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FINAL PHASE 2 RCRA FACILITY INVESTIGATION PLAN OF ACTION NS MAYPORT FL  
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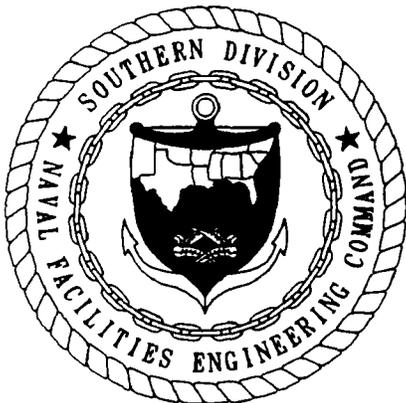


**FINAL**

**PLAN OF ACTION  
PHASE 2, RCRA FACILITY INVESTIGATION  
NAVAL STATION MAYPORT  
MAYPORT, FLORIDA**

**CONTRACT TASK ORDER NO. 028  
MODIFICATION NO. 2  
NAVY CLEAN - DISTRICT I  
CONTRACT NO. N62467-89-D-0317**

**SEPTEMBER 1992**



**SOUTHERN DIVISION  
NAVAL FACILITIES ENGINEERING COMMAND  
CHARLESTON, SOUTH CAROLINA  
29411-0068**

**DRAFT  
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**FINAL**  
**PLAN OF ACTION**

**Contract Task Order #028, Modification No. 2**  
**Navy CLEAN - District I**  
**Contract No. N62467-89-D-0317**

**PHASE 2**  
**RCRA FACILITY INVESTIGATION**  
**NAVSTA MAYPORT, FLORIDA**

28 September 1992

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### ATTACHMENTS

**Attachment A - Schedule**

**Attachment B - Cost Estimate of services, schedule and costs estimated to meet the objectives of the Draft SOW (SOW 14) dated 10 July 1991, for the RCRA Facility Investigation (RFI) at NAVSTA Mayport, Florida, as revised by Modification to SOW, dated 23 June 1992.**

## I. INTRODUCTION

This POA describes the scope of services, schedule and costs estimated to meet the objectives of the SOW (SOW 14) dated 10 July 1991, for the RCRA Facility Investigation (RFI) at NAVSTA Mayport, Florida and revised by the Modification to Statement of Work dated 23 June 1992. A RCRA Facility Investigations (RFI) at Naval Station Mayport is required by the Hazardous and Solid Waste Amendment (HSWA) permit, EPA I.D. No. FL9-170-024-260 issued by the U.S. Environmental Protection Agency (USEPA) on 25 March 1988.

The RFI is being implemented in phases as described in the Corrective Action Management Plan (CAMP; Appendix F; Volume I; RFI Workplan; October 1991). Phase 1 RFI field activities have been completed at the Group I Area Solid Waste Management Units (SWMUs). A Draft Final Phase 1 RFI Report was submitted July 6, 1992 for regulatory review. This POA addresses requirements to implement Phase 2 of the RFI in order to conform with the HSWA permit, CAMP schedule, and RFI Workplan. An additional element of the work described in this POA is implementing a RCRA Facility Assessment/Sampling Visit (RFA/SV) at four Group II SWMUs identified by USEPA as requiring additional investigation in their RFA dated September 1989. The Phase 2 RFI includes the following activities:

- Management Activities including field activity coordination, progress reports, TRC/Project Managers' meetings, follow-on implementation of the CAMP, and community relations coordination.
- Technical Activities including: revision of existing final RFI Workplan by addenda; developing an RFA Sampling Visit (RFA/SV) at selected SWMUs in the Group II Area; and implementation of the RFI Workplan at Group II by installation of monitoring wells, sampling, surveying, laboratory analysis, data validation, data evaluation, Human Health and Environmental Assessment (HEA), and Phase 2 RFI report writing.

The following sections present: Scope of Services (Section II), key personnel (Section III), schedule (Section IV) and cost estimates (Section V).

## II. SCOPE OF SERVICES

The Group II SWMUs are located in the northern portion of NAVSTA Mayport along the St. Johns River (CAMP; 1991). The Phase 2 SWMUs in Group II which require a RFI under the HSWA permit are:

- SWMU 6 - Waste Oil Pit/Sludge Drying Bed
- SWMU 7 - OWTP Sludge Drying Beds
- SWMU 8 - OWTP Percolation Pond
- SWMU 9 - Oily Waste Treatment Plant (OWTP)
- SWMU 10 - Hazardous Waste Storage Area
- SWMU 11 - Fuel Spill Area
- SWMU 12 - Neutralization Basins
- SWMU 15 - Old Pesticide Area
- SWMU 16 - Old Transformer Storage Yard

Verification sampling will be conducted during field implementation of the Phase 2 RFI, if feasible, at the four SWMUs identified in the USEPA's RFA as requiring Sampling Visits (SV). Subtasks for verification sampling at these SWMUs will include preparation of a technical memorandum describing sampling and analysis requirements for a RFA/SV, conducting the RFA/SV, data assessment, and RFA/SV reporting. The Group II SWMUs which require a RFA/SV as identified by USEPA are:

- SWMU 19 NADEP Blasting Area

- SWMU 28 DRMO Yard
- SWMU 48 Former Chemistry Lab Accumulation Area
- SWMU 51 Waste Oil Tanks

The following Tasks and proposed level of effort are predicated on the anticipated requirements for Workplan implementation for Phase 2 based on present site knowledge and our understanding of the SOW. No contingencies have been considered. The POA establishes the following work breakdown structure to meet the objectives of the Phase 2 RFI at the Group II Area.

**TASK 1: PROJECT MANAGEMENT**

Subtask 1.1 Project Management and Progress Reports (Technical/Financial Monthly Reports)

- Activity 1.1.1 Project Management
- Activity 1.1.2 Project Progress Reports
- Activity 1.1.3 Update Workplan
- Activity 1.1.4 Project Meetings
- Activity 1.1.5 Field Audits

Subtask 1.2 Continued Community Relations Implementation

**TASK 2: PLANNING DOCUMENTS (Phase 2 RFA Sampling Visit Technical Memorandum)**

**TASK 3: FIELD PROGRAM - SCREENING (Phase 2 RFI Field Screening and RFA Sampling Visit)**

Subtask 3.1 Floating Product Plume Investigation

- Activity 3.1.1 Field Preparation
- Activity 3.1.2 Subsurface Soil/Groundwater Screening

Subtask 3.2 Conduct Sampling Visit

Subtask 3.3 Assess RFA/SV Data and Report Findings

**TASK 4: FIELD PROGRAM - CONFIRMATION (Phase 2 RFI Field Investigations)**

Subtask 4.1 Field Preparation and Implementation

- Activity 4.1.1 Kick-off Meeting
- Activity 4.1.2 Field Team Preparation

Subtask 4.2 Piezometer and Monitoring Well Installations

- Activity 4.2.1 Field Preparation
- Activity 4.2.2 Drill and Install Piezometers
- Activity 4.2.3 Drill and Install Shallow Monitoring Wells
- Activity 4.2.4 Drill and Install Deep Monitoring Wells
- Activity 4.2.5 Development of Shallow and Deep Monitor Wells

**Subtask 4.3 Sediment and Surface Water Sample Collection**

- Activity 4.3.1 Field Preparation
- Activity 4.3.2 Sediment and Surface Water Sample Collection

**Subtask 4.4 PCB and Background Soil Sample Collection**

- Activity 4.4.1 Field Preparation
- Activity 4.4.2 PCB Soil Sample Collection
- Activity 4.4.3 Background Soil Sample Collection

**Subtask 4.5 Groundwater Sampling**

- Activity 4.5.1 Field Preparation
- Activity 4.5.2 Sample Collection

**Subtask 4.6 Hydraulic Testing and Groundwater Level Measurements**

- Activity 4.6.1 Field Preparation
- Activity 4.6.2 Aquifer Parameter Testing
- Activity 4.6.3 Measurement of Groundwater Levels
- Activity 4.6.4 Hydraulic Testing and Groundwater Data Evaluation
- Activity 4.6.5 Analyses of Hydrogeologic Data

**Subtask 4.7 Survey of Sampling Locations**

**Subtask 4.8 Biological Field Investigation (Qualitative)**

**Subtask 4.9 Laboratory Analyses of Environmental Samples**

**TASK 5: DATA ASSESSMENT (Laboratory Validation and Management of Data)**

**Subtask 5.1 Data Validation**

**Subtask 5.2 Data Management**

**Subtask 5.3 Data Evaluation**

**TASK 6: RISK ASSESSMENT**

**Subtask 6.1 Human Health Assessment**

**Subtask 6.2 Environmental Assessment**

**TASK 7: REPORTING (Phase 2 RFI Report Preparation)**

The following paragraphs describe the level of effort required to fulfill the Subtasks and Activities of each Task described in the Workplan. Except as noted herein, each Task will be conducted as described in the RFI Workplan.

**TASK 1: PROJECT MANAGEMENT**

**Subtask 1.1 Project Management and Progress Reports (Technical/Financial Monthly Reports)**

ABB-ES will provide management consistent with the needs of the project's objectives and ABB-ES' total quality management program. For costing and scheduling purposes, this effort is broken down into the following activities.

Activity 1.1.1 Project Management This effort includes all of the usual requirements of project management including, but not limited to, budget reviews, periodic liaison with the EIC, telephone conversations, sub-contractor management, file management, meeting preparation and minutes review, conflict/problem resolution, staff management, report preparation and generation, etc. Additionally, this task includes the necessary file management, document generation, budget tracking, and the myriad of tasks required of a Project Assistant.

ABB-ES will release competitive solicitations for services which will be procured via sub-contract. Subsequent to award of the CTO, the Task Order Manager and the Senior Engineer will coordinate with the Procurement Manager to update specifications and assist in the negotiations. ABB-ES will secure subcontractors for the following field related tasks: drilling, IDW management, laboratory analyses, surveying, data validation, biological inventory, and field screening for floating product plume delineation.

Activity 1.1.2 Project Progress Reports Technical/Financial Monthly Reports (TFMR) will be prepared for the length of the project in accordance with the contract provisions for program-level submittals. Each report will be in the format required by the contract and will summarize monthly activities, encountered problems, proposed resolutions, estimates at completion, variance reporting and revised schedule. ABB-ES will notify the Navy of any significant new conditions affecting the project, including imminent hazard or substantial endangerment, and any deviation from the schedule or scope of work.

The estimated duration of the project is 48 weeks. The cost estimate includes preparation of 12 monthly reports over the anticipated life of the project. Two additional reports are budgeted to report any unanticipated variances which may occur during the project life. The schedule is affected by the timing of document reviews. Underlying assumptions for Navy and regulatory review are described in Task 7, Phase 2 RFI Report Preparation.

Activity 1.1.3 Update Workplan Phase 1 RFI findings have identified opportunities to fill RFI data gaps and address field management issues on a SWMU and facility-wide basis. Identified data gaps and field issues include:

- determination of background contaminant concentrations in soil and groundwater;
- assessment of regional and SWMU-specific groundwater flow patterns with additional piezometers;
- delineation of floating product at the OWTP sludge beds, and;
- management of Investigation Derived Wastes (IDW) in accordance with regulatory standards and facility operation requirements.

An addendum to the existing Workplan will be prepared which will identify proposed background soil and groundwater sample locations, piezometer locations, and investigative strategies for delineation of the floating product plume using field screening techniques. In addition, an IDW management plan will be prepared which details how hazardous and non-hazardous IDW will be handled during the Phase 2 RFI field activities. It is anticipated that the Workplan addendum and IDW management plan will be succinct documents limited to the specific scope of items described above. No regulatory approval of these documents will be necessary since these documents will be derivative of the existing Workplan and will not change the present scope of investigations.

Activity 1.1.4 Project Meetings For estimation of LOE, it is assumed that ABB-ES will participate in 2 Technical Review Committee (TRC) meetings (at NAVSTA Mayport, Florida), 2 project review meetings (at NAVSTA Mayport), and 2 regulatory meetings (at USEPA Region IV). Each meeting will require 2 days and one night at each location, time for preparation prior to meeting, and completion and distribution of minutes following the meeting. One Senior Engineer will attend the TRC and project review meetings to assist the EIC with technical questions concerning field investigations. One Senior Engineer and one

Technical Expert will attend regulatory meetings to assist the EIC with technical questions concerning field investigations. The Task Order Manager will attend all meetings since issues affecting scope, schedule and budget will likely be discussed.

Unless otherwise directed, ABB-ES will assume that the Navy will prepare agenda and be the lead at each meeting. ABB-ES will tape record each meeting (if permitted) and provide seven copies of minutes within 10 working days to the EIC for distribution to attendees. Minutes are estimated to average 5 pages in length and will be distributed to an estimated 7 attendees.

A meeting will be held with the EIC prior to preparation of the preliminary draft RFI Report to discuss initial findings and to define the anticipated content of the report. This meeting is expected to be held at ABB-ES Tallahassee, unless directed otherwise by the EIC.

Activity 1.1.5 Field Audits One two-day health and safety audit and two two-day quality assurance audits of field activities will be conducted during the field work effort to ensure compliance with work plan standard operation procedures, as well as to ascertain any necessary changes to the work effort to ensure that project objectives will be met. The first audit will be at field work initiation, with a second audit scheduled to coincide with the projected audit by regulatory agency. These audits will be conducted by the QA/QC Manager and the Health and Safety Manager (H&S).

#### Subtask 1.2 Continued Community Relations Implementation

ABB-ES will update and maintain the draft CRP mailing list on IBM compatible data base software. ABB-ES will implement portions of the draft CRP in coordination with the Navy. The LOE assumes that ABB-ES will prepare and distribute fact sheets (two quarters and 100 individual mailings per quarter), attend one public meeting with the Navy, and prepare typical visual aids such as slides and overlays for presentation at the meeting. The LOE assumes that the draft Community Relations Plan implementation will be limited to a routine community relations program where community concerns are minor.

### **TASK 2: PLANNING DOCUMENTS (Phase 2 RFA Sampling Visit Technical Memorandum)**

Verification sampling will be conducted at selected SWMUs identified by the USEPA's RFA (September, 1989) as requiring further investigation. The purpose of the sampling is to determine if a release occurred at the suspected sites and to determine if an RFI is required. The selected SWMUs include Sites 19, 28, 48 and 51. These sites are within the general locality of the Group II RFI sites.

A technical memorandum (TM) will be prepared prior to actual field implementation which will describe the sampling and analysis procedures for the RFA sampling visit at the selected SWMUs. The technical memorandum will identify the location, type, frequency and analyses for samples, and describe the rationale and criteria for sample collection. Field sampling procedures and QA/QC will be consistent with those described in the revised RFI Workplan. Two copies of the initial draft TM, two copies of the preliminary draft final TM, and 10 copies of the draft final TM will be submitted to the Navy.

### **TASK 3: FIELD PROGRAM - SCREENING (Phase 2 RFI Field Screening and RFA Sampling Visit)**

Subtask 3.1 Floating Product Plume Investigation Approximately 60 penetrometer (or equivalent type of technology) sample points will be advanced to a depth of approximately 20 feet below land surface (bls) in order to assess the extent of a floating product plume and associated contaminated soil and groundwater located near SWMU 8. Field screening and real time data analysis will permit efficient on-site delineation

of the floating product plume. This will assist in locating up-gradient and downgradient monitoring wells effectively at this site (Activity 4.2.3).

Activity 3.1.1 Field Preparation ABB-ES will coordinate the mobilization and demobilization of the penetrometer subcontractor and equipment at the site. ABB-ES will review site specific health and safety, decontamination, and sampling procedures to ensure compliance with the goals of this task.

Activity 3.1.2 Subsurface Soil/Groundwater Screening The penetrometer will be advanced at approximately 60 sample points located in a grid pattern in accordance with standard methods. The location of the grid sample points will be altered as needed to map the plume boundaries. Data obtained from the penetrometer survey will be analyzed to determine the location, depth, and screen interval of SWMU 8 shallow monitor wells to be placed outside the plume boundary as described in Activity 4.2.3. Two groundwater and soil samples will be collected from each penetrometer punch for on-site analysis of total petroleum hydrocarbon.

### Subtask 3.2 Conduct RFA Sampling Visit

The RFA sampling visit (SV) will be conducted subsequent to Navy and regulatory approval of the draft final TM. Mobilization for the SV will be planned to occur simultaneously with RFI mobilization if practicable. For LOE estimation, separate mobilizations are assumed.

For cost estimation purposes, it is assumed that at least one monitoring well will be installed at each selected SWMU. In addition, three shallow soil samples, one subsurface soil sample, and one round of groundwater samples will be collected at each selected SWMU.

Subcontractors for this subtask will include drillers, analytical laboratories, and surveyors. Subcontractor costs for this subtask are included in Task 4, FIELD PROGRAM - CONFIRMATION. The LOE for Level C data validation of the RFA/SV samples is included in the Task 5, DATA ASSESSMENT.

### Subtask 3.3 Assess RFA/SV Data and Report Findings

Data collected from the RFA/SV will be assessed in order to make a determination of release. The data will be presented in a RFA/SV report. Two copies of the initial draft RFA/SV report and 10 copies of the draft final RFA/SV report will be submitted to the Navy. For estimation of LOE, a 25-percent re-write is assumed for each review.

## **TASK 4: FIELD PROGRAM - CONFIRMATION (Phase 2 RFI Field Investigations)**

The following subtasks compose the Phase 2 RFI field investigations. Equipment mobilization, decontamination, rinsate blank collection, and administrative activities (e.g., completion of field log books, supply orders, shipment airbills, lab coordination, etc.) will be necessary each day during field and sampling activities. All personnel will be responsible for observing proper health and safety protocols during field investigations. Specific roles and responsibilities will be identified during the daily Health and Safety and daily activities briefing. The LOE assumes that modified Level D PPE, as described in the Workplan, will be required. If conditions in the field change and higher levels of protection are required, then the level of effort will increase. Subcontractors will be solely responsible for compliance with applicable health and safety criteria for their personnel.

#### Subtask 4.1 Field Preparation and Implementation

Activity 4.1.1 Kick-off Meeting A kick-off meeting will take place after ABB-ES receives the notice to proceed and subcontractors, personnel, and other resources are scheduled and available. The purpose of this meeting is to bring together the field team leaders, sub-contractors (if needed), cognizant facility departments (e.g., Public Works, Security, Fire, Fuel Farm, Flight Operations, and Weapons Departments), and the project management staff prior to initiation of the actual field work to discuss health and safety issues, security and accessibility requirements, scheduling, etc. Having this kick-off meeting prior to initiation of the field work will serve to foster a cooperative relationship among all participants and provide time to respond to any concerns or last minute difficulties.

ABB-ES will coordinate and supervise mobilization of personnel and equipment involved with the NAVSTA Mayport RFI and RFA/SV. With the assistance and approval of NAVSTA Mayport personnel, ABB-ES will secure on-site staging, equipment storage, decontamination, and temporary waste storage areas.

At least one additional site meeting is planned during the duration of the project field program in order to discuss logistical issues with the base personnel, to communicate any preliminary data and findings, and to permit project management review of field activities.

Activity 4.1.2 Field Team Preparation This effort will include the gathering and checking of equipment to be employed, as well as liaison with the various vendors that will provide site management support. These vendors include: field office, phone, electrical, deionized water, photography, PCB field kits, etc.

#### Subtask 4.2 Piezometer and Monitoring Well Installations

ABB-ES will supervise the installation of piezometers and monitoring wells in accordance with the HSWA permit and RFI Workplan. The following types of piezometers and monitoring wells are proposed:

- Five piezometers will be installed outside the Group II Area to refine facility-wide hydrogeology;
- Three piezometers will be installed within the Group II Area to refine SWMU-specific hydrogeology;
- Eight surficial aquifer monitoring wells will be installed at Group II SWMUs which require a RFI;
- Four surficial aquifer monitoring wells will be installed at Group II SWMUs which require a RFA/SV;
- One upper Hawthorn Group monitoring well will be installed in the Group II Area near SWMUs which require a RFI.

Soil borings will be advanced using hollow stem augers in the shallow borings. Mud rotary method will be used to construct the deeper well which will be constructed with surface casings. Due to the timing of regulatory approval for the RFA/SV Workplan, a separate mobilization has been assumed for construction of the four RFA/SV monitoring wells.

ABB-ES will provide a three-member sampling team to: collect field data; collect, package, preserve, and manage borehole soil samples; and supervise drilling and well installation to confirm compliance with work plan specifications. At least one member of the sampling team will be a geologist or engineer qualified to log the borings. Boring logs will be prepared from the field data.

Drill cuttings, well development fluids, sampling wastes, and other wastes produced during the investigation will be managed in accordance with the Investigation Derived Waste (IDW) Management Plan prepared under Subtask 1.1. For estimation of LOE and costs, it is assumed that Phase 2 IDW will be managed the same as Phase 1 IDW. Adjustments in the estimated LOE will be needed if the Phase 2 IDW are hazardous and/or the facility imposes unanticipated IDW management requirements due to base operations.

Activity 4.2.1 Field Preparation ABB-ES will coordinate the mobilization and demobilization of the drilling subcontractor and equipment at the site. ABB-ES will review site specific health and safety, decontamination, sampling procedures, and the goals of this subtask. LOE estimates include travel time for mobilization (and demobilization) and the loading, unloading, and staging of equipment and supplies.

Activity 4.2.2 Drill and Install Piezometers Eight piezometers will be constructed in accordance with the methods described in the Volume II of III Sampling and Analysis Plan, Appendix D. Each piezometer will be constructed with 2" PVC in accordance with the Workplan to an approximate depth of 15 feet bls. LOE is based upon installing four piezometers per day.

Activity 4.2.3 Drill and Install Shallow Monitoring Wells Twelve shallow monitoring wells will be drilled in accordance with the methods described in the Workplan. For cost estimating, it is assumed that the Surficial Aquifer wells will be constructed of 2-inch schedule 40 PVC completed to an average depth of 25 feet below ground surface with a 10-foot screened interval. Actual construction details will be determined based on site conditions encountered during drilling and well construction.

Split spoon samples will be collected at 2 ft intervals during drilling of the well borehole and physical characteristics will be described in detail using the Unified Soil Classification System (USCS). Organic vapor concentrations of each sample will be measured by the Head Space Method using an OVA equipped with a flame ionization detector (FID). LOE for this effort is based on installing two wells per day.

Subsurface soil samples will be collected from just above the water table from each monitoring well boring for analysis of selected Appendix IX analytes identified in the Workplan. An additional sample shall also be collected from each boring for physical-chemical analyses described in the Workplan.

Activity 4.2.4 Drill and Install Deep Monitoring Well A deep monitoring well will be drilled in accordance with the methods outlined in the Work Plan. The monitoring well will be installed at the location identified in Volume II of III Sampling and Analysis Plan, Appendix D. The deep well will be constructed of four-inch schedule 40 PVC (with 8-inch PVC surface casings) completed to an average depth of 125 feet below ground surface with a 25-foot screened interval. The well will be double cased to a depth of approximately 60 ft. bls.

Split spoon samples will be collected at 5 ft intervals during drilling of the well borehole and physical characteristics will be described in detail using the USCS method. Organic vapor concentrations of each sample will be measured by the Head Space Method using OVA equipment with a FID. The LOE for this effort is based upon installing the well in 2.5 days.

Activity 4.2.5 Development of Shallow and Deep Monitoring Wells Shallow and deep monitoring wells will be developed in accordance with methods outlined in the Work Plan. The wells will initially be developed prior to grouting or no sooner than 48 hours after completion of well installation. Development water from the wells will be collected and stored on-site in 55-gallon drums stored near the well heads. It is anticipated that additional development may be necessary for the shallow and deep wells after the grout has cured. The LOE for this effort is based upon developing shallow wells in 2.5 hours per well and the development of the deep well in two days.

In addition, attempts will continue to complete development of the Group I Area monitoring well, MPT-2-MW17DD. This well failed to be developed in a timely manner during Phase 1. Daily pumping of MW17DD for the duration of Subtask 2.2 will attempt to finish development of this well. The LOE assumes approximately 1.5 hours per day for pumping and development water management.

#### Subtask 4.3 Sediment and Surface Water Sample Collection

Subtask 4.3 will be accomplished in accordance with the strategy and field procedures described in the Workplan. Group Area II sediment and surface water samples will be collected at locations as described in the Workplan. No field subcontractors (e.g., drillers, etc.) are anticipated for this subtask.

Activity 4.3.1 Field Preparation Field preparation for soil and groundwater sampling will consist of equipment calibration, check-out, travel, initial mobilization and final demobilization of equipment, supplies, and personnel specific for this task.

Activity 4.3.2 Sediment and Surface Water Sample Collection ABB-ES will collect surface water (if present) and sediment samples at SWMU 8 OWTP Percolation Pond or vicinity. ABB-ES will provide a three-member sampling team to collect field data and environmental samples. The samples will be analyzed for selected Appendix IX Compounds described in the Workplan. Surface water and sediment samples will be handled, preserved, and transported to an approved laboratory under chain of custody for analysis using accepted NEESA Level C QA/QC protocols.

#### Subtask 4.4 PCB and Background Soil Sample Collection

Activity 4.4.1 Field Preparation Field preparation for soil sampling will consist of equipment calibration, check-out, travel, initial mobilization and final demobilization of equipment, supplies, and personnel specific for this task.

Activity 4.4.2 PCB Soil Sample Collection Volume II of III, Sampling and Analysis Plan, Section 3.3.4, Figure 3-13 and Volume I of III, RFI Workplan, Appendix B, Technical Memorandum, Sampling Grid Layout for PCB Soil Sampling, SWMU 16 *Sampling Locations*, identify the locations where collection of soil samples are proposed. In addition, PCBs will be sampled at SWMU 2 in the Group I Area to further define the lateral extent of surficial contamination. The following surface soil samples will be collected:

- Group Area II, SWMU 16
  - PCB surface soil samples (0" to 6") at approximately 37 locations;
  - PCB subsurface soil samples (6" to 12") at approximately 37 locations.
- Group Area I, SWMU 2
  - PCB surface soil samples (0" to 6") at approximately 50 locations;
  - PCB subsurface soil samples (6" to 12") at approximately 50 locations.

SWMU 16, the Old Transformer Area, is currently used as a long term parking area. The area is covered with gravel and cement parking bumpers. Either asphalt or reinforced concrete lie beneath the gravel. Difficult hand augering and manual labor will be required due to the variations in subsurface conditions. A minimum of 10 sample days are planned for collection of the PCB soil samples at SWMU 16. Unanticipated situations caused by weather or equipment malfunctions may increase the number of sample days required to complete this activity.

SWMU 2 surface soil was confirmed contaminated with PCB during the Phase 1 investigation. A fifty-node triangular sampling grid with ten foot spacing was sampled. PCBs were detected in boundary samples and further surficial soil sampling is necessary to determine the lateral extent of contamination. Additional sample points will be located along extensions of the existing grid lines. It is assumed that an additional 50 sample locations will be sampled at two depths for estimation of LOE.

ABB-ES will provide a four-member sampling and analysis team to collect field data and environmental samples, and to perform the PCB field screening analyses. In general, two personnel will be responsible for collecting samples and maintaining the field log book, while the third and fourth will be responsible for sample management (e.g., verifying proper information on sample labels, filling out chain of custody forms, preserving and packaging samples for shipment, etc.) and conducting field screening analyses.

Selected soil samples (approximately 10% of samples) will be collected, handled, preserved, and transported to an approved laboratory under chain of custody for analysis using accepted NEESA Level C QA/QC protocols, and analyzed for PCBs using EPA Method 8080 for confirmational analyses.

Activity 4.4.3 Background Soil Sample Collection Approximately ten background surface soil samples will also be collected from areas located off-site from the Group Areas I and II. Background sample locations will be described in the Workplan Addendum prepared under Subtask 1.1.

#### Subtask 4.5 Groundwater Sampling

Subtask 4.5 will be accomplished in accordance with the field procedures described in the Workplan. ABB-ES will conduct groundwater sampling upon completion of monitoring well installation and well development.

Activity 4.5.1 Field Preparation Field preparation will be composed of the initial mobilization and final demobilization of equipment, supplies, and personnel specific for this activity. Typical groundwater sampling equipment which will be mobilized for this phase of the project will include teflon bailers, submersible pumps, hoses and cables, portable winches, portable electric generators, electric tapes for water elevation measurements, pH meters, conductivity meters, thermometers, trash pumps, and portable tanks for purge water collection.

Activity 4.5.2 Sample Collection Figure 3-13 and Figure 3-19 in Volume II, Sampling and Analysis Plan, of the RFI Workplan identify the monitoring wells to be sampled. Three background monitoring wells (S-1, MPT 1-1, and an additional one to be determined) will be sampled. In addition four new shallow monitoring wells are anticipated to be installed during the RFA/SV. These will be sampled during the RFI if the timing permits. Otherwise, it is assumed that a separate mobilization will be required.

The LOE assumes that existing wells at the site will be sampled and used for measuring groundwater elevations. Groundwater samples will not be collected from wells where floating product is encountered. However, for the purpose of the LOE, it is assumed that all monitoring wells will be sampled at least once. The 25 monitoring wells which will be sampled are composed of three sets:

- Surficial Aquifer monitoring wells completed to a depth of approximately 15-feet bls (21 of the 25 monitoring wells);
- Intermediate aquifer monitoring well completed to a depth of approximate 125-feet bls (1 of 25 monitoring wells);
- Three background groundwater monitoring wells (3 of 25) installed in the Surficial Aquifer (S-1, MPT-1-1, and one other to be determined).

Groundwater samples will be analyzed for selected Appendix IX compounds and general water quality parameters described in the RFI Workplan. ABB-ES will provide a three-member sampling team with equipment and supplies to collect field data and environmental samples. Groundwater samples will be collected, handled, preserved, and transported to an approved laboratory under chain of custody for analysis using accepted NEESA Level C QA/QC protocols.

A minimum of 5 sample days are planned for collection of the groundwater samples. Groundwater elevations, depth of floating product (if present), and basic water quality field parameters (pH, conductivity, and temperature) will be measured during sampling activities. A minimum of five well volumes will be purged prior to sampling. It is assumed for LOE estimation that the wells will recharge quickly enough to permit sampling immediately after purging. Unanticipated situations caused by weather, site conditions, well responsiveness, equipment malfunctions, or change in the level of PPE may increase the number of sample days required to complete this task.

For planning purposes, it is anticipated that four instances of floating product will be found, each requiring laboratory analysis. The effort for taking the samples is included in this task. That cost of the analyses will be included in the overall lab subcontract listed under Subtask 4.9.

#### Subtask 4.6 Hydraulic Testing and Groundwater Level Measurement

In-situ permeability testing will be performed and groundwater levels measured. ABB-ES will take samples prior to hydraulic testing to minimize the potential for cross-contamination. The following activities outline this Subtask.

Activity 4.6.1 Field Preparation Field preparation will be composed of gathering and checking equipment and supplies, as well as the initial mobilization and final demobilization of equipment, supplies, and personnel specific for this task.

Activity 4.6.2 Aquifer Parameter Testing In-situ permeability testing (slug test) will be performed in selected new piezometers and monitoring wells (up to 20) in order to determine a range of hydraulic conductivity values in the Surficial Aquifer in Group Area II. The methodology and calculations for in-situ permeability testing presented in the Workplan will be utilized. The LOE for this effort is based upon testing four shallow wells per day.

Activity 4.6.3 Measurement of Groundwater Levels Groundwater and surface water levels will be measured in order to prepare a potentiometric (water table contour) map and to determine the direction of groundwater and surface water flow. Two additional staff gages will be installed in order to determine surface water level elevations, tidal fluctuations, and groundwater/surface water hydraulic relationships. Groundwater levels will be measured in each new monitoring well and piezometer in association with synoptic water level measurements which are scheduled station wide on a monthly basis. All measurements will be referenced to the datum established in Subtask 4.7 to determine the configuration of the water-table surface and the direction of ground-water flow. Water-level measurements in monitoring wells and piezometers and surface water measurements will be taken in accordance with the Workplan. All water level measurements will be taken on the same day. LOE for this effort is based upon 2-man crews measuring approximately twelve wells per hour within approximately four hours for one event.

Activity 4.6.4 Hydraulic Testing and Groundwater Data Evaluation Upon completion of field activities associated with this task, the accumulated time versus water table recovery data will be processed using AQTESOLV (TM) that employs the method of Bouwer and Rice (1976) for unconfined aquifers to calculate conductivity values which will be used to assess groundwater flow conditions.

Activity 4.6.5 Analyses of Hydrogeologic Data To aid in the analyses of the groundwater hydraulic characteristics a table of hydraulic conductivity values and a potentiometric surface map will be developed. Graphics will be used to illustrate groundwater and surface water flow direction. A water table contour map will be generated from the data collected and groundwater velocities will be calculated.

#### Subtask 4.7 Survey of Sampling Locations

ABB-ES will subcontract this task. Horizontal and vertical locations of all monitoring wells will be established by a OSHA 40 - hour trained registered Florida land surveyor. Third-order accuracy will be specified. Monitoring well points to be surveyed include: 12 new RFI Group Area II wells, 4 RFA/SV wells, eight piezometers, one new background well (to be determined), and two additional staff gage points. In addition, all new surface soil, surface water, sediment, and surficial soil sample areas are to be surveyed to establish location. The monitoring wells and sample point locations will be surveyed and tied to the State Plane Coordinate system. An ABB-ES representative will be on-site to oversee the survey to confirm conformance with the Workplan and to provide logistical support for site access and coordination with NAVSTA Mayport personnel.

#### Subtask 4.8 Biological Field Investigation

A qualitative terrestrial biological field investigation will be conducted at the Group II SWMUs or their vicinities in accordance with the Workplan. A Qualitative Aquatic Field Investigation may be conducted based on a review of existing data obtained from local natural resource management agencies. These activities will be subcontracted. An ABB-ES ecologist will be on-site to oversee the subcontractor.

#### Subtask 4.9 Laboratory Analyses of Environmental Samples

ABB-ES will subcontract this task. Samples will be sent under proper chain of custody to a NEESA-approved laboratory each sample day by overnight delivery services (e.g., Federal Express, Greyhound, etc.). Samples will be analyzed for the parameters listed in Volume II of III, RFI Sampling and Analysis Plan, Tables 3-21 and 3-22. *Selected Constituents, Methods of Analysis, and Numbers of Surface-water, Sediment, Ground-water, and Soil Samples to be Analyzed During the RFI at NAVSTA Mayport.*

Groundwater, soil, sediment and surface water samples will be analyzed for selected Appendix IX Contaminants by USEPA SW-846 Methods: metals by USEPA Methods 6010 (ICP), 7420 (GFAA), and 7470 (CVAA); cyanide by USEPA Method 9010; volatile organic compounds by USEPA Method 8240; semi-volatile organic compounds by USEPA Method 8270; chlorinated pesticides and PCBs by USEPA Method 8080. General water quality and physical soil parameters will be analyzed for selected water and soil samples. Floating product, if encountered, will be analyzed for total chlorine (ASTM D808), fractional distillation (ASTM D86), metals extraction (ASTM D3237), and lead, cadmium, and chromium analysis of metals extract by Graphite Furnace Atomic Adsorption (GF/AA). In addition, a Hydrocarbon Fuel Analysis (HFA) procedure will be run on each floating product sample (four in total).

Data will be provided from the laboratory in both hard and electronic formats. Data received from the laboratory will be transferred into a database as described in Task 5.

### **TASK 5: DATA ASSESSMENT (Laboratory Validation and Management of Data)**

#### Subtask 5.1 Data Validation

ABB-ES will subcontract this task. Laboratory data will be validated, reviewed, and evaluated in accordance with NEESA Level C (NEESA, 1988). Non-SW-846 procedures will be considered NEESA Level E analyses.

ABB-ES will prepare summary tables of validated data incorporating qualifiers for each analyte to identify pertinent data (i.e., chemicals of concern). Data will also be presented graphically in maps or other figures applicable to the nature of the data collected for analyses.

#### Subtask 5.2 Data Management

ABB-ES will receive analyzed data from the contract laboratory in electronic format. This data will be transferred into the Environmental Data Station (TM) computer system for archival, retrieval, and maintenance of data integrity. Data reports will be provided to project personal as requested (e.g., by the human health assessment and environmental assessment investigators). In addition, the database will be used as part of a Geographic Information System (GIS) for the analysis and presentation of spacially distributed data. The GIS will improve productivity of data analysis and presentation. A hardware platform will be necessary to implement this system on a project level basis. The GIS software is already available. An IBM<sup>™</sup> compatible 486 50 MHz computer with adequate memory and storage is proposed in the cost estimate to be purchased to support GIS implementation during Phase 2. This platform can be used for data management and evaluation for subsequent RFI phases.

#### Subtask 5.3 Data Evaluation

Field data and preliminary laboratory data will be evaluated to determine geologic condition, groundwater flow, aquifer characteristic, and possible contaminant sources. This evaluation will set the stage for the risk assessment and report preparation tasks.

### **TASK 6: RISK ASSESSMENT**

Two important risk assessment activities include the Human Health Assessment and the Environmental Assessment. These analyses compose the Health and Environmental Assessment (HEA) of the RFI. The HEA, in conjunction with other site characterization data, provides the basis for determination of the need for a Corrective Measures Study (CMS).

#### Subtask 6.1 Human Health Assessment

ABB-ES will conduct an Human Health Assessment (HHA) to establish the risk associated with each site and identify potential effects of the site conditions on public health and the environment. The HHA will consist of the following: a data usability study, identification of the chemicals of concern, identification the exposure pathways, identification of possible receptors, quantification of the degree of exposure, a risk assessment, an analysis report, and an uncertainty analysis.

The LOE estimates are based on the assumption that contamination may be detected at all SWMUs identified at NAVSTA Mayport. The LOE may change based on results obtained during the sampling, laboratory analysis, and data evaluation tasks.

#### Subtask 6.2 Environmental Assessment

ABB-ES will conduct an Environmental Assessment (EA) to establish the risk associated with each site and identify potential effects of the site conditions on flora and fauna and the environment. The EA will consist of the following: identification of the chemicals of concern, the exposure pathways, and possible receptors; quantification of the degree of exposure; and evaluation of risk.

The LOE estimates are based on the assumption that contamination may be detected at all Group Area II SWMUs identified at NAVSTA Mayport. The LOE may change based on results obtained during the sampling, laboratory analysis, and data evaluation tasks.

## **TASK 7: REPORTING (Phase 2 RFI Report Preparation)**

A Phase 2 RFI Report will be prepared and submitted to the Navy upon completion of the field activities and data analysis. The Phase 2 RFI Report will summarize the activities, methods, exceptions, corrective actions, findings, conclusions and recommendations. Specifically, the Phase 2 RFI Report will discuss the following topics:

- describe site physical characteristics including geologic conditions based on subsurface soil investigations, hydrogeologic conditions based on water level measurements and in-situ aquifer tests (i.e., slug tests), human health assessment, and ecological setting based on the qualitative ecological study;
- describe source characteristics including known locations, concentrations of contaminants of concern, and contaminated media (i.e., soil, groundwater, surface water, sediments); and
- describe the extent and nature of contaminants of concern detected in the media sampled at the site.

The RFI Report will provide a summary of conclusions concerning the site conditions and the extent of contamination. Data gaps will be identified based on the analysis of the field investigation data, and their potential impacts. Recommendations will be provided describing the appropriate responses needed to address the data gaps, if necessary. The RFI Report will be prepared in Preliminary Draft form for initial Navy review.

After review by the Navy, and response to their comments, a Draft Final RFI will be submitted for regulatory review. The scope for incorporation of Navy's comments is based on the assumption that 25% of the document will require rewrite.

ABB-ES will attend a review meeting with the EIC and base personnel prior to writing the initial Preliminary Draft RFI report for work conducted at NAVSTA Mayport. The initial Phase 2 Preliminary Draft RFI report will address the Group II SWMUs identified in the HSWA Permit, dated March 28, 1989 (SWMUs 6, 7, 8, 9, 10, 11, 12, 15, and 16). The LOE for this meeting is included in Subtask 1.1.

ABB-ES will revise the draft RFI report submittals upon receiving comments from applicable regulatory agencies and the Navy. SOUTHNAVFACENGCOM will be responsible for collecting and compiling review comments from regulatory agencies and other cognizant Naval activities. SOUTHNAVFACENGCOM will resolve conflicting comments from other cognizant Naval activities prior to submittal to ABB-ES. The scope for incorporation of Navy's comments is based on the assumption that 25% of the document will require rewrite. Any additional field work necessitated by regulatory review is not anticipated and is not included in the scope of this effort. As an alternative to the SOW schedule matrix, the following review and submittal cycle is proposed:

- Preliminary Draft RFI report submitted to Navy for initial review (two copies).
- Draft Final RFI report submitted to regulatory review (ten copies).
- Preliminary Final RFI report submitted to Navy for review and comment (two copies).
- Final RFI report prepared after Navy approval of preliminary Final (ten copies).

The level of effort for response to regulatory comments assumes that comments will be minor and will not significantly change the existing scope of the draft Final RFI Workplans. A 25-percent re-write per review is assumed for LOE estimation.

ABB-ES will provide the Navy with copies of all final documents on 5 1/4" double sided, double density diskettes in Wordperfect 5.1. It is understood that this provision is for Navy records and to generate additional copies of text and tables at some future date as needed by SOUTHNAVFACENGCOM. It is also understood that changes made to the deliverable which alter the meaning or intent as represented by ABB-ES will release ABB-ES from any liability associated with professional evaluations, conclusions or recommendations.

### III. KEY PERSONNEL

In addition to the Program Management Office (PMO) personnel, the designated roles for the Installation Restoration work at NAVSTA Mayport are as follows:

- Task Order Manager. The Task Order Manager for NAVSTA Mayport will be Ms. Peggy Layne, P.E. Ms. Peggy Layne is responsible for evaluating the appropriateness and adequacy of the technical and engineering services provided for CTO-0028 and in developing the technical approach and LOE required to address each of the POA tasks. Ms. Peggy Layne is also responsible for the day-to-day conduct of the work, including the integration of the input of supporting disciplines and subcontractors. She will be reviewing the ongoing quality control during the performance of the work, the technical integrity of conclusions and recommendations, and the clarity and usefulness of all project work products.

Some specific responsibilities of this role include:

- overall technical responsibility for the project;
  - initiating project activities;
  - participating in the work plan preparation and staff assignments;
  - identifying and fulfilling equipment and other resource requirements;
  - monitoring task activities to ensure compliance with established budgets, schedules, and scope of work; and
  - regularly interacting with the E-I-C, the program manager, and others as appropriate, on the status of the project.
- Quality Review Board. A Quality Review Board made up of senior technical staff from the ABB-ES team will assist the Task Order Manager by providing review of the technical aspects of the project to assure they are produced in accordance with corporate policy, and meet the requirements of SOUTHNAVFACENGCOM.

Mr. Willard Murray, Ph.D., P.E. and Mr. Ken Busen, P.G. will comprise the ABB-ES technical quality review board and will be actively involved in assuring the technical quality and appropriateness of methodologies, conclusions and recommendations of the RFI project at NAVSTA Mayport.

- Other Key Technical Team Members. Mr. Greg Brown, P.E. will be the engineer of record for this project and will be responsible for the overall technical approach for the investigations.

#### **IV. SCHEDULE**

Attachment A includes a Gantt chart presenting the proposed schedule for completion of the tasks described above. Additionally, a milestone report is included presenting the key deadline dates in the project. The Schedule assumes a Notice to Proceed receipt on 5 October and will be revised to reflect the actual date of the Notice to Proceed.

#### **V. COST**

Attachment B presents the cost estimate to complete the scope of services described herein on Table 1 and a fee itemization form. In addition a SF 1411 is also presented.

#### **VI. FEE ITEMIZATION FORM SCOPE LIMITATION**

The purpose of this paragraph is to clearly define the scope and assumptions made for this fee proposal, should it be necessary to enact provisions delineated at Part VII, Para. 22 of the subject Contract in accordance with FAR 52.243-2.

Specific Parameters:

As outlined specifically in Task #1 through #7 of the Plan of Action dated July 17, 1992.

Period of Performance Parameters:

Costs presented are estimated to be incurred through 30 September 1993 (Milestone Chart).

**ATTACHMENT A**

**SCHEDULE**

Schedule Name : Mayport  
 Responsible : Peggy Layne  
 As-of Date : 9/30/92 8:00am

Schedule File : MPTRFIP2

Task Name	Start Date	Dura	End Date	92		93		Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
				Nov	Dec	Jan	Feb								
+ Task 1: Project Management	10/5/92	299.	10/4/93	=====											
Task 2: Planning Documents	10/5/92	25.0	10/30/92	=====											
+ Task 3: Fld Prog. - Screening	10/26/92	26.4	5/21/93		=====										
+ Task 4: Field Program-Confirm.	10/21/92	77.0	1/6/93	=====											
+ Task 5: Data Assessment	12/7/92	97.0	3/18/93			=====									
+ Task 6: Risk Assessment	12/17/92	116.	4/28/93			=====									
+ Task 7: Reporting	4/12/93	102.	9/3/93						=====						

-----  
 ■■■■ Detail Task    ■■■■ Summary Task    ○○○○ Baseline  
 ■■■■ (Progress)    ■■■■ (Progress)    >>> Conflict  
 ■■■■ (Slack)       ■■■■ (Slack)       ..■■■ Resource delay  
 Progress shows Percent Achieved on Actual    ▲ Milestone  
 ----- Scale: 3 days per character -----

TIME LINE Gantt Chart Report, Strip 1

**ATTACHMENT B**

**COSTS**

## CLEAN FEE ITEMIZATION FORM SOUTH DIV ENVIRONMENTAL DIVISION

DATE OF SCOPE: 30 September 1992

A&amp;E FIRM: ABB Environmental Services, Inc.

CTO: 028, Modification #1

DATE OF ESTIMATE: 30 Septmeber 1992

CONTRACT NO.: N62467-89-D-0317

PROJECT: RCRA Facility Investigation

FUNDING: DERA

ACTIVITY: Naval Station Mayport

UIC CODE:

LOCATION:

ITEM	RATE/HR	OFFICE		FIELDWORK		TOTAL	
		LABOR HOURS	COST(S)	LABOR HOURS	COST(S)	LABOR HOURS	COST(S)
Program Manager	\$37.96		\$0.00		\$0.00	0	\$0.00
Task Order Manager	\$30.16	512	\$15,441.92	113	\$3,408.08	625	\$18,850.00
Senior Scientist	\$30.26	520	\$15,735.20	995	\$30,108.70	1515	\$45,843.90
Senior Engineer	\$30.16	500	\$15,080.00	354	\$10,676.64	854	\$25,756.64
Technical Expert	\$36.40	279	\$10,155.60	12	\$436.80	291	\$10,592.40
Geologist	\$19.76	680	\$13,436.80	646	\$12,764.96	1326	\$26,201.76
Engineer	\$19.24		\$0.00		\$0.00	0	\$0.00
Senior Hydrologist	\$35.14	20	\$702.80	17	\$597.38	37	\$1,300.18
Hydrologist	\$20.80	220	\$4,576.00	41	\$852.80	261	\$5,428.80
Senior Chemist	\$23.34		\$0.00		\$0.00	0	\$0.00
Chemist	\$17.00	48	\$816.00		\$0.00	48	\$816.00
Senior Ecologist	\$30.16	520	\$15,683.20	40	\$1,206.40	560	\$16,889.60
Applied Ecologist	\$20.28	200	\$4,056.00		\$0.00	200	\$4,056.00
Scientist	\$18.72		\$0.00		\$0.00	0	\$0.00
Public Health Specialist	\$30.76		\$0.00		\$0.00	0	\$0.00
Toxicologist	\$30.16	452	\$13,632.32	24	\$723.84	476	\$14,356.16
Community Relations Spec.	\$20.00	164	\$3,280.00		\$0.00	164	\$3,280.00
Quality Assurance Manager	\$26.52	214	\$5,675.28		\$0.00	214	\$5,675.28
Quality Assurance Assistant	\$20.50	430	\$8,815.00		\$0.00	430	\$8,815.00
Health & Safety Manager	\$24.96	28	\$698.88		\$0.00	28	\$698.88
Health & Safety Assistant	\$13.00		\$0.00		\$0.00	0	\$0.00
Technician	\$13.00		\$0.00	622	\$8,086.00	622	\$8,086.00
Project Assistant	\$13.52	440	\$5,948.80	133	\$1,798.16	573	\$7,746.96
Clerk/Word Processor	\$10.40	340	\$3,536.00	56	\$582.40	396	\$4,118.40
Technical Editor	\$13.79	76	\$1,048.04	24	\$330.96	100	\$1,379.00
CAD Operator/Sr. Draftsman	\$16.22	234	\$3,795.48	64	\$1,038.08	298	\$4,833.56
Draftsperson	\$10.92	40	\$436.80		\$0.00	40	\$436.80
<b>TOTAL DIRECT LABOR</b>	<b>XXXXX</b>	<b>5917</b>	<b>\$142,550.12</b>	<b>3141</b>	<b>\$72,611.20</b>	<b>9058</b>	<b>\$215,161.32</b>
X Multiplier (1.98)	XXXXX	XXXXX		XXXXX		XXXXX	\$223,473.29
<b>Total Burdened Direct Labor</b>	<b>XXXXX</b>	<b>XXXXX</b>		<b>XXXXX</b>		<b>XXXXX</b>	<b>\$438,634.61</b>

<b>PART II – OTHER DIRECT COSTS (Itemized on Supplement Sheets)</b>			
<b>ITEM</b>	<b>UNIT COSTS(S)</b>	<b>QUANTITY</b>	<b>TOTAL</b>
Telephone/Communication Expenses			\$2,265.00
Postage/Freight			\$7,330.00
Equipment			\$14,229.00
Expendables			\$14,927.00
Other			\$5,695.00
Subtotal			\$44,446.00
X G&A (.02)			\$888.92
<b>TOTAL OTHER DIRECT COSTS</b>	<b>XXXXXX</b>	<b>XXXXXX</b>	<b>\$45,334.92</b>

<b>PART III – TRAVEL (Itemized on Supplement Sheets)</b>			
Airfare			\$4,376.00
Lodging			\$9,408.00
Per Diem			\$6,288.00
Car Rental/Fuel			\$4,550.00
Field Van/Fuel			\$5,200.00
Other			
Subtotal			\$29,822.00
X G&A (.02)			\$596.44
<b>TOTAL TRAVEL EXPENSES</b>	<b>XXXXXX</b>	<b>XXXXXX</b>	<b>\$30,418.44</b>

<b>PART IV – SUBCONTRACTOR SERVICES (Itemized on Supplement Sheets)</b>			
Drilling			\$31,710.00
Laboratory			\$204,000.00
Survey			\$11,539.00
Report Reproduction			\$1,250.00
Other			\$124,777.00
Other			\$25,000.00
Other			\$5,000.00
Other			
Subtotal			\$403,276.00
X G&A (.02)			\$8,065.52
<b>TOTAL SUBCONTRACTOR EXPENSES</b>	<b>XXXXXX</b>	<b>XXXXXX</b>	<b>\$411,341.52</b>

	TOTAL	
	LABOR HOURS	COST(S)
TOTAL PART I (DIRECT LABOR)	9058	\$438,634.61
TOTAL PART II (Other Direct Costs)		\$45,334.92
TOTAL PART III (Travel Expenses)		\$30,418.44
<b>SUBTOTAL (Parts I, II, &amp; III)</b>		<b>\$514,387.97</b>
Award Fee Pool @ <u>9</u> % x Parts I, II, & III		
Enter Award Fee % here <u>9</u> %		\$46,294.92
<b>Parts I, II, &amp; III TOTAL</b>		<b>\$560,682.89</b>
TOTAL PART IV (Subcontractor Expenses)		\$411,341.52
Award Fee Pool @ <u>4.5</u> % x Part IV		
Enter Award Fee % here <u>4.5</u> %		\$18,510.37
<b>Part IV TOTAL</b>		<b>\$429,851.89</b>
TOTAL: (Parts I, II, & III)		\$560,682.89
(Part IV)		\$429,851.89
<b>GRAND TOTAL</b>		<b>\$990,534.78</b>
A&E Signature 	Date <u>9/30/92</u>	Telephone
EIC Signature	Date	Code
		Code 18C Approval
		Date

**ABB ENVIRONMENTAL SERVICES, INC.**

**COST SUMMARY**

**PROJECT: MAYPORT GROUP AREA II**

**MANAGER: PEGGY LAYNE**

DESCRIPTION	BASE	RATE	SUB-TOTAL	MULTIPLIER OVERHEAD	TOTAL
Task Order Manager	625	\$30.16	\$18,850.00	1.98	\$37,323.00
Senior Scientist	1515	\$30.26	\$45,843.90	1.98	\$90,770.92
Senior Engineer	854	\$30.16	\$25,756.64	1.98	\$50,998.15
Technical Expert		\$36.40		1.98	
Technical Expert	291	\$36.40	\$10,592.40	2.38	\$25,209.91
Geologist	1326	\$19.76	\$26,201.76	1.98	\$51,879.48
Engineer		\$19.24		1.98	
Senior Hydrologist	37	\$35.14	\$1,300.18	1.98	\$2,574.36
Hydrologist	261	\$20.80	\$5,428.80	1.98	\$10,749.02
Senior Chemist		\$23.34		1.98	
Chemist	48	\$17.00	\$816.00	1.98	\$1,615.68
Senior Ecologist		\$30.16		1.98	
Senior Ecologist	560	\$30.16	\$16,889.60	2.38	\$40,197.25
Applied Ecologist		\$20.28		1.98	
Applied Ecologist	200	\$20.28	\$4,056.00	2.38	\$9,653.28
Scientist		\$18.72		1.98	
Public Health Specialist		\$30.76		1.98	
Toxicologist	476	\$30.16	\$14,356.16	1.98	\$28,425.20
Community Relations Specialist	164	\$20.00	\$3,280.00	1.98	\$6,494.40
Quality Assurance Manager	214	\$26.52	\$5,675.28	1.98	\$11,237.05
Quality Assurance Assistant	430	\$20.50	\$8,815.00	1.98	\$17,453.70
Health & Safety Manager	28	\$24.96	\$698.88	1.98	\$1,383.78
Health & Safety Assistant		\$13.00		1.98	
Technician	622	\$13.00	\$8,086.00	1.98	\$16,010.28
Project Assistant	573	\$13.52	\$7,746.96	1.98	\$15,338.98
Clerk/Word Processor	396	\$10.40	\$4,118.40	1.98	\$8,154.43
Technical Editor	100	\$13.79	\$1,379.00	1.98	\$2,730.42
CAD Operator	298	\$16.22	\$4,833.56	1.98	\$9,570.45
Draftsman	40	\$10.92	\$436.80	1.98	\$864.86
<b>Total Labor:</b>	<b>9058</b>		<b>\$215,161.32</b>		<b>\$438,634.61</b>
Air Fare		Various	\$4,376.00	1.02	\$4,463.52
Lodging	192	Various	\$9,408.00	1.02	\$9,596.16
Per Diem	240	Various	\$6,288.00	1.02	\$6,413.76
Car Rental/Fuel	91	\$50.00	\$4,550.00	1.02	\$4,641.00
Field Van/Fuel	65	\$80.00	\$5,200.00	1.02	\$5,304.00
<b>Total Travel:</b>					<b>\$30,418.44</b>
Telephone/Telefax		\$5.00	\$2,265.00	1.02	\$2,310.30
Shipping – Reports		\$15.00	\$1,530.00	1.02	\$1,560.60
Shipping – Coolers/Other		\$100.00	\$5,800.00	1.02	\$5,916.00
Expendable Field Supplies			\$14,927.00	1.02	\$15,225.54
Equipment			\$14,229.00	1.02	\$14,513.58
Other			\$5,695.00	1.02	\$5,808.90
<b>Total Other Direct Costs:</b>					<b>\$45,334.92</b>
Drilling Subcontract			\$31,710.00	1.02	\$32,344.20
Analytical Subcontract			\$204,000.00	1.02	\$208,080.00
Survey Subcontract			\$11,539.00	1.02	\$11,769.78
Report Reproduction			\$1,250.00	1.02	\$1,275.00
Other – IDW, Data Val., Cone Pen.			\$124,777.00	1.02	\$127,272.54
Other – Biological Investigation			\$25,000.00	1.02	\$25,500.00
Other – Chemist			\$5,000.00	1.02	\$5,100.00
<b>Total Subcontract:</b>					<b>\$411,341.52</b>
<b>Total Cost:</b>					<b>\$925,729.49</b>
Award Fee – Labor, Travel, ODCs:			\$514,387.97	0.09	\$46,294.92
Award Fee – Subcontracts			\$411,341.52	0.045	\$18,510.37
<b>Total Cost + Award Fee:</b>					<b>\$990,534.78</b>

**ABB ENVIRONMENTAL SERVICES, INC.**

**TASK: 1.0 – PROJECT MANAGEMENT  
PROJECT: MAYPORT GROUP AREA II  
MANAGER: PEGGY LAYNE**

DESCRIPTION	BASE	RATE	SUB-TOTAL	MULTIPLIER OVERHEAD	TOTAL
Task Order Manager	512	\$30.16	\$15,441.92	1.98	\$30,575.00
Senior Scientist	80	\$30.26	\$2,420.80	1.98	\$4,793.18
Senior Engineer	160	\$30.16	\$4,825.60	1.98	\$9,554.69
Technical Expert		\$36.40		1.98	
Technical Expert	28	\$36.40	\$1,019.20	2.38	\$2,425.70
Geologist		\$19.76		1.98	
Engineer		\$19.24		1.98	
Senior Hydrologist		\$35.14		1.98	
Hydrologist		\$20.80		1.98	
Senior Chemist		\$23.34		1.98	
Chemist		\$17.00		1.98	
Senior Ecologist		\$30.16		1.98	
Senior Ecologist		\$30.16		2.38	
Applied Ecologist		\$20.28		1.98	
Applied Ecologist		\$20.28		2.38	
Scientist		\$18.72		1.98	
Public Health Specialist		\$30.76		1.98	
Toxicologist		\$30.16		1.98	
Community Relations Specialist	164	\$20.00	\$3,280.00	1.98	\$6,494.40
Quality Assurance Manager	36	\$26.52	\$954.72	1.98	\$1,890.35
Quality Assurance Assistant		\$20.50		1.98	
Health & Safety Manager	24	\$24.96	\$599.04	1.98	\$1,186.10
Health & Safety Assistant		\$13.00		1.98	
Technician		\$13.00		1.98	
Project Assistant	320	\$13.52	\$4,326.40	1.98	\$8,566.27
Clerk/Word Processor	100	\$10.40	\$1,040.00	1.98	\$2,059.20
Technical Editor	20	\$13.79	\$275.80	1.98	\$546.08
CAD Operator	44	\$16.22	\$713.68	1.98	\$1,413.09
Draftsman		\$10.92		1.98	
<b>Total Labor:</b>	<b>1488</b>				<b>\$69,504.06</b>
Air Fare	7	Various	\$2,876.00	1.02	\$2,933.52
Lodging	13	\$49.00	\$637.00	1.02	\$649.74
Per Diem	31	Various	\$854.00	1.02	\$871.08
Car Rental/Fuel	19	\$50.00	\$950.00	1.02	\$969.00
Field Van/Fuel		\$80.00		1.02	
<b>Total Travel:</b>					<b>\$5,423.34</b>
Telephone/Telefax	159	\$5.00	\$795.00	1.02	\$810.90
Shipping – Reports	32	\$15.00	\$480.00	1.02	\$489.60
Shipping – Coolers/Other		\$100.00		1.02	
Expendable Field Supplies				1.02	
Equipment				1.02	
Other				1.02	
<b>Total Other Direct Costs:</b>					<b>\$1,300.50</b>
Drilling Subcontract				1.02	
Analytical Subcontract				1.02	
Survey Subcontract				1.02	
Report Reproduction			\$250.00	1.02	\$255.00
Other				1.02	
Other				1.02	
Other				1.02	
<b>Total Subcontract:</b>					<b>\$255.00</b>
<b>Total Cost:</b>					<b>\$76,482.90</b>
Award Fee – Labor, Travel, ODCs:			\$76,227.90	0.09	\$6,860.51
Award Fee – Subcontracts			\$255.00	0.045	\$11.48
<b>Total Cost + Award Fee:</b>					<b>\$83,354.88</b>

**ABB ENVIRONMENTAL SERVICES, INC.**

**TASK: 2.0 PLANNING DOCUMENTS (PHASE 2 RFA SAMPLING VISIT TECHNICAL MEMORANDUM [04])**  
**PROJECT: MAYPORT GROUP AREA II**  
**MANAGER: PEGGY LAYNE**

DESCRIPTION	BASE	RATE	SUB-TOTAL	MULTIPLIER OVERHEAD	TOTAL
Task Order Manager		\$30.16		1.98	
Senior Scientist	40	\$30.26	\$1,210.40	1.98	\$2,396.59
Senior Engineer	40	\$30.16	\$1,206.40	1.98	\$2,388.67
Technical Expert		\$36.40		1.98	
Technical Expert	14	\$36.40	\$509.60	2.38	\$1,212.85
Geologist	120	\$19.76	\$2,371.20	1.98	\$4,694.98
Engineer		\$19.24		1.98	
Senior Hydrologist		\$35.14		1.98	
Hydrologist		\$20.80		1.98	
Senior Chemist		\$23.34		1.98	
Chemist		\$17.00		1.98	
Senior Ecologist		\$30.16		1.98	
Senior Ecologist		\$30.16		2.38	
Applied Ecologist		\$20.28		1.98	
Applied Ecologist		\$20.28		2.38	
Scientist		\$18.72		1.98	
Public Health Specialist		\$30.76		1.98	
Toxicologist	8	\$30.16	\$241.28	1.98	\$477.73
Community Relations Specialist		\$20.00		1.98	
Quality Assurance Manager	4	\$26.52	\$106.08	1.98	\$210.04
Quality Assurance Assistant		\$20.50		1.98	
Health & Safety Manager	4	\$24.96	\$99.84	1.98	\$197.68
Health & Safety Assistant		\$13.00		1.98	
Technician		\$13.00		1.98	
Project Assistant		\$13.52		1.98	
Clerk/Word Processor	40	\$10.40	\$416.00	1.98	\$823.68
Technical Editor	8	\$13.79	\$110.32	1.98	\$218.43
CAD Operator	30	\$16.22	\$486.60	1.98	\$963.47
Draftsman		\$10.92		1.98	
<b>Total Labor:</b>	<b>308</b>				<b>\$13,584.13</b>
Air Fare				1.02	
Lodging				1.02	
Per Diem		\$26.00		1.02	
Car Rental/Fuel		\$50.00		1.02	
Field Van/Fuel		\$80.00		1.02	
<b>Total Travel:</b>					
Telephone/Telefax		\$5.00		1.02	
Shipping - Reports		\$15.00		1.02	
Shipping - Coolers/Other		\$100.00		1.02	
Expendable Field Supplies				1.02	
Equipment				1.02	
Other				1.02	
<b>Total Other Direct Costs:</b>					
Drilling Subcontract				1.02	
Analytical Subcontract				1.02	
Survey Subcontract				1.02	
Report Reproduction				1.02	
Other				1.02	
Other				1.02	
Other				1.02	
<b>Total Subcontract:</b>					
<b>Total Cost:</b>					<b>\$13,584.13</b>
Award Fee - Labor, Travel, ODCs:			\$13,584.13	0.09	\$1,222.57
Award Fee - Subcontracts				0.045	
<b>Total Cost + Award Fee:</b>					<b>\$14,806.70</b>

**ABB ENVIRONMENTAL SERVICES, INC.**

**TASK: 3.0 FIELD PROGRAM – SCREENING (PHASE 2 RFI FIELD SCREENING AND RFA SAMPLING)**  
**PROJECT: MAYPORT GROUP AREA II**  
**MANAGER: PEGGY LAYNE**

DESCRIPTION	BASE	RATE	SUB-TOTAL	MULTIPLIER OVERHEAD	TOTAL
Task Order Manager	20	\$30.16	\$603.20	1.98	\$1,194.34
Senior Scientist	270	\$30.26	\$8,170.20	1.98	\$16,177.00
Senior Engineer	116	\$30.16	\$3,498.56	1.98	\$6,927.15
Technical Expert		\$36.40		1.98	
Technical Expert	8	\$36.40	\$291.20	2.38	\$693.06
Geologist	290	\$19.76	\$5,730.40	1.98	\$11,346.19
Engineer		\$19.24		1.98	
Senior Hydrologist		\$35.14		1.98	
Hydrologist	24	\$20.80	\$499.20	1.98	\$988.42
Senior Chemist		\$23.34		1.98	
Chemist		\$17.00		1.98	
Senior Ecologist		\$30.16		1.98	
Senior Ecologist		\$30.16		2.38	
Applied Ecologist		\$20.28		1.98	
Applied Ecologist		\$20.28		2.38	
Scientist		\$18.72		1.98	
Public Health Specialist		\$30.76		1.98	
Toxicologist	24	\$30.16	\$723.84	1.98	\$1,433.20
Community Relations Specialist		\$20.00		1.98	
Quality Assurance Manager		\$26.52		1.98	
Quality Assurance Assistant		\$20.50		1.98	
Health & Safety Manager		\$24.96		1.98	
Health & Safety Assistant		\$13.00		1.98	
Technician	20	\$13.00	\$260.00	1.98	\$514.80
Project Assistant	44	\$13.52	\$594.88	1.98	\$1,177.86
Clerk/Word Processor	56	\$10.40	\$582.40	1.98	\$1,153.15
Technical Editor	24	\$13.79	\$330.96	1.98	\$655.30
CAD Operator	30	\$16.22	\$486.60	1.98	\$963.47
Draftsman		\$10.92		1.98	
<b>Total Labor:</b>	<b>926</b>				<b>\$43,223.93</b>
Air Fare				1.02	
Lodging	54	\$49.00	\$2,646.00	1.02	\$2,698.92
Per Diem	60	\$26.00	\$1,560.00	1.02	\$1,591.20
Car Rental/Fuel	12	\$50.00	\$600.00	1.02	\$612.00
Field Van/Fuel	24	\$80.00	\$1,920.00	1.02	\$1,958.40
<b>Total Travel:</b>					<b>\$6,860.52</b>
Telephone/Telex	40	\$5.00	\$200.00	1.02	\$204.00
Shipping – Reports	5	\$15.00	\$75.00	1.02	\$76.50
Shipping – Coolers/Other	30	\$100.00	\$3,000.00	1.02	\$3,060.00
Expendable Field Supplies	15	\$10.00	\$150.00	1.02	\$153.00
Equipment				1.02	
Other				1.02	
<b>Total Other Direct Costs:</b>					<b>\$3,493.50</b>
Drilling Subcontract				1.02	
Analytical Subcontract				1.02	
Survey Subcontract				1.02	
Report Reproduction				1.02	
Cone Penetrometer			\$100,000.00	1.02	\$102,000.00
Other				1.02	
Other				1.02	
<b>Total Subcontract:</b>					<b>\$102,000.00</b>
<b>Total Cost:</b>					<b>\$155,577.95</b>
Award Fee – Labor, Travel, ODCs:			\$53,577.95	0.09	\$4,822.02
Award Fee – Subcontracts			\$102,000.00	0.045	\$4,590.00
<b>Total Cost + Award Fee:</b>					<b>\$164,989.97</b>

**ABB ENVIRONMENTAL SERVICES, INC.**

**TASK: 4.0 FIELD PROGRAM – CONFIRMATION (PHASE 2 RFI FIELD INVESTIGATIONS[08])**

**PROJECT: MAYPORT GROUP AREA II**

**MANAGER: PEGGY LAYNE**

DESCRIPTION	BASE	RATE	SUB-TOTAL	MULTIPLIER OVERHEAD	TOTAL
Task Order Manager	93	\$30.16	\$2,804.88	1.98	\$5,553.66
Senior Scientist	725	\$30.26	\$21,938.50	1.98	\$43,438.23
Senior Engineer	238	\$30.16	\$7,178.08	1.98	\$14,212.60
Technical Expert		\$36.40		1.98	
Technical Expert	4	\$36.40	\$145.60	2.38	\$346.53
Geologist	356	\$19.76	\$7,034.56	1.98	\$13,928.43
Engineer		\$19.24		1.98	
Senior Hydrologist	17	\$35.14	\$597.38	1.98	\$1,182.81
Hydrologist	17	\$20.80	\$353.60	1.98	\$700.13
Senior Chemist		\$23.34		1.98	
Chemist		\$17.00		1.98	
Senior Ecologist		\$30.16		1.98	
Senior Ecologist	40	\$30.16	\$1,206.40	2.38	\$2,871.23
Applied Ecologist		\$20.28		1.98	
Applied Ecologist		\$20.28		2.38	
Scientist		\$18.72		1.98	
Public Health Specialist		\$30.76		1.98	
Toxicologist		\$30.16		1.98	
Community Relations Specialist		\$20.00		1.98	
Quality Assurance Manager		\$26.52		1.98	
Quality Assurance Assistant		\$20.50		1.98	
Health & Safety Manager		\$24.96		1.98	
Health & Safety Assistant		\$13.00		1.98	
Technician	602	\$13.00	\$7,826.00	1.98	\$15,495.48
Project Assistant	89	\$13.52	\$1,203.28	1.98	\$2,382.49
Clerk/Word Processor		\$10.40		1.98	
Technical Editor		\$13.79		1.98	
CAD Operator	34	\$16.22	\$551.48	1.98	\$1,091.93
Draftsman		\$10.92		1.98	
<b>Total Labor:</b>	<b>2215</b>				<b>\$101,203.52</b>
Air Fare	1	\$750.00	\$750.00	1.02	\$765.00
Lodging	120	\$49.00	\$5,880.00	1.02	\$5,997.60
Per Diem	143	\$26.00	\$3,718.00	1.02	\$3,792.36
Car Rental/Fuel	54	\$50.00	\$2,700.00	1.02	\$2,754.00
Field Van/Fuel	41	\$80.00	\$3,280.00	1.02	\$3,345.60
<b>Total Travel:</b>					<b>\$16,654.56</b>
Telephone/Telefax	144	\$5.00	\$720.00	1.02	\$734.40
Shipping – Reports	5	\$15.00	\$75.00	1.02	\$76.50
Shipping – Coolers/Other	28	\$100.00	\$2,800.00	1.02	\$2,856.00
Expendable Field Supplies	1	\$14,777.00	\$14,777.00	1.02	\$15,072.54
Equipment	1	\$9,621.00	\$9,621.00	1.02	\$9,813.42
Other – Field Office	1	\$4,920.00	\$4,920.00	1.02	\$5,018.40
<b>Total Other Direct Costs:</b>					<b>\$33,571.26</b>
Drilling Subcontract			\$31,710.00	1.02	\$32,344.20
Analytical Subcontract			\$204,000.00	1.02	\$208,080.00
Survey Subcontract			\$10,789.00	1.02	\$11,004.78
Report Reproduction				1.02	
IDW Management			\$8,777.00	1.02	\$8,952.54
Biological			\$25,000.00	1.02	\$25,500.00
Other				1.02	
<b>Total Subcontract:</b>					<b>\$285,881.52</b>
<b>Total Cost:</b>					<b>\$437,310.86</b>
Award Fee – Labor, Travel, ODCs:			\$151,429.34	0.09	\$13,628.64
Award Fee – Subcontracts			\$285,881.52	0.045	\$12,864.67
<b>Total Cost + Award Fee:</b>					<b>\$463,804.17</b>

**ABB ENVIRONMENTAL SERVICES, INC.**

**TASK: 5.0 DATA ASSESSMENT (LABORATORY VALIDATION AND MANAGEMENT OF DATA [10])**

**PROJECT: MAYPORT GROUP AREA II**

**MANAGER: PEGGY LAYNE**

DESCRIPTION	BASE	RATE	SUB-TOTAL	MULTIPLIER OVERHEAD	TOTAL
Task Order Manager		\$30.16		1.98	
Senior Scientist	160	\$30.26	\$4,841.60	1.98	\$9,586.37
Senior Engineer	60	\$30.16	\$1,809.60	1.98	\$3,583.01
Technical Expert		\$36.40		1.98	
Technical Expert	40	\$36.40	\$1,456.00	2.38	\$3,465.28
Geologist	160	\$19.76	\$3,161.60	1.98	\$6,259.97
Engineer		\$19.24		1.98	
Senior Hydrologist		\$35.14		1.98	
Hydrologist		\$20.80		1.98	
Senior Chemist		\$23.34		1.98	
Chemist		\$17.00		1.98	
Senior Ecologist		\$30.16		1.98	
Senior Ecologist		\$30.16		2.38	
Applied Ecologist		\$20.28		1.98	
Applied Ecologist		\$20.28		2.38	
Scientist		\$18.72		1.98	
Public Health Specialist		\$30.76		1.98	
Toxicologist	24	\$30.16	\$723.84	1.98	\$1,433.20
Community Relations Specialist		\$20.00		1.98	
Quality Assurance Manager	150	\$26.52	\$3,978.00	1.98	\$7,876.44
Quality Assurance Assistant	350	\$20.50	\$7,175.00	1.98	\$14,206.50
Health & Safety Manager		\$24.96		1.98	
Health & Safety Assistant		\$13.00		1.98	
Technician		\$13.00		1.98	
Project Assistant	80	\$13.52	\$1,081.60	1.98	\$2,141.57
Clerk/Word Processor	20	\$10.40	\$208.00	1.98	\$411.84
Technical Editor		\$13.79		1.98	
CAD Operator	60	\$16.22	\$973.20	1.98	\$1,926.94
Draftsman	40	\$10.92	\$436.80	1.98	\$864.86
<b>Total Labor:</b>	<b>1144</b>				<b>\$51,755.98</b>
Air Fare				1.02	
Lodging				1.02	
Per Diem		\$26.00		1.02	
Car Rental/Fuel		\$50.00		1.02	
Field Van/Fuel		\$80.00		1.02	
<b>Total Travel:</b>					
Telephone/Telefax	40	\$5.00	\$200.00	1.02	\$204.00
Shipping – Reports	25	\$15.00	\$375.00	1.02	\$382.50
Shipping – Coolers/Other		\$100.00		1.02	
Expendable Field Supplies				1.02	
Equipment – Computer	1	\$4,608.00	\$4,608.00	1.02	\$4,700.16
Other – ACS	500	\$1.55	\$775.00	1.02	\$790.50
<b>Total Other Direct Costs:</b>					<b>\$6,077.16</b>
Drilling Subcontract				1.02	
Analytical Subcontract				1.02	
Survey Subcontract				1.02	
Report Reproduction				1.02	
Data Validation			\$16,000.00	1.02	\$16,320.00
Other				1.02	
Chemist			\$2,500.00	1.02	\$2,550.00
<b>Total Subcontract:</b>					<b>\$18,870.00</b>
<b>Total Cost:</b>					<b>\$76,703.14</b>
Award Fee – Labor, Travel, ODCs:			\$57,833.14	0.09	\$5,204.98
Award Fee – Subcontracts			\$18,870.00	0.045	\$849.15
<b>Total Cost + Award Fee:</b>					<b>\$82,757.27</b>

**ABB ENVIRONMENTAL SERVICES, INC.**

**TASK: 6.0 RISK ASSESSMENT (12)**  
**PROJECT: MAYPORT GROUP AREA II**  
**MANAGER: PEGGY LAYNE**

DESCRIPTION	BASE	RATE	SUB-TOTAL	MULTIPLIER OVERHEAD	TOTAL
Task Order Manager		\$30.16		1.98	
Senior Scientist	40	\$30.26	\$1,210.40	1.98	\$2,396.59
Senior Engineer	40	\$30.16	\$1,206.40	1.98	\$2,388.67
Technical Expert		\$36.40		1.98	
Technical Expert	117	\$36.40	\$4,258.80	2.38	\$10,135.94
Geologist	80	\$19.76	\$1,580.80	1.98	\$3,129.98
Engineer		\$19.24		1.98	
Senior Hydrologist	20	\$35.14	\$702.80	1.98	\$1,391.54
Hydrologist	60	\$20.80	\$1,248.00	1.98	\$2,471.04
Senior Chemist		\$23.34		1.98	
Chemist	48	\$17.00	\$816.00	1.98	\$1,615.68
Senior Ecologist		\$30.16		1.98	
Senior Ecologist	400	\$30.16	\$12,064.00	2.38	\$28,712.32
Applied Ecologist		\$20.28		1.98	
Applied Ecologist	80	\$20.28	\$1,622.40	2.38	\$3,861.31
Scientist		\$18.72		1.98	
Public Health Specialist		\$30.76		1.98	
Toxicologist	300	\$30.16	\$9,048.00	1.98	\$17,915.04
Community Relations Specialist		\$20.00		1.98	
Quality Assurance Manager	24	\$26.52	\$636.48	1.98	\$1,260.23
Quality Assurance Assistant	80	\$20.50	\$1,640.00	1.98	\$3,247.20
Health & Safety Manager		\$24.96		1.98	
Health & Safety Assistant		\$13.00		1.98	
Technician		\$13.00		1.98	
Project Assistant		\$13.52		1.98	
Clerk/Word Processor	100	\$10.40	\$1,040.00	1.98	\$2,059.20
Technical Editor	24	\$13.79	\$330.96	1.98	\$655.30
CAD Operator	60	\$16.22	\$973.20	1.98	\$1,926.94
Draftsman		\$10.92		1.98	
<b>Total Labor:</b>	<b>1473</b>				<b>\$83,167.00</b>
Air Fare	1	\$750.00	\$750.00	1.02	\$765.00
Lodging	5	\$49.00	\$245.00	1.02	\$249.90
Per Diem	6	\$26.00	\$156.00	1.02	\$159.12
Car Rental/Fuel	6	\$50.00	\$300.00	1.02	\$306.00
Field Van/Fuel		\$80.00		1.02	
<b>Total Travel:</b>					<b>\$1,480.02</b>
Telephone/Telefax	40	\$5.00	\$200.00	1.02	\$204.00
Shipping - Reports	20	\$15.00	\$300.00	1.02	\$306.00
Shipping - Coolers/Other		\$100.00		1.02	
Expendable Field Supplies				1.02	
Equipment				1.02	
Other				1.02	
<b>Total Other Direct Costs:</b>					<b>\$510.00</b>
Drilling Subcontract				1.02	
Analytical Subcontract				1.02	
Survey Subcontract				1.02	
Report Reproduction				1.02	
Other				1.02	
Other				1.02	
Chemist			\$2,500.00	1.02	\$2,550.00
<b>Total Subcontract:</b>					<b>\$2,550.00</b>
<b>Total Cost:</b>					<b>\$87,707.02</b>
Award Fee - Labor, Travel, ODCs:			\$85,157.02	0.09	\$7,664.13
Award Fee - Subcontracts			\$2,550.00	0.045	\$114.75
<b>Total Cost + Award Fee:</b>					<b>\$95,485.90</b>

**ABB ENVIRONMENTAL SERVICES, INC.**

**TASK: 7.0 REPORTING (PHASE 2 RFI REPORT PREPARATION [14])**

**PROJECT: MAYPORT GROUP AREA II**

**MANAGER: PEGGY LAYNE**

DESCRIPTION	BASE	RATE	SUB-TOTAL	MULTIPLIER OVERHEAD	TOTAL
Task Order Manager		\$30.16		1.98	
Senior Scientist	200	\$30.26	\$6,052.00	1.98	\$11,982.96
Senior Engineer	200	\$30.16	\$6,032.00	1.98	\$11,943.36
Technical Expert		\$36.40		1.98	
Technical Expert	80	\$36.40	\$2,912.00	2.38	\$6,930.56
Geologist	320	\$19.76	\$6,323.20	1.98	\$12,519.94
Engineer		\$19.24		1.98	
Senior Hydrologist		\$35.14		1.98	
Hydrologist	160	\$20.80	\$3,328.00	1.98	\$6,589.44
Senior Chemist		\$23.34		1.98	
Chemist		\$17.00		1.98	
Senior Ecologist		\$30.16		1.98	
Senior Ecologist	120	\$30.16	\$3,619.20	2.38	\$8,613.70
Applied Ecologist		\$20.28		1.98	
Applied Ecologist	120	\$20.28	\$2,433.60	2.38	\$5,791.97
Scientist		\$18.72		1.98	
Public Health Specialist		\$30.76		1.98	
Toxicologist	120	\$30.16	\$3,619.20	1.98	\$7,166.02
Community Relations Specialist		\$20.00		1.98	
Quality Assurance Manager		\$26.52		1.98	
Quality Assurance Assistant		\$20.50		1.98	
Health & Safety Manager		\$24.96		1.98	
Health & Safety Assistant		\$13.00		1.98	
Technician		\$13.00		1.98	
Project Assistant	40	\$13.52	\$540.80	1.98	\$1,070.78
Clerk/Word Processor	80	\$10.40	\$832.00	1.98	\$1,647.36
Technical Editor	24	\$13.79	\$330.96	1.98	\$655.30
CAD Operator	40	\$16.22	\$648.80	1.98	\$1,284.62
Draftsman		\$10.92		1.98	
<b>Total Labor:</b>	<b>1504</b>				<b>\$76,196.00</b>
Air Fare				1.02	
Lodging				1.02	
Per Diem		\$26.00		1.02	
Car Rental/Fuel		\$50.00		1.02	
Field Van/Fuel		\$80.00		1.02	
<b>Total Travel:</b>					
Telephone/Telefax	30	\$5.00	\$150.00	1.02	\$153.00
Shipping - Reports	15	\$15.00	\$225.00	1.02	\$229.50
Shipping - Coolers/Other		\$100.00		1.02	
Expendable Field Supplies				1.02	
Equipment				1.02	
Other				1.02	
<b>Total Other Direct Costs:</b>					<b>\$382.50</b>
Drilling Subcontract				1.02	
Analytical Subcontract				1.02	
Survey Subcontract			\$750.00	1.02	\$765.00
Report Reproduction			\$1,000.00	1.02	\$1,020.00
Other				1.02	
Other				1.02	
Other				1.02	
<b>Total Subcontract:</b>					<b>\$1,785.00</b>
<b>Total Cost:</b>					<b>\$78,363.50</b>
Award Fee - Labor, Travel, ODCs:			\$76,578.50	0.09	\$6,892.07
Award Fee - Subcontracts			\$1,785.00	0.045	\$80.33
<b>Total Cost + Award Fee:</b>					<b>\$85,335.90</b>

**ABB ENVIRONMENTAL SERVICES, INC.**  
**TRAVEL ESTIMATE – CTO #028, MODIFICATION #1**  
**PHASE 2 RCRA FACILITY INVESTIGATION – NS MAYPORT**

**1. Task 1 – Project Management**

Purpose	Traveller	Origin	Destination	Air Fare			Lodging			Per Diem			Vehicle Rental		
				No. Flights	Unit Price	Total Price	No. Nights	Unit Rate	Total Price	No. Days	Unit Rate	Total Price	No. Days	Unit Rate	Total Price
TRC Mtgs	Task Order Mgr	Tallahassee	NS Mayport				2	\$49	\$98	4	\$26	\$104	4	\$50	\$200
	Sr. Engineer	Tallahassee	NS Mayport				2	\$49	\$98	4	\$26	\$104			
Proj. Mtgs	Task Order Mgr	Tallahassee	NS Mayport				2	\$49	\$98	4	\$26	\$104	4	\$50	\$200
	Sr. Engineer	Tallahassee	NS Mayport				2	\$49	\$98	4	\$26	\$104			
Reg. Mtgs	Task Order Mgr	Tallahassee	Atlanta	2	\$350	\$700		\$79		2	\$34	\$68	2	\$50	\$100
	Sr. Engineer	Tallahassee	Atlanta	2	\$350	\$700		\$79		2	\$34	\$68			
	Tech Expert	Tallahassee	Atlanta	2	\$350	\$700		\$79		2	\$34	\$68			
Fld Audit	QA Mgr	Tallahassee	NS Mayport				2	\$49	\$98	3	\$26	\$78	3	\$50	\$150
	H&S Mgr	Tallahassee	NS Mayport				1	\$49	\$49	2	\$26	\$52	2	\$50	\$100
CRP Mtg	CRP Spec.	Portland	NS Mayport	1	\$776	\$776	1	\$49	\$49	2	\$26	\$52	2	\$50	\$100
	Sr. Engineer	Tallahassee	NS Mayport				1	\$49	\$49	2	\$26	\$52	2	\$50	\$100
Total:						\$2,876		\$637		\$854		\$950			

**2. Task 3 – Field Program (Screening)**

Purpose	Traveller	Origin	Destination	Air Fare			Lodging			Per Diem			Vehicle Rental		
				No. Flights	Unit Price	Total Price	No. Nights	Unit Rate	Total Price	No. Days	Unit Rate	Total Price	No. Days	Unit Rate	Total Price
Screening	Sr. Scientist	Tallahassee	NS Mayport				13	\$49	\$637	14	\$26	\$364	14	\$80	\$1,120
	Geologist	Tallahassee	NS Mayport				13	\$49	\$637	14	\$26	\$364			
	Sr. Engineer	Tallahassee	NS Mayport				1	\$49	\$49	2	\$26	\$52	2	\$50	\$100
Sampling	Sr. Scientist	Tallahassee	NS Mayport				9	\$49	\$441	10	\$26	\$260	10	\$80	\$800
	Geologist	Tallahassee	NS Mayport				9	\$49	\$441	10	\$26	\$260	10	\$50	\$500
	Sr. Engineer	Tallahassee	NS Mayport				9	\$49	\$441	10	\$26	\$260			
Total:								\$2,646		\$1,560		\$2,520			

3. Task 4 – Field Program (Confirmation)

Purpose	Traveller	Origin	Destination	Air Fare			Lodging			Per Diem			Vehicle Rental		
				No. Flights	Unit Price	Total Price	No. Nights	Unit Rate	Total Price	No. Days	Unit Rate	Total Price	No. Days	Unit Rate	Total Price
Kick-Off	Sr. Scientist	Tallahassee	NS Mayport							1	\$26	\$26	1	\$50	\$50
	Sr. Engineer	Tallahassee	NS Mayport							1	\$26	\$26			
Field Team Prep.	Sr. Scientist	Tallahassee	NS Mayport					\$49			\$26			\$50	
	Technician	Tallahassee	NS Mayport					\$49			\$26				
Piezo-meter	Sr. Scientist	Tallahassee	NS Mayport				9	\$49	\$441	10	\$26	\$260	10	\$80	\$800
	Geologist	Tallahassee	NS Mayport				9	\$49	\$441	10	\$26	\$260	10	\$50	\$500
	Technician	Tallahassee	NS Mayport				9	\$49	\$441	10	\$26	\$260	10	\$50	\$500
Sediment/ Surf. Water Sampling	Sr. Scientist	Tallahassee	NS Mayport				4	\$49	\$196	5	\$26	\$130	5	\$80	\$400
	Geologist	Tallahassee	NS Mayport				4	\$49	\$196	5	\$26	\$130	5	\$50	\$250
	Technician	Tallahassee	NS Mayport				4	\$49	\$196	5	\$26	\$130			
PCB/Bkgd Sampling	Sr. Scientist	Tallahassee	NS Mayport				13	\$49	\$637	15	\$26	\$390	15	\$80	\$1,200
	Geologist	Tallahassee	NS Mayport				13	\$49	\$637	15	\$26	\$390	15	\$50	\$750
	Sr. Engineer	Tallahassee	NS Mayport				13	\$49	\$637	15	\$26	\$390			
	Technician	Tallahassee	NS Mayport				13	\$49	\$637	15	\$26	\$390			
GW Sampling	Sr. Scientist	Tallahassee	NS Mayport				5	\$49	\$245	6	\$26	\$156	6	\$80	\$480
	Geologist	Tallahassee	NS Mayport				5	\$49	\$245	6	\$26	\$156	6	\$50	\$300
	Technician	Tallahassee	NS Mayport				5	\$49	\$245	6	\$26	\$156			
Hydraulic Testing	Sr. Scientist	Tallahassee	NS Mayport				4	\$49	\$196	5	\$26	\$130	5	\$80	\$400
	Technician	Tallahassee	NS Mayport				4	\$49	\$196	5	\$26	\$130			
	Hydrologist	Tallahassee	NS Mayport				1	\$49	\$49	2	\$26	\$52	2	\$50	\$100
Bio. Fld	Sr. Ecologist	Wash., DC	NS Mayport	1	\$750	\$750	5	\$49	\$245	6	\$26	\$156	5	\$50	\$250
Total:						\$750		\$5,880		\$3,718		\$5,980			

4. Task 6 – Risk Assessment

Purpose	Traveller	Origin	Destination	Air Fare			Lodging			Per Diem			Vehicle Rental		
				No. Flights	Unit Price	Total Price	No. Nights	Unit Rate	Total Price	No. Days	Unit Rate	Total Price	No. Days	Unit Rate	Total Price
Site Review	Sr. Ecologist	Wash., DC	NS Mayport	1	\$750	\$750	5	\$49	\$245	6	\$26	\$156	6	\$50	\$300

**ABB ENVIRONMENTAL SERVICES, INC.**  
**GROUP AREA II, MAYPORT, FLORIDA**  
**Expendable Supplies – 4.0 FIELD PROGRAM**

<b>Nomenclature</b>	<b>Purchase/ Lease</b>	<b>Qty</b>	<b>Unit Price</b>	<b>Total Price</b>
Baggies	P	6	\$5	\$30
Shipping Tape	L	14	\$3	\$42
Cyanide/Pb-Ac Test	P	1	\$8	\$8
Cyanide/KI Test	P	1	\$11	\$11
Visqueen	P	2	\$20	\$40
Monofilament Line 60 lbs.(1000 ft.)	P	1	\$20	\$20
Teflon Squeeze Bottles	P	4	\$60	\$240
Wire Flag Stakes	P	200	\$1	\$200
Wooden Stakes, 2"x 1"x3'	P	100	\$0.27	\$27
Visqueen (1 roll/week)	P	6	\$20	\$120
Aluminum Foil (4 rolls/day)	P	60	\$2	\$120
IPA (.5 gal./day)	P	30	\$18	\$540
Paper Towels (1 roll/day)	P	30	\$1	\$30
Alconox (.5 bottle/day)	P	10	\$10	\$100
1 gallon baggies (box)	P	24	\$3	\$72
Garbage Bags	P	12	\$20	\$240
Bubble Wrap	P	1	\$10	\$10
Baggies	P	4	\$5	\$20
Bubble Wrap	P	5	\$50	\$250
Tin Foil	P	10		\$0
Miscellaneous Office Supplies	P	1	\$250.00	\$250
PCB Test Kits	P	60	\$150	\$9,000
teflon 5/8" Tubing	P	20	\$2	\$30
<b>Total:</b>				<b>\$11,400</b>

**ABB ENVIRONMENTAL SERVICES, INC.**  
**GROUP AREA II, MAYPORT, FLORIDA**  
**Expendable Field Supplies (Health & Safety) – 4.0 FIELD PROGRAM**

1. The following disposable items are required per person per day:

Nomenclature	Qty/ Person	No. People	No. Days	Unit Price	Total Price
Tyvek Booties	4	5	30	\$2.27	\$1,362
Disposable Gloves	10	5	30	\$0.18	\$270
Subtotal:					\$1,632

2. The following reusable items are required for the entire field effort:

Nomenclature	Qty	Unit Price	Total Price
Ear Plugs (box)	1	\$60.00	\$60
Hard Hats	4	\$8.50	\$34
Nitrile Gloves (bag)	1	\$19.25	\$19
Subtotal:			\$113

3. Total Health & Safety Equipment:

\$1,745

**ABB ENVIRONMENTAL SERVICES, INC.**  
**RI FIELD WORK GROUP II AREA, MAYPORT, FLORIDA**  
**Equipment – 4.0 FIELD PROGRAM**

Nomenclature	Purchase/ Lease	Qty	Unit Price	Total Price
Plastic Spool	P	1	\$10	\$10
Teflon Squeeze Bottles	P	4	\$60	\$240
Glass Bowl	P	13	\$20	\$260
SS Spoons	P	13	\$17	\$221
100' Tape	P	1	\$30	\$30
Soil Color Chart	P	1	\$25	\$25
Sand Grain Sizing Folder	P	1	\$25	\$25
Alizavin Red Stain	P	1	\$16	\$16
Glass Bowls	P	10	\$20	\$200
SS Spoons	P	10	\$17	\$170
Photo Albums	P	5	\$12	\$60
Micro Cassette Recorder	P	1	\$50	\$50
Camera	P	1	\$100	\$100
Cellular Telephone	P	1	\$600	\$600
Log Book	P	4	\$25	\$100
3.5" Computer Disketts HD	P	1	\$17	\$17
Cloth Diskett Holder	P	1	\$15	\$15
Oil Water Probe	P	1	\$1,450	\$1,450
Deep Submersible Pump	P	1	\$4,500	\$4,500
Outdoor Extension Cords, 50'	P	1	\$25	\$25
Differential Photometer	P	1	\$895	\$895
Mechanical Pipett	P	1	\$200	\$200
Balance	P	1	\$100	\$100
Signs	P	4	\$28	\$112
2 Aluminum Clip Boards	P	2	\$40	\$80
Micro Casette & Batteries	P	1	\$20	\$20
Film W/Processing	P	10	\$10	\$100
Total:				\$9,621.00

ABB ENVIRONMENTAL SERVICES, INC.  
MAYPORT GROUP AREA II  
Other Direct Costs – 4.0 FIELD OFFICE

Nomenclature	Purchase/ Lease	Qty	Unit Price	Total Price
Field Trailer (months)	L	12	\$250	\$3,000
Telephone Charges (months)	P	12	\$160	\$1,920
Total:				\$4,920

ABB ENVIRONMENTAL SERVICES, INC.  
MAYPORT GROUP AREA II  
Other Direct Costs – 5.0 DATA ASSESSMENT (LABORATORY VALIDATION AND MANAGEMENT  
OF DATA)

Nomenclature	Purchase/ Lease	Qty	Unit Price	Total Price
486 Computer	P	1	\$3,895	\$3,895
Dotmatrix Printer	P	1	\$358	\$358
Tax and Shipping	P	1	\$355	\$355
Total:				\$4,608



28/02

30 September 1992

Commanding Officer  
Southern Division  
Naval Facilities Engineering Command  
2155 Eagle Drive  
Charleston SC 29411-0068

Attention: Janet Morris, Code 0232JM

**SUBJECT: Final Plan of Action and Fee Proposal Submittal for  
Phase 2 RCRA Facility Investigation (RFI), Group II Area  
Naval Station (NAVSTA), Mayport, FL  
CTO No. 0028, Modification No. 2  
Navy CLEAN District I  
Contract N62467-89-D-0317**

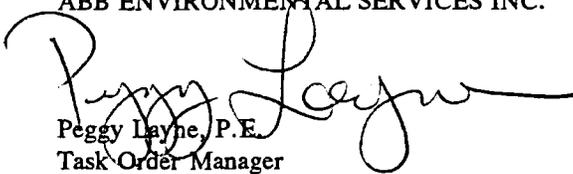
Dear Ms. Morris:

Enclosed is a copy of the Final Plan of Action and Fee Proposal for the RFI, Group II Area at NAVSTA Mayport, FL. The Fee Proposal reflects our estimated level of effort for revisions to the existing RFI Work Plans and field implementation, revised according to our negotiations on 24 and 25 September. The project scope was initially described in the Final Scope of Work (SOW #14) dated 10 July 1991 and revised by the Modification to SOW dated 23 June 1992. The schedule assumes a date for Notice to Proceed of 5 October 1992.

If you have any questions, please call me at 904-656-1293.

Very truly yours,

ABB ENVIRONMENTAL SERVICES INC.



Peggy Layne, P.E.  
Task Order Manager

cc: J. Hudson  
J. Reed  
B. Lawrence  
File: CTO-0028

ABB Environmental Services Inc.