ATTACHMENT 1

SCOPE OF WORK
GROUNDWATER SAMPLING PROGRAM
FORT WAINWRIGHT, ALASKA

1. BACKGROUND

This scope of work (SOW) was developed to support environmental monitoring activities at Fort Wainwright in Fairbanks, Alaska. Groundwater sampling and analysis will be performed to fulfill regulatory requirements of the Environmental Protection Agency ("EPA") and Alaska Department of Environmental Conservation ("State" or "ADEC"). The base SOW addresses only groundwater sampling and analysis from existing groundwater monitoring wells and reporting requirements; optional tasks exist for installation of new wells and surveying. Prior sampling reports will be available for review. Exact site locations will also be available for review.

2. OBJECTIVES:

Sample and analyze groundwater from wells located at former Building 3564, North Post, Building 2060, Building 2062/former Building 2063, Coal Storage Yard, and the Fort Wainwright landfill; survey and install wells; provide results in a report format; and attend related project meetings. It is assumed that when the task discusses "Fall 2004" that the time frame will be decided upon by the Contracting Officer Representative (COR) for achieving the best historical results, looking for historical similar groundwater levels, but will likely be in August 2004. When a building is designated "former building", that building has been demolished but remains designated as that building site for historical references and is listed that way with the State and EPA.

3. TASKS:

The work under this SOW shall follow the definition of tasks described in this section, and shall be performed in accordance with the Environmental Protection Agency (EPA) and State of Alaska current environmental regulations. All work shall be performed within one of the described tasks for the purposes of scheduling and associated cost. No work outside of these tasks shall be performed. Specific analytical tests may be deleted by the COR from the list of requirements for any individual task if current data indicates that the sampling requirement is not necessary.

Task 1, Former Building 3564: (CLIN 0001AA)

Sample and analyze groundwater for Diesel Range Organics (DRO), Residual Range Organics (RRO), Gasoline Range Organics (GRO), and Benzene, Toluene, Ethylbenzene and Xylenes (BTEX), seven monitoring wells near former Building 3564 located on Fort Wainwright. The wells to be sampled are AP7178, AP7180, AP6729, AP7187, AP7189,

AP7191, and AP7183. These wells will be sampled in accordance with ADEC and EPA guidance. Each of these wells are to be sampled once in Fall 2004. Wells range in depth from about 20 to 150 feet.

Groundwater Sampling and Analysis

Water levels will be measured in all monitoring wells prior to the wells being purged and sampled. If free-phase petroleum is detected in the well, the thickness of the product layer will be determined using an interface probe or comparable device and recorded in the monitoring report. Water levels will be measured to the nearest 0.10 inch and be measured from a set location on the well casing.

Task 2, North Post Sampling: (CLIN 0001AB)

Sample and analyze groundwater for GRO, BETX, DRO, RRO, and Polynuclear Aromatic Hydrocarbons (PAHs), from seven wells located near the North Post site on Fort Wainwright. North Post site is located northwest of the "North Post Housing" area on the oxbow of the Chena River. Each of these wells to be included for sampling and are AP6819, MP2C, MP3C, AP7095, AP8780, AP8781, and AP8782. These wells will be sampled once during the Fall of 2004. These wells will be sampled in accordance with ADEC and EPA current environmental regulations. Wells range in depth from about 20 to 150 feet.

Groundwater Sampling and Analysis

Water levels will be measured in all monitoring wells prior to the wells being purged and sampled. If free-phase petroleum is detected in the well, the thickness of the product layer will be determined using an interface probe or comparable device and recorded in the monitoring report. Water levels will be measured to the nearest 0.10 inch and be measured from a set location on the well casing.

Task 3, Building 2060: (CLIN 0001AC)

Sample and analyze groundwater for DRO from wells AP7202R and AP7206, located near Building 2060 on Fort Wainwright. Each wells will be sampled once in Fall 2004. Wells will be sampled in accordance with ADEC and EPA current environmental regulations. Wells range in depth from about 20 to 40 feet.

Groundwater Sampling and Analysis

Water levels will be measured in all monitoring wells prior to the wells being purged and sampled. If free-phase petroleum is detected in the well, the thickness of the product layer will be determined using an interface probe or comparable device and recorded in the monitoring report. Water levels will be measured to the nearest 0.10 inch and be measured from a set location on the well casing.

Task 4, Building 2062/Former Building 2063: (CLIN 0001AD)

Sample and analyze nine groundwater-monitoring wells for DRO, GRO and BTEX, located near Building 2062 and former Building 2063 on Fort Wainwright. These wells will be sampled once in the fall of 2004 and in accordance with ADEC and EPA current environmental regulations. Wells include: AP7222, AP7214, A7210, AP7220, AP8268, AP8269, AP8270, AP8271 and AP8772. Wells range in depth from about 20 to 40 feet

Groundwater Sampling and Analysis

Water levels will be measured in all monitoring wells prior to the wells being purged and sampled. If free-phase petroleum is detected in the well, the thickness of the product layer will be determined using an interface probe or comparable device and recorded in the monitoring report. Water levels will be measured to the nearest 0.10 inch and be measured from a set location on the well casing.

Task 5, Mobilization and Sampling Requirements: (CLIN 0001AE)

This task includes mobilization and demobilization for sampling events detailed in above Tasks 1 through 4 inclusive in Fall 2004. All sampling for above tasks will be conducted during one time frame to be determined by the COR, but most likely August 2004. Task shall include mobilization of personnel, and equipment for field personnel and any subcontractors, if required. Sampling shall be conducted within a two-day time frame including travel. (Note: Travel is set up as a reimbursable item not to be included in this task. See CLIN 0001AS)

Prior to sampling, the Contractor shall inspect each well to ensure its integrity and that no damage (frost jacking, cracked pad, bent casing, etc) has occurred since the last sampling effort. Any observed damage to wells or probes should be reported immediately to the COR. If necessary, wellhead elevations may be resurveyed as described in Option Task 1.

The Contractor shall be solely responsible for any re-sampling needed due to the improper packaging, shipping or collection of samples. Trip blanks will be included in accordance with appropriate State and EPA current environmental regulations. Temperature blanks, as well, shall be included in all coolers shipped in accordance with State and EPA regulations.

The Contractor shall manage all of the investigative-derived waste (IDW) produced during activities required by this SOW in accordance with the IDW Management Area Standard Operating Procedures (SOP), Fort Wainwright, Alaska dated March 2001, or newer revised version as available. Groundwater IDW will be containerized in 55-gallon drums, provided by the Army and transported to the Environmental Staging Facility at Fort Wainwright (Bldg 3489). Submission of the analytical laboratory reports will satisfy the requirement for standard hazardous waste characterization in accordance with

the IDW SOP. This task shall include costs for all analytical requirements set forth in the individual tasks above. Additional subsequent disposal of IDW is not anticipated and costs should not be included in the proposal for this task.

Contractor shall utilize the existing Site Health and Safety Plan and the Quality Assurance Program Plan (QAPP) previously used for sampling at these sites. Plans will be provided to Contractor within ten days of contract award.

Task 6, Meetings: (CLIN 0001AF)

Contractor shall attend a total of two meetings regarding Tasks 1-5 at Public Works Environmental Offices, Fort Richardson or Fort Wainwright, Alaska. One meeting will be held at Fort Wainwright. Each meeting should last approximately four hours in length, except the Fort Wainwright meeting, which should last approximately six hours.

Contractor will make a presentation of the work performed at scheduled meetings. The presentation shall consist of a summary of the work that has been accomplished and the work that is anticipated followed by an open discussion among those present. PowerPoint and/or handouts are required. (Note: Travel is set up as a reimbursable item not to be included in this task. See CLIN 0001AS).

Within 10 calendar days following each meeting, Contractor shall prepare and submit minutes of the meeting to the COR in a final format.

Task 7, Reporting: (CLIN 0001AG)

Contractor shall prepare a Sampling and Analysis Plan (SAP) Technical Memorandum (TM) prior to beginning fieldwork. The TM will be due ninety days after contract award. COR will review TM, and if significant changes must be made, contractor will be required to provide an addendum as an attachment within the sampling report.

Contractor shall prepare a report summarizing the work completed and any recommendations regarding monitoring the site(s). Report is due ninety days after sampling is completed and shall include final lab reports. Results shall be put into a "spider chart" format showing the location of wells sampled, historical sampling results, and current contaminant and well depths. Also included on the chart should be the Maximum Concentration Levels, groundwater levels, depth of wells, and prior sampling results. Prior results from each site will be included in the monitoring report and will be provided to the Contractor within sixty days of award.

Task 8, Fort Wainwright Landfilll (Operable Unit 4) Groundwater Monitoring Draft and Final Work Plan, Final Quality Assurance Project Plan and Final Site Safety and Health Plan: (CLIN 0001AH)

The Contractor shall review and update, if necessary, the existing Work Plan that describes the overall work to be accomplished described in Task 9 below. The Work

Plan should also include as an appendix. A copy of the Memorandum of Understanding between the Army and State, which will be provided Contractor within thirty days of contract award. A Quality Assurance Project Plan (QAPP) and Site Safety and Health Plan (SSHP) shall also be reviewed and updated from existing documents for the Landfill Groundwater Monitoring to be conducted.

The work plan shall refer to the existing OU4 Landfill Operations, Maintenance, and Monitoring Manual, previous documents and the existing comprehensive OU4 Management Plan (1993) for accepted, previously agreed upon methods, while briefly addressing the specific requirements of this contract. All documents referenced in support of the work plan will be provided Contractor within thirty days of contract award.

The work plan is not to be a rewrite of the OU4 Landfill Operations, Maintenance, and Monitoring Manual or the OU4 Management Plan, but rather a consolidation of the task specific sampling requirements. All plans shall meet requirements of United States Army Alaska (USARAK), the reference documents, and this task and should be similar to prior work plans produced for this site in scope and depth. (See Government Furnished Material)

The Work Plan, QAPP and Site Safety and Health Plan will be subject to review and must be approved by the COR prior to the commencement of the initial fieldwork. All work will be conducted according to, the approved Work Plan, the approved QAPP and the approved Site Safety and Health Plan. The report required by this task shall include both this site and the Fort Wainwright Coal Storage Yard (further detailed in Task 10). The draft work plan, QAPP and Site Safety and Health Plan must be submitted for regulatory review, and be received by the COR ninety days after award.

The Army will require a thirty-day review period, at which time a comment review conference will be scheduled (Task 13); final report will be due fourteen days after the comment review conference. The report shall be tabbed and written to separate the two sites but shall be bound into one three-ring binder report.

Task 9, Landfill Groundwater Sampling for Spring and Fall 2004: (CLIN 0001AJ)

The Contractor shall provide one sample and analysis of groundwater for EPA Method 8260B (VOCs), 8270C (SVOCs), EPA 6000 (Metals) and EPA 7000 (Metals) from at each of the following existing wells AP-5588, AP-5589, AP-6132, AP-6136, AP-8061 (AP-6137A), AP-6138A, AP-8062 (AP-6139A), AP-8063 (AP-6139B), DH-6534, and FW-LF-4 located near the landfill on Fort Wainwright. Wells will be sampled in both Spring and Fall 2004. Wells will be sampled in accordance with ADEC and EPA current environmental regulations. Water level readings shall also be taken at each well prior to sampling as per 18 AAC 60.830 (measured to ±0.01").

Contractor will be required to thaw well AP8063 at the Fort Wainwright landfill. Information on this well can be obtained from the COR upon award. Historical method of thawing well has been using steam.

Task 10, Coal Storage Yard Draft and Final Work Plan, Quality Assurance Project Plan and Site Safety and Health Plan: (CLIN 0001AK)

The Contractor shall prepare a brief draft Work Plan that describes the overall work to be accomplished, described in Task 11 below and as set forth in the draft Cleanup Operations and Site Exit Strategy Evaluation (CLOSES) report for the Coal Storage Yard, which will be provided to Contractor upon award. A Quality Assurance Project Plan (QAPP) and Site Safety and Health Plan (SSHP) shall also be prepared from existing documents for the Coal Storage Yard Operations, Maintenance and Monitoring (OM&M) to be conducted under this Task.

The work plan shall use the existing comprehensive OU4 OM&M Manual for accepted, previously agreed upon methods, while briefly addressing the specific requirements of the current task. All mentioned documents will be provided Contractor within thirty days of contract award.

The work plan is not to be a rewrite of the OU4 Coal Storage Yard Operations, Maintenance, and Monitoring Manual or the OU4 Management Plan, but rather a consolidation of the task specific sampling requirements. All plans shall meet requirements of United States Army Alaska (USARAK), the reference documents, and this task and should be similar to prior work plans produced for this site in scope and depth. (See Government Furnished Material)

The Work Plan, QAPP and Site Safety and Health Plan will be subject to review and must be approved by the COR prior to the commencement of the initial fieldwork. As a minimum the plan shall have sections addressing safety, field and lab chemistry, Contractor organization and management, data quality, data management, well specifications, drilling requirements, well abandonment, investigation derived waste, and surveying requirements, as appropriate. All work will be conducted according to the approved Work Plan, the approved QAPP, and the approved SSHP. The report required by this task shall include both this site and the Fort Wainwright Coal Storage Yard (further detailed in Task 10). The draft work plan, QAPP and Site Safety and Health Plan must be submitted for regulatory review, and be received by the COR ninety days after award.

The COR will require a thirty-day review period, at which time a comment review conference will be scheduled (Task 13); final report will be due fourteen days after the comment review conference. The report shall be tabbed and written to separate the two sites but shall be bound into one three-ring binder report.

Task 11, Coal Storage Yard Groundwater Sampling for Fall 2004: (CLIN 0001AL)

Sample and analyze groundwater by EPA Method 8260 for monitoring of benzene, toluene, and TCE from wells AP-6407, AP-6408, AP-7334 and AP-7335 located near Building 3565 (Power Plant) on Fort Wainwright. Wells will be sampled in Fall 2004. Wells will be sampled in accordance with ADEC and EPA current environmental

regulations. Water level readings shall also be taken at each well prior to sampling as per 18 AAC 60.830 (measured to ±0.01" with an interface probe).

Task 12, Mobilization and Sampling Requirements for Tasks 8-11: (CLIN 0001AM)

This task includes mobilization and demobilization for sampling events detailed in above Tasks 8 through 11. Sampling for above tasks will be conducted as set forth in the individual tasks; however, sampling for Optional Task 9 and 11 shall be done concurrently in Fall 2004. This task shall include mobilization of personnel, and equipment, and travel and per diem from Anchorage to Fairbanks for field personnel and any subcontractors if required. Sampling shall be conducted within a five day time frame including travel.

Prior to sampling, the Contractor shall inspect each well to ensure its integrity and that no damage (frost jacking, cracked pad, bent casing, etc) has occurred since the last sampling effort. Any observed damage to wells or probes should be reported immediately to the COR. If necessary, wellhead elevations may be resurveyed as described in Option Task 1.

The Contractor shall be responsible for any re-sampling needed due to the improper packaging, shipping or collection of samples. Trip blanks will be included in accordance with appropriate State and EPA current environmental regulations. Temperature blanks, as well, shall be included in all coolers shipped in accordance with State and EPA regulations. (See Government Furnished Material)

The Contractor shall manage all of the investigative-derived waste (IDW) produced during activities required by this SOW in accordance with the IDW Management Area Standard Operating Procedures, Fort Wainwright, Alaska dated March 2001, or newer revised version as available.

Groundwater IDW will be containerized in 55-gallon drums provided by the Army and transported to the Environmental Staging Facility at Fort Wainwright (Bldg 3489). Submission of the analytical laboratory reports will satisfy the requirement for standard hazardous waste characterization in accordance with the IDW SOP. Task shall include costs for all analytical requirements set forth in the individual tasks above. Additional subsequent disposal of IDW is not anticipated and costs should not be included in the proposal for this task.

Task 13, Comment Review Conference (This conference will be regarding only Tasks 8-10 above (landfill and coal storage yard): (CLIN 0001AN)

A review conference following submission of the draft reports required in Tasks 8 and 10 will be required. It is anticipated this meeting will last four to six hours and will be held in Fairbanks, Alaska. Minutes will be taken by Contractor at this meeting and submitted no later than ten days after the conference in draft form. Contractor will provide final

minutes within three days of receipt of comments/corrections from COR. (Note: Travel is set up as a reimbursable item not to be included in this task. See CLIN 0001AS)

Task 14, Reporting on Tasks 8-13: (CLIN 0001AP)

Contractor shall prepare a report summarizing the work completed and any recommendations regarding monitoring the site(s). Two reports will be submitted to the COR under this task.

The first report will be due within forty-five days after completion of Task 9 and will be submitted in draft and final forms. Results shall be put into a "spider chart" format showing the location of wells sampled, historical sampling results, and current contaminant and well depths. Also included on the chart should be the Maximum Concentration Levels, groundwater levels and depth of wells, prior sampling results, and recommendations for future work. Prior results from each site will be included in the monitoring report and will be provided to Contractor within thirty days of award. This report will only include Landfill Spring 2004 results.

The second report will be due within forty-five days after completion of Tasks 9 and 11 fall sampling, and will also be submitted in draft and final forms. Results shall be put into a "spider chart" format showing the location of wells sampled, historical sampling results, and current contaminant and well depths. Also included on the chart should be the Maximum Concentration Levels, groundwater levels and depth of wells, prior sampling results, and recommendations for future work. Prior results from each site will be included in the monitoring report and will be provided to Contractor within thirty days of award. This report will include the Landfill Fall 2004 as well as the Coal Storage Yard 2004 Fall results.

A thirty-day review period is required for the Army after submission of the draft reports. It is not anticipated that a comment review conference will be required. Upon receipt by Contractor of comments, Contractor will have twenty days to finalize and deliver the final reports. Reports shall be tabbed and written to separate the two sites but shall be bound into one three-ring binder report.

Task 15, Meetings related only to Tasks 8-14: (CLIN 0001AQ)

Contractor shall attend a total of four meetings at Public Works Environmental Offices, Fort Richardson or Fort Wainwright, Alaska. Two meetings will be held at Fort Wainwright. Each meeting should last approximately four hours in length, except the Fort Wainwright meeting, which should last approximately six hours. This task should include travel requirements for the Fairbanks meeting; this would be a one-day trip to Fairbanks including a rental car.

Contractor will make a presentation of the work performed at scheduled meetings. The presentation shall consist of a summary of the work that has been accomplished and the work that is anticipated followed by an open discussion among those present.

PowerPoint and/or handouts are required. (Note: Travel is set up as a reimbursable item not to be included in this task. See CLIN 0001AS).

Within 10 calendar days following each meeting, the Contractor shall prepare and submit minutes of the meeting to COR.

Task 16, Project Management: (CLIN 0001AR)

The Contractor shall provide appropriate project management to support each task as described above, which includes project oversight, and tasks outlined in this paragraph. Contractor shall, during the life of this contract, manage the Contract in accordance with the Statement of Work, including communications with COR on a minimum every-other-week basis and preparation of a Master Schedule, Monthly Progress Reports, Pay Estimates and Pay Estimate Summaries of Work Performed. Each report shall state whether current work is on schedule. If the work is not on schedule, the Contractor shall state what actions are anticipated in order to get back on schedule. Each report shall be submitted to the COR not later than the 10th day of the calendar month following the month covered by the report.

Travel Cost: (CLIN 0001AS)

This CLIN represents the costs that are applied to travel. This is a reimbursable CLIN. Supporting documents, such as invoices and receipts, must be submitted to and accepted by the COR monthly with regular invoice(s). This CLIN will encompass any and all reasonable expenses involved in the travel to meetings, testing, and other services where travel is required in accordance with this contract, ***and will not be reported under any other CLIN***

OPTION TASKS: THESE TASKS MAY BE AWARDED IN THE BASE OR OPTION YEAR. (CLIN 0002)

OPTION TASK 1 , Surveying of Existing Wells on Fort Wainwright: (CLIN 0002AA)

The contractor shall locate the fifteen existing wells in Tasks 1 through 4, horizontally to the nearest 1.0 foot, and elevations to the nearest 0.01-foot. The contractor shall update the site maps to include sample locations and other information gathered during the field investigations. Wells will be surveyed using Alaska State Plane Coordinate System, NAD83, Zone 3, with elevations to the NAVD88 vertical datum. Wells to be surveyed shall be identified by COR. All survey data shall be provided electronically on CD-ROM, and all field notes, sketches, recordings, and computations made by the contractor or subcontractor in establishing the survey shall become the property of the Government upon completion of the contract. All survey logs will be provided to COR within sixty days of survey completion.

OPTION TASK 2, Installation of Replacement Wells at the Fort Wainwright Landfill: (CLIN 0002AB)

The Contractor shall install and develop two new monitoring wells. The Contractor shall install and develop the wells in accordance with ADEC GD001. The Contractor shall also install a locked protective casing for each well. The protective casing shall have a combination lock set with numbers provided by the COR. Contractor must contact the Alaska District Corps of Engineers to receive well numbers which shall be assigned to the wells.

The first new monitoring well shall be installed at a screened interval between 80 and 90 feet below ground surface (bgs).

The second new monitoring well shall be installed at a screened interval between 15 and 125 feet bgs.

Due to remote location of these two wells to be installed, a special drill rig will be required to ensure site integrity and minimize site disruption. This rig will ensure that the wells can be installed without creating deep trenches and damage to the training roads required to be accessed.

Contractor shall provide well logs to the COR of wells surveyed and sampled in a monitoring report under CLIN 0001 and 0002AN.

OPTION TASK 3, Well Installation and Surveying: (CLIN 0002AC)

Contractor shall install and survey five groundwater monitoring wells as necessary to complete this monitoring program. Wells shall be installed to replace wells that cannot be sampled, but are critical for the program. Well locations shall be determined by COR. These wells will be installed during the sampling process, therefore, mobilization for installation shall be conducted at the same time as sampling demobilization/ mobilization.

Submission of the analytical laboratory reports will satisfy the requirement for characterization. Task shall include costs for all analytical requirements set forth in the individual tasks above. Wells shall be installed using air rotary auger to a depth of about 20 feet bgs.

- Install five (5) groundwater monitoring wells (2 inch diameter PVC) to a depth of approximately 25 feet bgs.
- Obtain numbers for wells from Alaska District Corps of Engineers.
- Collect and field screen soil samples at minimum 5 foot intervals starting at ground surface and extending to bottom of boring.
- Soil shall be analyzed for DRO, GRO and BTEX.
- Install protective security casings, covers, and dial combination locks (DPW has a standard combination lock that will be used on all monitoring wells).

- Create a geologic log of each of the four (5) borings and provide as-built diagrams for each well.
- Develop wells for groundwater sampling.

Well logs and survey data will be provided to COR within sixty days of installation and survey completion.

OPTION YEAR TASKS (CLIN 0003)

Task 1: (CLIN 0003AA)

Contractor shall conduct a repeat of all work under Base Task 1 during the Fall 2005.

Task 2: (CLIN 0003AB)

Contractor shall conduct a repeat of all work under Base Task 2 during Fall 2005.

Task 3: CLIN 0003AC) (SITE CLOSED AFTER BASE YEAR)

Reserved.

Task 4: (CLIN 0003AD)

Contractor shall conduct a repeat of all work under Base Task 4 during Fall 2005.

Task 5: (CLIN 0003AE)

Contractor shall conduct a repeat of all work under Base Task 5 during Fall 2005, except as follows:

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Mobilization, sampling and other tasks will only be for optional Tasks 1A, 2A, 4A and 5A 8A. Task shall include mobilization of personnel, and equipment, and travel and per diem from Anchorage to Fairbanks, if necessary, for field personnel and any subcontractors if required; however, sampling shall be conducted within a no more than two-day time frame including travel.

Task 6: (CLIN 0003AF)

Contractor shall conduct a repeat of all work under Base Task 6 during Fall 2005,

Task 7: (CLIN 0003AG)

Contractor shall conduct all work under Base Task 7 except as follows: only the report summarizing work complete will be required; no new SAP will be required.

Task 8: (CLIN 0003AH)

Contractor shall conduct all work under Base Task 8 except as follows: Prior year work plan shall be revised to make any changes required to the COR. The QAPP and SHSP will not be required to be revised in the option year.

Task 9: (CLIN 0003AJ)

Contractor shall conduct a repeat of all work under Base Task 9 during Spring and Fall 2005.

Task 10: (CLIN 0003AK)

Contractor shall conduct all work under Base Task 10 except as follows: Prior year work plan shall be revised to make any changes required to the COR. The QAPP and SHSP will not be required to be revised in the option year.

Task 11: (CLIN 0003AL)

Contractor shall conduct a repeat of all work under Base Task 11 during Fall 2005.

Task 12: (CLIN 003AM)

Contractor shall conduct a repeat of all work under Base Task 12 during Spring and Fall 2005.

Task 13: (CLIN 0003AN)

Contractor shall conduct a repeat of all work under Base Task 13 during option year period.

Task 14: (CLIN 0003AP)

Contractor shall conduct a repeat of all work under Base Task 13 during option year period.

Task 15: (CLIN 0003AQ)

Contractor shall conduct a repeat of all work under Base Task 15 during option year period, except only two meetings shall be required.

Task 16: (CLIN 0003AR)

Contractor shall conduct a repeat of all work under Base Task 16 during option year period, except only two meetings shall be required.

Travel Cost: (CLIN 0003AS)

This CLIN represents the costs that are applied to travel. This is a reimbursable CLIN. Supporting documents, such as invoices and receipts, must be submitted to and accepted by the COR monthly with regular invoice(s). This CLIN will encompass any and all reasonable expenses involved in the travel to meetings, testing, and other services where travel is required in accordance with this contract, ***and will not be reported under any other CLIN***.

4. GENERAL REQUIREMENTS FOR ALL TASKS

Investigation Derived Waste

All liquid IDW shall be drummed and transported by the Contractor to the Environmental Staging Facility located at Building 3489, FWA. IDW shall not be left on site after sampling has been completed. All IDW containers shall be clearly labeled with the date, project name, drum number, well/boring number, contents, depths materials came from, analytical sample numbers that correspond to the material, analytical methods run and when they are due, and Contractor point of contact with phone number. If any of this information is missing and the IDW has to be characterized prior to disposal, all costs shall be borne by the Contractor. Deliveries of IDW shall be coordinated with Therese Deardorff at 384-2716 of Public Works (PW) and the operators of the disposal facilities. The Contractor shall be fully responsible for characterizing and profiling IDW for the purpose of disposal (generally the sample results will satisfy the requirements for characterization).

Field Book Requirements

Contractor shall document the fieldwork performed in a field book. Each book shall contain the following information on the cover:

- Owner of the book
- Book number
- Job name and work order
- Start date and
- End date

Each day, daily entries will be recorded on each page numbered. The following information will be included, at a minimum.

- Date and time
- Sampling start/stop times
- Weather conditions
- Personnel present (full names)
- Level of personal protection
- Field observations
- Site identification (visual sketches when appropriate)

- Location of sampling points (visual sketches when appropriate)
- Description of sample (date/time of collection, type of sample, tests requested, container used, preservatives, lot number of methanol used, etc.)
- Sample identification number
- Number of samples taken
- Time of the sample collection
- Number of QA/QC samples taken
- Type of field instrumentation (model number and serial number)
- Name of persons collecting samples
- Decontamination procedures
- Any visitors to the site and their level of personal protection
- All calibrations done
- Any other field measurements
- Sample shipping information (date, time, destination, location)
- Any general observations or notes, and
- Any deviations from the sampling plan

Laboratory Analysis

Samples identified for submittal for laboratory analysis under the respective tasks shall be analyzed using the following methods as applicable to each site:

- GRO (AK101)
- DRO (AK102)
- RRO (AK103)
- BTEX (SW8021B)
- PAHs (SW8270 SIM or Ion Trap)
- VOC (SW8260)
- TOC (SW9060)
- Metals (EPA Methods)

In addition, the following requirements must also be met.

Laboratory Services

Contractor shall provide laboratory services for this project. All laboratory work shall be performed in strict accordance with the ADEC and EPA current environmental regulations. Contractor shall only use laboratories that are approved by ADEC/EPA and shall provide that certification in the work plan(s).

QA/QC Procedures

The Contractor shall ensure that proper QA/QC sample procedures are maintained. The Contractor shall follow ADEC regulations where applicable.

Maximum Holding Times

The Contractor shall be responsible to ensure all samples are extracted and analyzed within the maximum holding times as specified by each method. Recollection of samples not meeting EPA and/or State of Alaska specified holding times shall be the sole responsibility of the Contractor.

Discrepancies

A cooler receipt form shall be prepared for each cooler of samples received by the project laboratory. Any and all discrepancies shall be documented on the cooler receipt form. The COR shall be notified, verbally and by fax, by the Contractor of such discrepancies within 24 hours of receipt of the samples by the laboratory. All corrective actions taken shall be thoroughly documented in the final laboratory report. Examples of discrepancies are: inappropriate sample container or sample container size, broken sample container, cooler temperature outside of the EPA required 4° ± 2 °C, the lack of chain-of-custody forms, any errors or discrepancies in chain-of-custody forms, custody seals, etc. Copies of all cooler receipt forms shall be provided with the associated data packages.

Reporting Requirements

Data packages must contain all the information required by the State of Alaska Underground Storage Tanks (UST) Procedures Manual and 18 AAC 78. Copies of the field notes and other pertinent data will be included with the data package. The data package shall be accompanied by a brief letter report outlining sampling and analysis activities.

Definition of Sample Sets

For the purpose of this contract, all shipments of samples for any "Task" shall be considered a sample set and a final laboratory report shall be generated for each sample set. Each report shall contain a table correlating field sample numbers and laboratory sample numbers, and indicate which extraction analytical test method were performed and the dates they were performed.

Laboratory Reports

Copies of each laboratory report, with chromatograms for all gas chromatography petroleum methods, shall be produced and sent to COR within 45 days of delivery of a sample set to the project laboratory. A copy of the sample set cooler receipt form shall be included with each laboratory report copy. Additional raw data, such as chromatograms of non-petroleum methods and calculations, are not required unless specifically instructed.

Report Data

All reported data will reflect any dilutions and/or concentrations. The dilution factor, if applicable, shall be noted on the analytical report. Such changes should also be reflected in the reporting limits with footnotes detailing the reason for the dilution. If dilution is required, data from both runs shall be recorded and reported. If samples must be rerun for any reason, the data shall be included in the report. Chemical data will be reported as "J" flagged in-between the MRL and the MDL.

QA/QC Data

All respective laboratory QA/QC shall be reported with their respective acceptance criteria. For example: Matrix Spike/Matrix Spike Duplicate (MS/MSH), acceptance criteria, the respective Relative Percentage Deviation and its acceptance criteria, the initial result, the value of the spike and its percent recovery. Report all QC criteria failures and submit data for all sets. Report method detection limits for all analyses for all test methods.

Case Narrative

A case narrative shall be included in each report, outlining any problems with analysis, all samples analyzed, laboratory I.D. numbers, field I.D. numbers, method(s) used, etc. The case narrative shall include the project name.

Minimum Data Requirements for Paper Copy Chemical Laboratory Reports:

- Project name
- Field sample ID number on chain-of-custody
- Abbreviated Subcontracted Laboratory name
- Subcontracted Laboratory report number
- Lab ID number for sample
- Date sample taken
- Date sample received at Subcontracted Laboratory
- Date sample extracted or prepared
- Date sample analyzed
- Extraction or preparation procedures, if appropriate
- Analysis procedure including method numbers
- Analyte of parameter
- Sample detection limit and sample reporting limit
- Initial and continuing calibration
- Analytical results
- Units
- Dilution factor
- Chromatograms for all GC petroleum methods
- Matrix
- Sample Description, i.e. multi-phase, non-homogeneous, pebbles, roots, cloudy, viscous, etc.

- Soil/Sediment and Solid Waste: Data shall be reported on a dry weight basis with percent moisture included.
- Each page or sample reported shall include as a minimum the ID sample number and method number.
- Original Chain-of Custody record and sample cooler receipt forms. All forms shall be properly signed and dated.

Electronic Deliverables

Raw Analytical Data Package. One copy of all raw data obtained by the Contractor from the analytical laboratory; and all electronic deliverables shall conform to the requirements identified in the Alaska District Corps of Engineers Environmental Engineering Branch *Manual for Electronic Deliverables* (Reference 7.43). All final text files generated under this Contract shall be furnished to COR in this electronic format on CD-ROM. The contractor shall deliver all analytical chemical data in compliance with EDF version 1.2a. All analytical chemical data and measurable field data shall be delivered in compliance with Environmental Data Management System (EDMS) Guidelines and Restrictions, Version 1.2a, May 1998. The laboratory shall have demonstrated capability to produce electronic data deliverables using EDF version 1.2a. In addition, all wells and other surveyed features (trenches, etc) shall be entered into the EDMS deliverable using grid coordinates compatible with the Cold Regions Research and Engineering Laboratory (CRREL) GIS. The following coordinate systems will be used: Fort Wainwright- NAD83 state plane meters, zone 3, NAVD88; Fort Richardson- NAD83 state plane meters, zone 4, NAVD88. The contractor may contact CRREL (384-0513) to request additional information concerning proper selection of grid coordinates. All chemical laboratory data shall be delivered in the EDF format along with a printed error-free summary log generated with the Electronic Data Consistency Checker (EDCC). One copy of the final EDF version 1.2a deliverable shall be delivered to COR as part of the complete laboratory data package. The government will only accept paper copy reports and electronic deliverables with no discrepancies between the two. One additional copy of the Final approved EDF version 1.2a deliverables shall be delivered directly to Karen Dearborn with the Environmental Resources Department (Building 724), on Fort Richardson. All EDF/EDMS deliverables shall be delivered on CD-ROM. CD-ROMs shall be labeled with the project name, report number, date, name of the laboratory, and a point of contact. The specifics of EDF version 1.2a and EDMS version 1.2a can be found at the ArsenaultLegg web page at www.arsenaultlegg.com.

5. PERSONNEL QUALIFICATIONS

The lead team member should have, at a minimum, a 4-year degree in chemistry, environmental science, engineering, geology, or related field. One team member must be proficient in environmental laws and regulations, state and federal, and have experience in performing groundwater sampling and analysis. Personnel resumes with qualifications shall be submitted with bid submission.

6. NOTICES OF VIOLATION/LETTERS OF DEFICIENCY

The contractor shall certify in writing that at the time of offerer submission that he/she is the Prime Contractor and that all Subcontractors have no outstanding Notices of Violation or Letters of Deficiency, and that no outstanding notices or letters exist issued on the basis of contractor conducted work from any State or Federal Regulatory Agency. The Offerororor shall address any State or Federal Regulatory Agency "Notices of Violation" or "Letter of Deficiency," within the last three (3) years, and if successfully cured the cause of such violation or deficiency

7. SITE VISIT

The Government may conduct a guided site visit to be scheduled by the Contracting Officer and coordinated with bidders not later than one week prior to solicitation closing. Bidders/Offerors must provide their own transportation.

8. PUBLIC AFFAIRS

The contractor shall **not** make available to the news media or publicly disclose **any** data generated or reviewed under this contract. When approached by the news media, the contractor shall refer them to the COR for response. Project reports and data generated under this contract shall become the property of the government. .

9. CORRESPONDENCE

Contractor shall keep a record of each phone conversation and written correspondence affecting decisions relating to the performance of this contract. A summary of the phone conversations and written correspondence shall be submitted with the monthly progress report to COR.

10. SUBMITTALS:

Required number of report copies, base tasks

Submittal Type	CLIN	Draft	Final	Electronic
Laboratory Reports	0001AE	NA	1	2
Meeting minutes	0001AF	NA	1	1
Presentations	0001AF	1	6	1
SAP Tech Memo	0001AG	NA	5	2
Sampling Report	0001AG	4	5	2
Draft/Final Work Plan	0001AH	8	8	2
Draft/FinalQAPP/SHSP	0001AH	8	8	2
Draft/Final Work Plan	0001AJ	8	8	2
Draft/FinalQAPP/SHSP	0001AJ	8	8	2
Laboratory Reports	0001AL	NA	1	2
Review Conf minutes	0001AM	NA	1	1
Draft/Final Reports	0001AN	8	8	2
Meeting minutes	0001AO	NA	1	1

Presentations	0001AO	1	8	1

Required number of report copies, option tasks

Submittal Type	CLIN	Draft	Final	Electronic
Survey logs	Opt Task 1	0	1	1
Survey/well logs	Opt Task 2	0	1	1
Survey/well logs	Opt Task 3	0	1	1

Schedule of Submittals: Base Year (CLINs that will be completed under base period 0001)

Submittal Type	CLIN	Due
Laboratory Reports	0001AE	Sampling completion + 60 days
Final Meeting minutes	0001AF	10 days after schedule meeting
Presentations	0001AF	at scheduled meeting
SAP Tech Memo	0001AG	Award + 60 days
Sampling Report	0001AG	Sampling completion + 60 days
Draft Work Plan	0001AH	Award + 60 days
Final Work Plan	0001AH	Review conference (CLIN 0001AM) + 14 days
Draft QAPP/SHSP	0001AH	Award + 60 days
Final QAPP/SHSP	0001AH	Review conference (CLIN 0001AM) + 14 days
Draft Work Plan	0001AJ	Award + 60 days
Final Work Plan	0001AJ	Review conference (CLIN 0001AM) + 14 days
Draft QAPP/SHSP	0001AJ	Award + 60 days
Final QAPP/SHSP	0001AJ	Review conference (CLIN 0001AM) + 14 days
Laboratory Reports	0001AL	Review conference (CLIN 0001AM) + 14 days
Draft Review Conf minutes	0001AM	10 days after schedule meeting
Final Review Conf minutes	0001AM	Three days after receipt of COR comments
Draft Report 1	0001AN	45 days after completion of Task 9
Final Report1	0001AN	20 days after receipt of COR comments
Draft Report 2	0001AN	45 days after completion of Tasks 9 & 11
Final Report 2	0001AN	20 days after receipt of COR comments
Meeting minutes	0001AP	10 days after schedule meeting
Presentations	0001AP	at scheduled meeting

Schedule of Submittals: Option Tasks (CLINs that may be awarded in either base or option year period(s))

Submittal Type	CLIN	Due

Survey logs	Opt Task 1	Installation + 60 days
Survey/well logs	Opt Task 2	Included in 0001AN/0002AN reports
Survey/well logs	Opt Task 3	Installation + 60 days

Option Year Tasks (CLINs that may be picked up) :

Required number of report copies, option year tasks

Submittal Type	CLIN	Draft	Final	Electronic
Laboratory Reports	0003AE	NA	1	2
Meeting minutes	0003AF	NA	1	1
Presentations	0003AF	1	6	1
SAP Tech Memo	0003AG	NA	5	2
Sampling Report	0003AG	4	5	2
Draft/Final Work Plan	0003AH	8	8	2
Draft/FinalQAPP/SHSP	0003AH	8	8	2
Draft/Final Work Plan	0003AJ	8	8	2
Draft/FinalQAPP/SHSP	0003AJ	8	8	2
Laboratory Reports	0003AL	NA	1	2
Review Conf minutes	0003AM	NA	1	1
Draft/Final Reports	0003AN	8	8	2
Meeting minutes	0003AP	NA	1	1
Presentations	0003AP	1	8	1

Schedule of Submittals: Option Year Tasks (CLINs that may be completed under option period 0003)

Submittal Type	CLIN	Due
Laboratory Reports	0003AE	Sampling completion + 60 days
Final Meeting minutes	0003AF	10 days after schedule meeting
Presentations	0003AF	at scheduled meeting
SAP Tech Memo	0003AG	Award + 90 days
Sampling Report	0003AG	Sampling completion + 60 days
Draft Work Plan	0003AH	Award + 90 days
Final Work Plan	0003AH	Review conference (CLIN 0001AM) + 14 days
Draft Work Plan	0003AJ	Award + 90 days
Final Work Plan	0003AJ	Review conference (CLIN 0001AM) + 14 days
Laboratory Reports	0003AL	Review conference (CLIN 0001AM) + 14 days
Draft Review Conf minutes	0003AM	10 days after schedule meeting
Final Review Conf minutes	0003AM	Three days after receipt of COR comments
Draft Report 1	0003AN	45 days after completion of Task 9

Final Report1	0003AN	20 days after receipt of COR comments
Draft Report 2	0003AN	45 days after completion of Tasks 9 & 11
Final Report 2	0003AN	20 days after receipt of COR comments
Meeting minutes	0003AP	10 days after schedule meeting
Presentations	0003AP	at scheduled meeting

The Reports shall be delivered to the following address:

U.S. Army Garrison Alaska
Dept. of Public Works
APVR-RPW-EV
ATTN: Therese Deardorff (COR)
730 Quartermaster Road
Fort Richardson, Alaska
99505-6500
(907) 384-2716

SPECIAL CONDITIONS

Verbal directions, instructions, explanations, commitments, and or acceptance given to the contractor or his personnel by any Government employee shall not be construed by the contractor as a change in scope to this Task Order. The Contracting Officer must issue any change in scope of work in writing to be binding on the Government. Contractor shall obtain all permits as required by state and local regulatory agencies. Work shall conform to applicable state, local, and federal regulatory requirements. The contractor shall notify the COR by email or telephone prior to each sampling event to confirm dates of sampling and list of personnel who will be on site. Provide notification seven (7) days prior to work start. Contractor shall suspend work and in no case proceed to the next deliverable without the receipt of Government review comments or receiving the Government's approval, in writing, of the preceding deliverable. Also, the contractor shall not incorporate his response(s) to the Government review comments into any Final Report or consider submission of any report as Final unless the COR has indicated, in writing, that the response is acceptable and appropriately addressed the Government's review comments.

REFERENCES AND GOVERNMENT FURNISHED MATERIAL

The references and government furnished material can be viewed at the Regional Contracting Office-Alaska web site at http://www.usarak.army.mil/RCO-AK/. At the web site portal select "Current Solicitations", "Large Dollar Solicitations", and then select the appropriate solicitation number that is found in Block 4, Standard Form 1449.

ADEC 1999, Alaska Department of Environmental Conservation, Storage Tank Program, Underground Storage Tank Procedures Manual, 1 March 1999.

ADEC 1999, Alaska Department of Environmental Conservation, 18 AAC 78, Underground Storage Tanks, as amended through 24 August 1999.

ADEC 1999, Alaska Department of Environmental Conservation, 18 AAC 75, Oil and Hazardous Substances Pollution Control Regulations, as amended through 1 October 1999.

United States Environmental Protection Agency (USEPA). Chemical Analysis of Water and Wastes. USEPA-600/4-79-020. March 1983.

United States Environmental Protection Agency (USEPA). Test Methods for Evaluating Solid Wastes. USEPA Pub. No. SW-846. Latest Ed.

Management Plan OU 4 Remedial Investigation-Feasability Study

2002 Annual Report Coal Storage Yard (CYS)

2002 Annual Report on Landfill

Final Work Plan Groundwater Monitoring

Groundwater Monitoring Data Analysis Landfill

Groundwater Sampling Program Health

Installation of Monitoring Wells

Investigative Derived Waste Management