	Each	\$260.00	
27.3.32	MCP 13 Metals	Each	\$225.00	
27.3.33	MCP 14 Metals	Each	\$250.00	
27.4	GAS CHROMATOGRAPHY			
27.4.1	Volatile Organic Analysis & MTBE/GCMS	Each	\$205.00	
27.4.2	Purgeable Aromatics	Each	\$125.00	
27.4.3	Purgeable Halocarbons	Each	\$125.00	
27.4.4	BTEX & MTBE	Each	\$125.00	
27.4.5	Volatile Organic Analysis & MTBE/GCMS	Each	\$240.00	
27.4.5.1	Volatile Organic Analysis MCP List	Each	\$200.00	
27.4.6	Methanol	Each	\$180.00	
27.4.6.1	Oxygenates (DIPE, ETBE, TBA, TAME)	Each	\$150.00	
27.4.6.2	Ethanol	Each	\$125.00	
27.4.6.2.1	Ethanol Add on	Each	\$45.00	
27.4.7	Volatile Petroleum Hydrocarbons/GCFID (Gasoline Range)	Each	\$150.00	
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	\$540.00	
27.4.8.1	Methylphenol (Add On)			
27.4.8.1.1	2-Methylphenol (Add On)	Each	\$30.00	
27.4.8.1.2	3-Methylphenol (Add On)	Each	\$30.00	
27.4.8.1.3	4-Methylphenol (Add On)	Each	\$30.00	
27.4.8.2	Semi-volatile MCP List	Each	\$425.00	
27.4.9	Semi-Volatile Petroleum Hydrocarbons/GCFID (Diesel Range)	Each	\$150.00	
27.4.10	GCFID Fingerprint	Each	\$150.00	
27.4.11	Pesticides (Priority Pollutant)	Each	\$150.00	
27.4.11.1	Pesticides MCP List	Each	\$150.00	
27.4.12	PCB's	Each	\$150.00	
27.4.12.1	PCB by SOXLET	Each	\$51.00	
27.4.13	Herbicides (2/4/D/Silvex)	Each	\$240.00	
27.4.14	BTEX, Ethers (MTBE, DIPE) Add on	Each	\$12.00	
27.4.15	Polynuclear Aromatic Hydrocarbons (PAH)	Each	\$200.00	
27.4.15.1	Polynuclear Aromatic Hydrocarbons (PAH) By SIM	Each	\$200.00	
27.4.16	AIR SAMPLE ANALYSIS OF VES OFF-GAS			
27.4.16.1	BTEX & MTBE	Each	\$100.00	
27.4.16.2	Volatile Petroleum Hydrocarbons/ Gasoline Range & Methane	Each	\$114.00	
27.4.16.3	Polynuclear Aromatic Hydrocarbons by GC/MS	Each	\$405.00	
27.4.16.4	Petroleum Hydrocarbons/Diesel Fuel Range	Each	\$162.00	
27.4.17	AIR SAMPLE ANALYSIS - INDOOR AIR QUALITY			
27.4.17.1	BTEX & MTBE - includes Summa Canister	Each	\$480.00	
27.4.17.1.1	Add-on for composite valve	Each	\$30.00	
27.4.17.1.2	TO15 (TO14 + 15 TICS)	Each	\$239.00	
27.4.17.2	Volatile Petroleum Hydrocarbons/ Gasoline Range			
27.4.17.2.1	Includes Tedlar Bag	Each	\$420.00	
27.4.17.2.2	Includes Summa Canister	Each	\$510.00	
27.4.17.2.3	Polynuclear Aromatic - Includes PUF with GFFT Hydrocarbons by GC/MS	Each	\$540.00	
27.4.17.3	DEP Air Petroleum Hydrocarbons (Draft Method)			
27.4.17.3.1	SUMMA Canister - DEP Method - Normal Turnaround	Each	\$480.00	
27.4.17.3.2	Tedlar Bag - DEP Method - Normal Turnaround	Each	\$420.00	
27.4.17.3.3	Tenax Tubes - DEP Method - Normal	Each	\$390.00	
27.4.17.4	Methane (Air-includes Summa)	Each	\$180.00	

TASKS		ITEM DESCRIPTION			UOM	MAXIMUM ALLOWED	RSRVD
	27.4.17.5	Formaldehyde in Air			Each	\$81.00	
27.4.18		DEP VPH			Each	\$180.00	
	27.4.18.1	Method 5035 -Soil Preservation Kit for Unknown or Low Level Concentrations			Each	\$36.00	
	27.4.18.2	Method 5035 -Soil Preservation Quality Control Container for Unknown or Low Level Concentrations			Each	\$36.00	
	27.4.18.3	Method 5035 - Soil Preservation Kit for Medium Level Concentrations			Each	\$30.00	
	27.4.18.4	Method 5035 - Encore Sampler for Unknown or Low Level Concentrations with Laboratory Preparation			Each	\$42.00	
	27.4.18.5	Method 5035 - Encore Sampler Quality Control Container for Unknown or Low Level Concentrations			Each	\$36.00	
	27.4.18.6	Method 5035 - Encore Sampler for Medium to High Level Concentrations with Laboratory Preparation			Each	\$30.00	
	27.4.27	DEP EPH			Each	\$320.00	
	27.4.28	Methane (US EPA Method 8015M/EP18/TO3)			Each	\$120.00	
	27.4.29	Formaldehyde in Soil/Water			Each	\$175.00	
27.5		RCRA WASTE CHARACTERIZATION					
	27.5.1	Ignitability (flash point)			Each	\$36.00	
	27.5.2	Corrosivity (as pH)			Each	\$24.00	
	27.5.3	Cyanide Reactivity			Each	\$42.00	
	27.5.4	Sulfide Reactivity			Each	\$36.00	
	27.5.5	Paint Filter			Each	\$18.00	
	27.5.6	TCLP Extraction-Add on			Each	\$90.00	
	27.5.7	Zero Headspace Extraction			Each	\$120.00	
	27.5.8	Metal Extraction			Each	\$26.00	
	27.5.9	Alkalinity			Each	\$48.00	
	27.5.10	TCLP Metals			Each	\$88.00	
27.6		DRINKING WATER ORGANICS					
	27.6.1	Trihalomethanes			Each	\$100.00	
	27.6.2	Organohalides			Each	\$120.00	
	27.6.3	Volatile Aromatics			Each	\$120.00	
	27.6.4	Ethylene Dibromide/1,2 Dibromo-3-Chloropropane			Each	\$120.00	
	27.6.5	Pesticides			Each	\$150.00	
	27.6.6	Pesticides			Each	\$150.00	
	27.6.7	Pesticides & PCB's			Each	\$162.00	
	27.6.8	Chlorinated Herb.			Each	\$240.00	
	27.6.9	Volatile Organic Analysis			Each	\$210.00	
	27.6.10	Semi-Volatile Organic Analysis			Each	\$450.00	
	27.6.11	Carbamates			Each	\$192.00	
	27.6.12	Glyphosate			Each	\$240.00	
	27.6.13	Endothal			Each	\$210.00	
	27.6.14	Diquat			Each	\$215.00	
27.8		PETROLEUM HYDROCARBONS					
	27.8.1	Total Petroleum Hydrocarbons (TPH)					

TASKS		ITEM DESCRIPTION	UOM	MAXIMUM ALLOWED	RSRVD	
27.8	27.8.1	27.8.1.1	1-5 Samples	Each	\$90.00	
		27.8.1.2	6-10 Samples	Each	\$66.00	
		27.8.1.3	> 10 Samples	Each	\$54.00	
	27.8.2	Total BTEX				
		27.8.2.1	1-5 Samples	Each	\$90.00	
		27.8.2.2	6-10 Samples	Each	\$66.00	
	27.8.3	Polynuclear Aromatic Hydrocarbons				
		27.8.3.1	1-5 Samples	Each	\$90.00	
		27.8.3.2	6-10 Samples	Each	\$66.00	
	27.8.4	EIA Screening Analyst/Operator and Equipment for on-site analysis. Includes equipment, operator and equipment incidentals, e.g. sample jars, extraction materials, pipettes, gloves, balance, spectrometer, printer, reports, shipping etc.				
		27.8.4.1	Daily	Day	\$600.00	
		27.8.4.2	Weekly	Week	\$3,000.00	
	27.9	GEOTECHNICAL ANALYSES				
	27.9.1	Sieve/Hydrometer Grain Size Analysis (gradation)		Each	\$150.00	
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	\$18.00		
27.10.2	Sample Compositing		Each	\$18.00		
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	RSRVD
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	
	28.1.1.2	Weekly		\$300	
28.1.2	150-250 scfm				
	28.1.2.1	Daily		\$125	
	28.1.2.2	Weekly		\$500	
28.1.3	250-400 scfm				
	28.1.3.1	Daily		\$200	
	28.1.3.2	Weekly		\$800	
28.1.4	400-550 scfm				
	28.1.4.1	Daily		\$250	
	28.1.4.2	Weekly		\$1,000	
28.2	Portable Air Compressor, Diesel or Gasoline Powered (includes fuel)				
	28.2.1	100 - 299 scfm			
		28.2.1.1	Daily		\$250
28.2.1.2		Weekly		\$750	
28.2.2	300 - 750 scfm				
	28.2.2.1	Daily		\$400	
	28.2.2.2	Weekly		\$1,600	
28.2.3	751-900 scfm				
	28.2.3.1	Daily		\$500	
	28.2.3.2	Weekly		\$2,000	
28.2.4	901-1,400 scfm				
	28.2.4.1	Daily		\$750	
	28.2.4.2	Weekly		\$2,400	
28.3	Backhoe/Loader, rubber tire				
	28.3.1	Hourly		\$45	
	28.3.2	Daily		\$350	
28.4	Excavator, track (large)				
	28.4.1	Hourly		\$100	
	28.4.2	Daily		\$800	
28.5	Exhaust Fan, 10" Explosion Proof				
	28.5.1	Hourly		\$3,200	
	28.5.2	Daily			

TASKS		ITEM DESCRIPTION	UOM	MAXIMUM ALLOWED	RSRVD
	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	
	28.6.2	Weekly		\$260	
	28.6.3	Monthly		\$300	
28.7		Equipment Enclosure 8' x 20'			
	28.7.1	Weekly		\$200	
	28.7.2	Monthly		\$800	
28.8		Flood Lights			
	28.8.1	Daily		\$50	
	28.8.2	Weekly		\$200	
	28.8.3	Monthly		\$600	
28.9		Generator (Excluding fuel)			
	28.9.1	3.5 kw			
	28.9.1.1	Daily		\$100	
	28.9.1.2	Weekly		\$400	
	28.9.1.3	Monthly		\$1,200	
	28.9.2	6.5 kw			
	28.9.2.1	Daily		\$125	
	28.9.2.2	Weekly		\$500	
	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	
	28.9.3.3	Monthly		\$2,400	
	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	
	28.9.5	50 - 85 kw			
	28.9.5.1	Daily		\$400	
	28.9.5.2	Weekly		\$1,600	
	28.9.5.3	Monthly		\$4,800	
	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	
	28.10.3	Weekly		\$300	
28.11		Discharge Hose			
	28.11.1	3/4" X 50'			
	28.11.1.1	Daily		\$3	
	28.11.1.2	Weekly		\$12	
	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	
	28.11.3.3	Monthly		\$144	
	28.11.4	4" X 50'			
	28.11.4.1	Daily		\$15	
	28.11.4.2	Weekly		\$60	
	28.11.4.3	Monthly		\$240	
28.12		Skid Steer Loader or Mini Excavator			
	28.12.1	Skid Steer Loader			
	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 hammer attachment	Per Day	\$300	
	28.12.1.5	Hydraulic hammer attachment	Per Hour	\$35	
	28.12.2	Mini Excavator			
	28.12.2.1	Daily		\$350	
	28.12.2.2	Weekly		\$1,400	
	28.12.2.3	Monthly		\$4,200	
28.13		3 to 4 Yard Loader, Front-end			

TASKS		ITEM DESCRIPTION	UOM	MAXIMUM ALLOWED	RSRVD
	28.13.1	Daily		\$900	
	28.13.2	Weekly		\$3,600	
	28.13.3	Monthly		\$10,800	
28.14		Mounted LEL Sensor			
	28.14.1	Daily		\$35	
	28.14.2	Weekly		\$100	
	28.14.3	Monthly		\$230	
28.15		Pump, Construction/Dewatering			
	28.15.1	1 hp, Explosion Proof			
	28.15.1	Daily		\$40	
	28.15.2	Weekly		\$160	
	28.15.3	Monthly		\$480	
	28.15.2	2 hp, Explosion Proof			
	28.15.2.1	Daily		\$60	
	28.15.2.2	Weekly		\$240	
	28.15.2.3	Monthly		\$720	
	28.15.3	3 hp, Explosion Proof			
	28.15.3.1	Daily		\$75	
	28.15.3.2	Weekly		\$300	
	28.15.3.3	Monthly		\$900	
	28.15.4	5 hp, Explosion Proof			
	28.15.4.1	Daily		\$80	
	28.15.4.2	Weekly		\$320	
	28.15.4.3	Monthly		\$415	
	28.15.5	10 hp, Explosion Proof			
	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			
	28.16.1.1	Daily		\$150	
	28.16.1.2	Weekly		\$600	
	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			
	28.16.2.1	Daily		\$200	
	28.16.2.2	Weekly		\$800	
	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			
	28.16.3.1	Daily		\$250	
	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	
	28.16.4.2	Weekly		\$600	
	28.16.4.3	Monthly		\$1,800	
28.17		Internal Combustion Engine			
	28.17.1	Daily		\$400	
	28.17.2	Weekly		\$1,600	
	28.17.3	Monthly		\$4,800	
	28.17.4	Fuel	Actual	At Cost	
	28.17.5	Thermal Oxidizer			
	28.17.5.1	Daily		\$400	
	28.17.5.2	Weekly		\$1,600	
	28.17.5.3	Monthly		\$4,800	
	28.17.6	Thermal Oxidizer/Catalytic Converter			
	28.17.6.1	Daily		\$500	
	28.17.6.2	Weekly		\$2,000	
	28.17.6.3	Monthly		\$6,000	
	28.17.7	Tractor			
	28.17.7.1	Daily		\$280	
	28.17.7.2	Weekly		\$1,120	
	28.17.7.3	Monthly		\$2,800	
	28.17.7.4	Hourly	Per Hour	\$40	
	28.17.8	Trailer/Low bed			
	28.17.8.1	Daily		\$120	
	28.17.8.2	Weekly		\$480	
	28.17.8.3	Monthly		\$1,200	
	28.17.9	Water Tanker			
	28.17.9.1	2,500-4,500 gallon water tanker			

TASKS		ITEM DESCRIPTION	UOM	MAXIMUM ALLOWED	RSRVD	
	28.17.9	28.17.9.1.1	Daily		\$125	
		28.17.9.1.2	Weekly		\$500	
		28.17.9.1.3	Monthly		\$1,500	
		28.17.9.2	4,500 - 8,800 gallon water tanker			
		28.17.9.2.1	Daily		\$280	
		28.17.9.2.2	Weekly		\$1,120	
		28.17.9.2.3	Monthly		\$2,800	
	28.17.10	28.17.9.3	Potable, Spring or Well Water	Actual	At Cost	
			Truck, (6 Wheel) 2 to 10 Yard Dump			
		28.17.10.1	Daily		\$240	
		28.17.10.2	Weekly		\$1,200	
	28.17.11	28.17.10.3	Monthly		\$3,600	
		28.17.10.4	Hourly		\$30	
			Truck, (10 Wheel) 20 Yard Dump			
		28.17.11.1	Daily		\$320	
	28.17.12	28.17.11.2	Weekly		\$1,280	
		28.17.11.3	Monthly		\$3,840	
		28.17.11.4	Hourly		\$40	
			Truck, Sampling Van - vehicle only			
	28.17.13	28.17.12.1	Daily		\$125	
		28.17.12.2	Weekly		\$500	
		28.17.12.3	Monthly		\$1,500	
			Truck, Pick-Up - vehicle only			
	28.17.14	28.17.13.1	Daily		\$125	
		28.17.13.2	Weekly		\$500	
		28.17.13.3	Monthly		\$1,500	
			Truck, Maintenance/Boom			
	28.17.15	28.17.14.1	Daily		\$760	
		28.17.14.2	Weekly		\$2,400	
		28.17.14.3	Monthly		\$7,200	
			Truck, Mobil Shop/Box - vehicle only			
	28.18	28.17.15.1	Daily		\$200	
		28.17.15.2	Weekly		\$800	
		28.17.15.3	Monthly		\$2,000	
			Treatment Systems			
	28.18	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	
		28.18.1.1.2	Weekly		\$400	
		28.18.1.1.3	Monthly		\$1,200	
		28.18.1.2	26 - 50 gpm			
		28.18.1.2.1	Daily		\$150	
		28.18.1.2.2	Weekly		\$600	
		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		
28.18.1.3.3		Monthly		\$3,000		
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.			
		28.18.2.1.1	Daily		\$30	
		28.18.2.1.2	Weekly		\$120	
		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			
		28.18.2.2.1	Daily		\$40	
		28.18.2.2.2	Weekly		\$200	
		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			
		28.18.2.3.1	Daily		\$50	
		28.18.2.3.2	Weekly		\$250	
		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				

TASKS		ITEM DESCRIPTION	UOM	MAXIMUM ALLOWED	RSRVD
	28.18.2.5.1	Daily		\$150	
	28.18.2.5.2	Weekly		\$750	
	28.18.2.5.3	Monthly		\$2,500	
	28.18.2.6	Pressure Vessel, 75 psig max design pressure, 0-100 gpm, 1500-2500 lbs of carbon required to fill vessel			
	28.18.2.6.1	Daily		\$75	
	28.18.2.6.2	Weekly		\$300	
	28.18.2.6.3	Monthly		\$750	
	28.18.2.7	Pressure Vessel, 75 psig max design pressure, 0-150 gpm, 2000-3000 lbs of carbon required to fill vessel			
	28.18.2.7.1	Daily		\$90	
	28.18.2.7.2	Weekly		\$360	
	28.18.2.7.3	Monthly		\$900	
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	
	28.18.3.1.2	Weekly		\$200	
	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			
	28.18.3.2.1	Daily		\$50	
	28.18.3.2.2	Weekly		\$200	
	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			
	28.18.3.3.1	Daily		\$60	
	28.18.3.3.2	Weekly		\$240	
	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	
	28.18.3.4.2	Weekly		\$280	
	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			
	28.18.3.5.1	Daily		\$80	
	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	\$130	
	28.18.4.1	Vactor Solids Excavator with Operator	Per Hour	\$175	
	28.18.4.2	Trailer Mounted Air Excavator with Operator	Per Hour	\$110	
	28.18.4.3	Monthly EFR-Up to 2 Events per month for a maximum of 6 months - See additional guidance	Per Event	\$3,000	
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/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 phase granular activated carbon vessels, up to 50 gallons per minute, transfer pump, heater and electrical controls. With soil vapor extraction module for 100 cfm flow rate with vapor phase granular activated carbon vessel.			
	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			

TASKS		ITEM DESCRIPTION	UOM	MAXIMUM ALLOWED	RSRVD	
	28.19.1	Daily		\$30		
		Weekly		\$45		
		Monthly		\$90		
	28.19.2	1" Diameter Turbine Meter				
		Daily		\$30		
		Weekly		\$45		
	28.19.3	1 1/2" Diameter Turbine Meter				
		Daily		\$30		
		Weekly		\$47		
	28.19.4	2" Diameter Turbine Meter				
		Daily		\$40		
		Weekly		\$55		
28.20	10 Ton Vibratory Roller or equivalent					
	Daily		\$750			
	Weekly		\$3,000			
28.21	Portable Vibratory Plate Compactor					
	Daily		\$250			
	Weekly		\$1,000			
28.22	Traffic Controls					
	Daily		\$750			
	Weekly		\$3,750			
28.23	Electric or Pneumatic Submersible Pump Rental with Controls					
	Daily		\$50			
	Weekly		\$200			
28.24	Electric or Pneumatic Non-Aqueous Phase Liquid Pump Rental with Controls					
	Daily		\$50			
	Weekly		\$200			
28.25	Air Sparging Compressor Rental with Controls up to 30 cfm @ 15 psi					
	Daily		\$50			
	Weekly		\$200			
28.26	Air Sparging Compressor Rental with Controls up to 50 cfm @ 15 psi					
	Daily		\$75			
	Weekly		\$300			
28.27	Asphalt/Concrete Cutting Saw, self-propelled (includes blade wear)		Per Day	\$450		
	Daily		\$450			
	Weekly		\$900			
28.28	Trench Box/Pneumatic Shoring (includes mobilization/demobilization)		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	

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			