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FINAL RCRA FACILITY INVESTIGATION PLAN OF ACTION NS MAYPORT FL
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ABB ENVIRONMENTAL

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FINAL

PLAN OF ACTION
RCRA FACILITY INVESTIGATION
NAVAL STATION MAYPORT

CONTRACT TASK ORDER NO. 0028
NAVY CLEAN - DISTRICT I
CONTRACT NO. N62467-89-D-0317

SEPTEMBER 1991

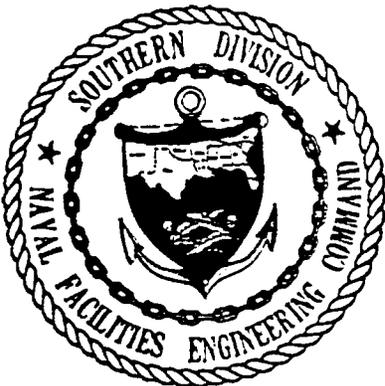


ABB Environmental Services, Inc.

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September 11, 1991

Commanding Officer
ATTN: Janet Morris, Code 0232JM
Southern Division
Naval Facilities Engineering Command
2155 Eagle Drive
Charleston SC 29411-0068

SUBJECT: Final Plan of Action and Fee Proposal Submittal for
RCRA Facility Investigation (RFI),
Naval Station (NAVSTA), Mayport, FL
CTO No. 028
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 at NAVSTA Mayport, FL. The Fee Proposal reflects our estimated level of effort for revisions to the existing RFI Work Plans and field implementation, subject to regulatory review and approval. The project scope was initially described in the Draft Scope of Work (SOW) dated 10 July 1991 and refined during a scoping meeting with the EIC from 6 August to 8 August 1991, and a site visit conducted on 13 August 1991. The schedule assumes a date for Notice to Proceed of 16 September 1991. The Final Plan of Action and Fee Proposal was negotiated by phone on 10 September, 1991.

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

Very truly yours,

ABB ENVIRONMENTAL SERVICES INC.

McLayne for Philip Georgariou

Philip Georgariou
Task Order Manager

cc: J. Hudson
Ken Barnes
T. Allen
File: CTO-0028

ABB Environmental Services, Inc.

FINAL
PLAN OF ACTION

Contract Task Order No. 028
Navy CLEAN - District I
Contract No. N62467-89-D-0317

RCRA FACILITY INVESTIGATION
NAVSTA MAYPORT, FLORIDA

SEPTEMBER 10, 1991

Submitted By:

ABB ENVIRONMENTAL SERVICES INC.
2571 EXECUTIVE CENTER CIRCLE EAST
TALLAHASSEE, FLORIDA 32301

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- Attachment A - Schedule
- Attachment B - Cost Estimate

I. INTRODUCTION

On September 6, 1990, Southern Division Naval Facilities Engineering Command (SOUTHNAVFAC) contracted with ABB Environmental Services Inc. (ABB-ES) to assist the Navy's Environmental Engineering Program by providing engineering support services for the Installation Restoration Program (IR). The first step in the process of executing a Contract Task Order (CTO) is for ABB-ES to respond to a Statement Of Work (SOW) by participating in a site visit and/or scoping meeting with the Engineer-in-Charge (EIC) to definitize the SOW. A Plan of Action (POA) is then prepared which presents the scope of services, schedule and costs estimated to meet the objectives of all or part of the SOW.

This POA describes the scope 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. The RFI includes the following activities:

- Management Activities including coordination of field activities, progress reports, and TRC/Project Managers' meetings.
- Technical Activities including: revision of existing draft RFI Work Plans per regulatory comments; development of a Community Relations Plan; preparation of a Corrective Action Management Plan; conduct a RFA Sampling Visit (SV) at selected SWMUs; and implementation of the final RFI Work Plans by installation of monitoring wells, sampling, surveying, laboratory analysis, data evaluation, Health and Environmental Assessment (HEA), and RFI report writing.

The purpose of this POA is to present the scope of services finalized by the Navy and ABB-ES during a scoping meeting with the EIC conducted from 6 August to 8 August, 1991 and a site visit made on 13 August 1991. This finalized scope of services is designed to meet the objectives set forth in the Draft SOW dated 10 July 1991 developed by SOUTHNAVFAC and as modified during the site visit.

The following sections present the scope of services (Section II), key personnel (Section III), schedule (Section IV) and cost estimates (Section V).

II. SCOPE OF SERVICES

This Plan of Action (POA) presents the basis for the technical approach and fee proposal describing the level of effort necessary to accomplish the Statement of Work (SOW) requested by Contract Task Order (CTO) #0028, dated 22 July 1991, under Contract No. N62467-89-D-0317. CTO #0028 requested services to conduct investigations at Naval Station (NAVSTA) Mayport, Florida, and produce a RCRA Facility Investigation (RFI) Report adequate for submittal to applicable regulatory agencies for their review and approval.

A site visit was conducted on 13 August 1991 at NAVSTA Mayport with the EIC to inspect the subject SWMUs and refine the SOW. The SOW was refined during the site visit to focus on the following five SOW Work Elements:

- Work Element 1: Project Schedules and Progress Reports;
- Work Element 2: Meetings;
- Work Element 3: Develop Community Relations Plan;
- Work Element 4: Prepare RFI Work Plan;
- Work Element 5: Conduct RFI Investigations;
- New Work Element: Conduct a RFA Sampling Visit.

Based on the information collected during the site visit, CTO #028 will address the first four Work Elements as originally described in the SOW, including revision of the existing Draft RFI Work Plan for the 17 HSWA Permitted SWMUs. In addition, SWMU 22 (Building 1600) will also be addressed in the revised RFI Work Plan in response to the USEPA's RFA which determined that this site required an RFI.

The fifth Work Element, Conduct RFI Investigations, was modified based on discussions with the EIC during the site visit. The USEPA prefers a phased approach to implementation of the RFI. The RFI will therefore be conducted in phases addressing separate geographic groupings of sites. Phase I of the RFI field implementation under CTO #028 will address the first group of sites which will be composed of the original HSWA Permitted SWMUs 2, 4, 5, 6, and 13, plus Building 1600 (SWMU 22). These sites are generally located in the southwestern portion of NAVSTA Mayport.

In addition, during field implementation of the Phase I RFI, verification sampling will be conducted at selected SWMUs identified by the USEPA's RFA. The selected SWMUs include Sites 26, 49, and 50. These sites are within the general locality of the Phase I RFI sites. Subtasks for verification activities at these sites will include preparation of a technical memorandum describing sampling and analysis requirements for a RFA Sampling Visit (SV), conducting the RFA/SV, and data assessment and reporting.

The following tasks have been defined in order to accomplish these Work Elements:

- Task #1 - Project Schedules and Progress Reports (Technical/Financial Monthly Reports)
- Task #2 - Meetings
- Task #3 - Community Relations Plan Development
 - Subtask 3.1 - Community Interviews;
 - Subtask 3.2 - Prepare Community Relations Plan;
 - Subtask 3.3 - Community Relations Plan Mailing List;
 - Subtask 3.4 - Implement Community Relations Plan.

- Task #4 - Draft RFI Work Plan Revisions
 - Subtask 4.1 - Prepare a Corrective Action Management Plan;
 - Subtask 4.2 - Prepare draft "point-by-point" responses to USEPA comments;
 - Subtask 4.3 - Revise RFI Work Plans for submittal to USEPA.

- Task #5 - RFA Sampling Visit
 - Subtask 5.1 - Prepare Technical Memorandum for Sampling Visit;
 - Subtask 5.2 - Conduct Sampling Visit;
 - Subtask 5.3 - Assess data and Report Findings.

- Task #6 - RFI Investigations
 - Subtask 6.1 - Preliminary Activities;
 - Subtask 6.2 - Hydrogeologic Investigation;
 - Subtask 6.3 - Surface water and Sediment Sampling;
 - Subtask 6.4 - Surface Soil Sampling;
 - Subtask 6.5 - Biological Field Investigation;
 - Subtask 6.6 - Chemical Analyses;
 - Subtask 6.7 - Data Evaluation and Validation;
 - Subtask 6.8 - Health and Environmental Assessment (HEA);
 - Subtask 6.9 - RFI Report Submittals.

WORK ELEMENT #1

Task #1 - Project Schedules and Progress Reports (Technical/Financial Monthly Reports)

ABB-ES will prepare Technical/Financial Monthly Reports (TFMR) for the length of this project in accordance with the provisions of Part V, Section 3 of the contract. Each report will be in the format required in the contract (Part IX, Attachment A) and will summarize activities during the month, any problems encountered and their proposed resolution, and will include a schedule update in the form of a Gantt chart. ABB-ES will notify the Navy immediately upon discovery of any significant new site conditions, including imminent hazard or substantial endangerment, and any deviation from the project schedule or POA. TFMRS will be submitted to SOUTHNAVFAC in accordance with the contract provisions for program-level submittals.

The estimated duration of the project is 45 weeks. The schedule is affected by the timing of document reviews. The estimate of the project duration assumes that review of draft documents by the Navy will require three calendar weeks. Review by the Navy of preliminary draft final documents before regulatory submittal will require one calendar week. Regulatory review of draft final documents will require six calendar weeks. The cost estimate therefore includes preparation of 11 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 key personnel and level of effort (LOE) estimated for this task include the Task Order Manager (88 hours) and Project Assistant (44 hours).

WORK ELEMENT #2

Task #2 - Meetings

ABB-ES will participate in 2 TRC meetings (at Jacksonville, Florida), 2 project review meetings (at NAVSTA Mayport), and 2 regulatory meetings (at USEPA Region IV). In addition, a meeting will be held with the EIC prior to preparation of the draft 90% 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. 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 Navy will prepare the agenda for each meeting and be the lead at each meeting. ABB-ES will tape record each meeting and provide four copies of the minutes within 10 working days to the EIC for distribution to attendees. Minutes are estimated to average 5 pages in length.

The key personnel and LOE estimated for this task include the Task Order Manager (28 hours), Senior Engineer (200 hours), Technical Expert (56 hours), and Project Assistant (48 hours).

WORK ELEMENT #3

Task #3 - Community Relations Plan Development

Development and implementation of a basic Community Relations Plan will be composed of four subtasks:

- Subtask 3.1 - Community Interviews;
- Subtask 3.2 - Prepare Community Relations Plan;
- Subtask 3.3 - Community Relations Plan Mailing List.
- Subtask 3.4 - Implement Community Relations Plan.

Subtask 3.1: Community Interviews. ABB-ES will conduct community interviews to gather information and identify community concerns. The data collected from the community interviews will define the optimal strategy for community participation and communications during the RFI and subsequent potential corrective actions.

Subtask 3.2: Prepare Community Relations Plan. A Community Relations Plan (CRP) will be prepared in accordance with the current EPA and Navy guidance based on the data collected during the community interviews. Four copies of the initial draft CRP, two copies of the preliminary draft final CRP, and 15 copies of the draft final CRP will be submitted to the Navy.

Subtask 3.3: Community Relations Plan Mailing List. ABB-ES will update and maintain the CRP mailing list on IBM compatible data base software.

Subtask 3.4: Implement Community Relations Plan. ABB-ES will implement portions of the CRP in coordination with the Navy. The LOE assumes that ABB-ES will prepare and distribute quarterly fact sheets (two quarters and 100 individual mailings per quarter), attend two public meetings with the Navy, and prepare typical visual aids such as slides and overlays for presentation at the meetings. The LOE assumes that the Community Relations Plan will be limited to a routine community relations program where community concerns are minor.

The key personnel and LOE estimated for this task include the Task Order Manager (24 hours), Senior Engineer (60 hours), Community Relations Specialist (144 hours), Project Assistant (4 hours), Draftsperson (20 hours), and Clerical/Word Processor (64 days).

WORK ELEMENT #4

Task #4 - Draft RFI Work Plan Revisions

ABB-ES will revise the existing RFI Work Plans to address U.S. Environmental Protection Agency (USEPA) comments dated 6 May 1991, other elements defined by the Draft SOW dated 10 July 1991 prepared by SOUTHNAVFAC, and other applicable regulatory comments. This task will be composed of the following subtasks:

- Subtask 4.1 - Prepare a Corrective Action Management Plan;
- Subtask 4.2 - Prepare draft "point-by-point" responses to regulatory comments;
- Subtask 4.3 - Revise RFI Work Plans for submittal to applicable regulatory agencies.

Subtask 4.1: Prepare a Corrective Action Management Plan. A draft RCRA Facility Assessment (RFA), dated September 1989, was prepared on behalf of the USEPA by their contractor, A.T. Kearney, Inc. The draft RFA identified fifty-six SWMUs at NAVSTA Mayport. Fifteen of these SWMUs were determined not to require further action. Twenty-three of the remaining SWMUs were determined to require further investigation. The remaining eighteen SWMUs were determined to require a RCRA Facility Investigation (RFI). Of these eighteen SWMUs, seventeen were addressed in the existing draft RFI Work Plans. The additional SWMU determined by the USEPA to require a RFI was Building 1600 Blasting Area.

The USEPA reported in their 6 May 1991 comments to the existing draft RFI Work Plans that they would address the thirty-nine additional SWMUs identified during the RFA under revised permit conditions at a later date. In anticipation of the USEPA's action, a Corrective Action Management Plan will be prepared and incorporated into the revised RFI Work Plans addressing the SWMUs requiring a RFI, additional investigation, or no further action. The Corrective Action Management Plan (CAMP) will define priorities, operational units, and proposed schedules for the SWMUs that have been identified at NAVSTA Mayport. Four copies of the initial draft CAMP, two copies of preliminary draft final CAMP, and 15 copies of the draft final CAMP will be submitted to the Navy.

The key personnel and LOE estimated for this task include the Task Order Manager (16 hours), Senior Engineer (32 hours), Hydrologist (16 hours), Technical Expert (peer review) (4 hours), Senior Draftsperson (10 hours), Project Assistant (8 hours), Clerical/Word Processing (8 hours).

Subtask 4.2 - Prepare draft "point-by-point" responses to regulatory comments.

Draft responses to the USEPA's comments to the existing RFI Work Plans will be prepared in a "point-by-point" format. The proposed responses will be submitted to the Navy for internal review prior to revision of the RFI Work Plans. The primary purpose of the "point-by-point" format is to aid the Navy in efficiently assessing the proposed responses for technical adequacy and institutional consistency prior to submittal to the USEPA. In addition, subsequently revised final responses submitted to the USEPA in the "point-by-point" format along with the revised RFI Work Plans will improve the likelihood of a smooth and timely regulatory review.

The Corrective Action Management Plan will also be submitted in draft form with the draft "point-by-point" responses to the Navy for their review and comment. Four copies of the initial draft "point-by-point" responses, two copies of the preliminary draft final "point-by-point" responses, and 15 copies of the draft final "point-by-point" responses will be submitted to the Navy.

The key personnel and LOE estimated for this task include the Task Order Manager (40 hours), Senior Engineer (60 hours), Geologist (80 hours), Hydrologist (80 hours), Senior Scientist (24 hours), Technical Expert (peer review) (8 hours), Technical Editor (24 hours), Project Assistant (16 hours), Clerical/Word Processing (24 hours).

Subtask 4.3 - Revise RFI Work Plans for submittal to applicable regulatory agencies.

The RFI Work Plans will be revised in accordance with comments received from the Navy on the "point-by-point" responses. SOUTHNAVFAC will be responsible for collecting and compiling review comments from other cognizant Naval activities. SOUTHNAVFAC will resolve any conflicting comments prior to transmittal to ABB-ES. The existing draft RFI Work Plans consist of the following elements in three volumes:

- Volume I:
 - Work Plan
 - Data Management Plan
 - Project Management Plan

- Volume II:
 - Sampling and Analysis Plan
 - Site Management Plan
 - Quality Assurance Plan

- Volume III:
 - Health and Safety Plan

The existing structure of the draft RFI Work Plans will be maintained and modified as appropriate to incorporate the Community Relations Plan and Corrective Action Management Plan, as well as regulatory and Navy review comments. It is anticipated that the Corrective Action Management Plan will be contained in Volume I, and the Community Relations Plan will be added as Volume IV after completion of the community interviews.

Preliminary Draft Final copies of the revised RFI Work Plans and "point-by-point" responses will be reviewed by the Navy prior to submittal to regulatory agencies. It is anticipated that the Navy will complete their review of the preliminary Draft Final documents at ABB-ES Tallahassee. Any last minute comments will be incorporated into the Draft Final documents and delivered to the Navy for regulatory submittal. Four copies of the revised initial draft RFI Work Plan, two copies of the preliminary draft final RFI Work Plan, and 15 copies of the draft final RFI work Plan will be submitted to the Navy.

The key personnel and LOE estimated for this task include the Task Order Manager (80 hours), Senior Engineer (120 hours), Geologist (120 hours), Hydrologist (120 hours), Senior Scientist (80 hours), Technical Expert (peer review) (24 hours), Technical Editor (24 hours), Project Assistant (40 hours), Senior Draftsperson (40 hours), and Clerical/Word Processing (40 hours).

NEW WORK ELEMENT

Task #5 - RFI Sampling Visit

Verification sampling will be conducted at selected SWMUs identified by the USEPA's RFA as requiring further investigation. The purpose of the sampling is to determine if a release occurred at the suspected sites and to determine if a RFI is required. The selected SWMUs include Sites 26, 49, 50 and 54. These sites are within the general locality of the Phase I RFI sites. Subtasks for verification activities at these sites are:

Subtask 5.1 - Prepare Technical Memorandum for Sampling Visit. 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 Work Plan. Four copies of the initial draft TM, two copies of the preliminary draft final TM, and 15 copies of the draft final TM will be submitted to the Navy.

Subtask 5.2 - Conduct 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 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 6 (Conduct RFI Investigation) assuming that mobilization for both tasks 5 and 6 occur simultaneously. The LOE for Level C data validation of the RFA/SV samples is included in the Task 6 data validation subtask.

Subtask 5.3 - Assess 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. Four copies of the initial draft RFA/SV report, two copies of the preliminary draft final RFA/SV report, and 15 copies of the draft final RFA/SV report will be submitted to the Navy.

The key personnel and LOE estimated for Task 5 include the Task Order Manager (60 hours), Quality Assurance Manager (10 hours), Senior Engineer (144 hours), Senior Scientist (60 hours), Geologist (260 hours), Hydrologist (60 hours), Toxicologist (80 hours), Health and Safety Manager (10 hours), Technical Expert (peer review) (14 hours), Technical Editor (24 hours), Project Assistant (66 hours), Senior Draftsperson (30 hours), and Clerical/Word Processing (56 hours).

WORK PLAN ELEMENT #5

Task #6 - Conduct RCRA Facility Investigations

The RFI will be implemented on a phased basis upon satisfactory regulatory review and approval of the RFI Work Plans. The Phase I RFI will address SWMUs 2, 4, 5, 6, and 13 which were identified in the HSWA Permit dated 25 March 1989, and SWMU 22 (Building 1600) which was determined to require a RFI in the USEPA's RFA. These SWMUs include:

- SWMU 2 - Landfill B
- SWMU 4 - Landfill D

- SWMU 5 - Landfill E .
- SWMU 6 - Landfill F
- SWMU 13 - Old Firefighting Training Area
- SWMU 22 - Building 1600 Blasting Area

The following subtasks' descriptions and proposed level of effort are based on the current anticipated requirements for work plan implementation for the five SWMUs listed above, and may be affected by future regulatory inputs. The Phase I RFI will be composed of the following subtasks:

- Subtask 6.1 - Preliminary Activities
- Subtask 6.2 - Hydrogeologic Investigation
- Subtask 6.3 - Surface water and Sediment Sampling
- Subtask 6.4 - Surface Soil Sampling
- Subtask 6.5 - Biological Field Investigation
- Subtask 6.6 - Chemical Analyses
- Subtask 6.7 - Data Evaluation and Validation
- Subtask 6.8 - Health and Environmental Assessment (HEA)
- Subtask 6.9 - RFI Report Submittals (Phase I SWMUs)

Subtask 6.1 - Preliminary Activities.

Coordination with Activity. A project kickoff meeting will be scheduled at NAVSTA Mayport, prior to initiation of field work, to plan logistics, initiate permit approvals, and discuss base fire/safety and security requirements. This meeting is scoped within Task 2 described earlier. 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. The level of effort estimates for meetings are addressed under Task 2.

Subcontractors. ABB-ES will secure subcontractors for the following field related tasks: drilling, laboratory analyses, surveying, and on-site office trailer.

Field Mobilization. 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 an on-site staging, equipment storage, decontamination, and temporary waste storage areas.

Drill cuttings, well development fluids, sampling wastes, and other wastes produced during the investigations will be containerized at the point of generation as appropriate. Samples will be collected for waste characterization to determine the appropriate waste management methods. Nonhazardous wastes such as drill cuttings may be disposed of at the point of generation. Hazardous waste will require appropriate management in accordance with RCRA requirements.

The LOE does not address waste management activities such as on-site waste transportation, on-site storage, off-site disposal, or TCLP sampling and analysis. ABB-ES assumes that NAVSTA Mayport will provide for these activities directly, unless directed otherwise.

LOE estimates include travel time for mobilization (and demobilization) and the loading, unloading, and staging of equipment and supplies.

Subtask 6.2 - Hydrogeologic Investigation.

Monitoring Well Installation. ABB-ES will supervise subcontracted drilling operations at NAVSTA for installation of 6 new shallow wells (completed in the surficial aquifer), and 2 new deep wells (completed in the upper Hawthorn). In addition, existing wells MPT-2-4, MPT-2-15S, MPT-2-15D, and MPT-13-5 will be replaced due to damage. Three surficial aquifer wells will also be installed at the RFA/SV sites. The total number of wells to be installed will be 14 surficial aquifer wells and 2 upper Hawthorn wells. The damaged existing wells which can be found will be abandoned in accordance to standard practices.

Soil borings will be advanced using hollow stem augers in the shallow borings. Mud rotary method will be used to construct the deeper wells. The deeper wells will be constructed with surface casings. Monitoring wells will be installed in the completed borings for the purpose of monitoring groundwater quality and assessing the direction of groundwater flow in the shallow aquifers. Wells will be installed in compliance with specifications described in the RFI Work Plan.

For cost estimating, it is assumed that the surficial wells will be constructed of 2-inch schedule 40 PVC completed to an average depth of 40 feet below ground surface with a 10-foot screened interval. The deeper wells 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. Actual construction details will be determined based site conditions encountered during drilling and well construction.

ABB-ES will provide a three-member sampling team to: collect field data; collect, package, preserve, and manage environmental 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.

One subsurface soil sample will be collected from just above groundwater level from each boring for analysis of Appendix IX analytes. An additional sample shall also be collected from each boring for physical-chemical analyses. Anticipated physical-chemical analyses include bulk density, particle size distribution, triaxial permeability, organic content (TOC), and cation exchange capacity.

Groundwater Sampling. ABB-ES will conduct groundwater sampling upon conclusion of monitoring well installation and well development. 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.

One round of background samples will also be collected from three existing wells remote and up-gradient from the SWMUs (i.e., DS-263, MPT-1, and S-1). These samples will be used to assess background groundwater contaminant concentrations in areas not impacted by activities at the SWMUs. One round of groundwater samples will be collected from the 11 new RFI wells, 3 RFA/SV wells, and 19 existing Expanded Site Investigation (ESI) wells. These groundwater samples will be analyzed for Appendix IX compounds.

Surveying. ABB-ES will subcontract this task. Horizontal and vertical locations of all monitoring wells will be established by a registered Florida land surveyor. Third-order accuracy will be specified. All wells (11 new RFI wells, 3 RFA/SV wells, 3 background wells, and 39 existing ESI wells) will be surveyed and tied to the NAVSTA Mayport grid system. ABB-ES will be on-site to oversee the survey to confirm conformance with the work plan and to provide logistical support for site access and coordination with activity personnel.

In addition to the survey of the monitoring wells, the surveyors will field verify the elevations of major stormwater drainage ditches at the Phase I SWMUs. The level of effort assumes that AutoCADD drawing files of the facility topography will be available from SOUTHNAVFAC to use as base references and that only field verification of elevations will be necessary.

Slug Tests. ABB-ES will conduct slug tests at selected well locations to estimate aquifer characteristics such as hydraulic conductivity. Slug tests will be conducted at 14 new monitoring wells and 19 existing monitoring wells.

Subtask 6.3 - Surface water and Sediment Sampling. ABB-ES will collect surface water and sediment samples at selected SWMUs or within their vicinity. ABB-ES will provide all equipment and personnel for sample collection. ABB-ES will provide a three-member sampling team to collect field data and environmental samples. 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.

One round of background reference surface water and sediment samples will also be collected from drainage features located upstream from the SWMUs. Three surface water samples and three sediment samples will be collected. These samples will be used to assess surface water and sediment contaminant concentrations in areas not impacted by activities at the SWMUs. They will be analyzed for Appendix IX Compounds.

ABB-ES will provide a three-member sampling team with equipment and supplies to collect field data and environmental samples. Surface water and sediment samples will be collected, handled, preserved, and transported to an approved laboratory under chain of custody for analysis using accepted NEESA QA/QC protocols.

Subtask 6.4 - Surface Soil Sampling. ABB-ES will collect surface soil samples at Landfill B (SWMU 2). ABB-ES will provide field screening analytical equipment for polychlorinated biphenyls (PCBs) in soil and conduct field screening analyses under this task. ABB-ES will provide all equipment and personnel for sample collection. 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. Selected soil 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.

One round of background surface soil samples will also be collected from areas located off-site from the SWMUs. A total of six background surface soil samples will be collected. These samples will be used to assess surface soil contaminant concentrations in areas not impacted by activities at the SWMUs.

Subtask 6.5 - Biological Field Investigation. ABB-ES will conduct qualitative and quantitative aquatic and terrestrial biological field investigations at selected SWMUs or their vicinities.

Subtask 6.6 - Chemical Analyses. ABB-ES will subcontract this task. Groundwater, soil, sediment, and surface water samples will be analyzed for suspected contaminants by a NEESA approved laboratory.

Subtask 6.7 - Data Evaluation and Validation. ABB-ES will validate, review, and evaluate analytical data (QC Level: C) for soil, sediment, surface water, and groundwater samples collected and analyzed during the course of the project.

Subtask 6.8 - Health and Environmental Assessment (HEA). ABB-ES will conduct an HEA to establish the baseline risk associated with each site and identify potential effects of the site conditions on public health and the environment. 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.

The key personnel and level of effort estimated for SubTask #6.1 through #6.8 include the Task Order Manager (196 hours), Quality Assurance Manager (16 hours), Senior Engineer (154 hours), Senior Scientist (1353 hours), Engineer (220 hours), Geologist (330 hours), Hydrologist (240 hours), Health and Safety Manager (24 hours), Senior Chemist (60 hours), Technical Expert (77 hours), Project Assistant (90 hours), Clerk/Word Processor (170 hours), Quality Assurance Assistant (544 hours).

Subtask 6.9 - RFI Report Submittals. ABB-ES will attend a review meeting with the EIC and base personnel prior to writing the initial 90% Draft RFI report for work conducted at NAVSTA Mayport. The initial 90% Draft RFI report will address the SWMUs identified in the HSWA Permit, dated March 28, 1989. The LOE for this meeting is described in Task 2 as one of two Project Management meetings.

ABB-ES will revise the draft RFI report submittals upon receiving comments from applicable regulatory agencies and the Navy. SOUTHNAVFAC will be responsible for collecting and compiling review comments from regulatory agencies and other cognizant Naval activities. SOUTHNAVFAC will resolve conflicting comments from other cognizant Naval activities prior to submittal to ABB-ES. As an alternative to the SOW schedule matrix, the following review and submittal cycle is proposed:

- 90% Draft RFI report submitted to Navy for initial review (four copies).
- Preliminary Draft Final RFI report prepared incorporating Navy comments on 90% Draft RFI Report (two copies).
- Draft Final RFI report prepared after Navy approval of preliminary Draft Final (15 copies).
- Draft Final RFI report submitted to regulatory review.
- Draft Final RFI report revised in response to regulatory commits as appropriate.
- Preliminary Final RFI report submitted to Navy for review and comment (two copies).
- Final RFI report prepared after Navy approval of preliminary Final (15 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 Work Plans.

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 SOUTHNAVFAC. 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.

The key personnel and level of effort estimated for Task #6 include the Task Order Manager (80 hours), Senior Engineer (160 hours), Senior Scientist (160 hours), Engineer (160 hours), Geologist (160 hours), Hydrologist (160 hours), Technical Expert (30 hours), Project Assistant (40 hours), Clerk/Word Processor (80 hours), CAD Operator/Sr. Draftsman (40 hours), and Technical Editor (20 hours).

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 Mr. Philip Georgariou. Mr. Philip Georgariou is responsible for evaluating the appropriateness and adequacy of the technical and engineering services provided for CTO-028 and in developing the technical approach and LOE required to address each of the POA tasks. Mr. Philip Georgariou is also responsible for the day-to-day conduct of the work, including the integration of the input of supporting disciplines and subcontractors. He 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 SOUTHNAVFAC.

Ms. Peggy Lane, 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. Michael Keirn, Ph.D. will be the technical expert in charge of developing the Health and Environmental Assessment study. 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. Mr. John McVoy will be the Quality Assurance Officer for the project.

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 1 September 1991, 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 #5 of the Plan of Action dated September 11, 1991.

Period of Performance Parameters:

Costs presented are estimated to be incurred through July 1992 (refer to Milestone Chart).

ATTACHMENT A
SCHEDULE

ATTACHMENT B

COSTS

**CLEAN FEE ITEMIZATION FORM
SOUTH DIV ENVIRONMENTAL DIVISION**

DATE OF SCOPE: 10 September 1991 A&E FIRM: ABB Environmental Services, Inc.CTO: 028 DATE OF ESTIMATE: 10 September 1991 CONTRACT NO.: N62467-89-D-0317PROJECT: RCRA Facility InvestigationFUNDING: Defense Environmental Restoration Act (DERA)ACTIVITY: Naval Station MavportUIC CODE: N60801 LOCATION: Mavport, Florida

ITEM	RATE/HR.	OFFICE		FIELDWORK		TOTAL	
		LABOR HOURS	COST(\$)	LABOR HOURS	COST(\$)	LABOR HOURS	COST(\$)
Program Manager	36.50		\$0.00		\$0.00	0	\$0.00
Quality Assurance Manager	25.50	26	\$663.00		\$0.00	26	\$663.00
Task Order Manager	29.00	612	\$17,748.00		\$0.00	612	\$17,748.00
Senior Engineer	29.00	930	\$26,970.00		\$0.00	930	\$26,970.00
Senior Scientist	29.10	1677	\$48,800.70		\$0.00	1,677	\$48,800.70
Engineer	18.50	380	\$7,030.00		\$0.00	380	\$7,030.00
Geologist	19.00	950	\$18,050.00		\$0.00	950	\$18,050.00
Hydrologist	20.00	676	\$13,520.00		\$0.00	676	\$13,520.00
Toxicologist	18.00	80	\$1,440.00		\$0.00	80	\$1,440.00
Program Assistant	13.00	356	\$4,628.00		\$0.00	356	\$4,628.00
Clerical/Word Processing	10.00	442	\$4,420.00		\$0.00	442	\$4,420.00
Accounting	14.00		\$0.00		\$0.00	0	\$0.00
Contract Manager	19.50		\$0.00		\$0.00	0	\$0.00
Technical Editor	13.26	124	\$1,644.24		\$0.00	124	\$1,644.24
Public Health Specialist	29.58		0.00		0.00	0	0.00
Community Relations Specialist	19.23	164	3,153.72		0.00	164	3,153.72
Health & Safety Assistant	12.50		\$0.00		\$0.00	0	\$0.00
Health & Safety Manager (CIH)	24.00		\$0.00		\$0.00	0	\$0.00
Quality Assurance Assistant	19.71	544	\$10,722.24		\$0.00	544	\$10,722.24
Cad Operator/Sr. Draftsperson	15.60	140	\$2,184.00		\$0.00	140	\$2,184.00
Draftsperson	10.50		\$0.00		\$0.00	0	\$0.00
Air Quality Engineer/Scientist	16.94		\$0.00		\$0.00	0	\$0.00
Senior Hydrologist	33.79		\$0.00		\$0.00	0	\$0.00
Senior Chemist (CLP Qual.)	22.44	60	\$1,346.40		\$0.00	60	\$1,346.40
Public Relations	20.00		\$0.00		\$0.00	0	\$0.00
Technician	13.00		\$0.00		\$0.00	0	\$0.00
Technical Expert (PhD-Sci/Eng)	35.00	213	\$7,455.00		\$0.00	213	\$7,455.00
TOTAL DIRECT LABOR	XXXXX	7,374	\$169,775.30	0	\$0.00	7,374	\$169,775.30
X Fringe (.3312)	XXXXX	XXXXX	\$56,229.58	XXXXX	\$0.00	XXXXX	\$56,229.58
X Overhead (.5413)	XXXXX	XXXXX	\$122,336.44	XXXXX	\$0.00	XXXXX	\$122,336.44
X G&A (.0733)	XXXXX	XXXXX	\$25,533.42	XXXXX	\$0.00	XXXXX	\$25,533.42
Total Burdened Dir. Labor	XXXXX	XXXXX	\$373,874.74	XXXXX	\$0.00	XXXXX	\$373,874.74

PART II - OTHER DIRECT COSTS (Itemized on Supplement Sheets)

ITEM	UNIT COST(S)	QUANTITY	TOTAL
Telephone/Communications	\$5.00/Call		\$1,790.00
Postage/Freight	See attached sheet		\$2,790.00
Expendables	See attached sheet		\$1,200.00
Equipment	See attached sheet		\$1,250.00
Other	See attached sheet		\$1,425.00
Subtotal			\$8,455.00
X G&A (.0733)			\$619.75
TOTAL	XXXXXXX	XXXXXXX	\$9,074.75

PART III - TRAVEL (Itemized on Supplement Sheets)

Car/Fuel	See attached sheet		\$2,100.00
Field Van/Fuel	See attached sheet		\$4,000.00
Per Diem	See attached sheet		\$3,796.00
Lodging	See attached sheet		\$5,244.00
Airfare	See attached sheet		\$3,680.00
Subtotal			\$18,820.00
X G&A (.0733)			\$1,379.51
TOTAL TRAVEL EXPENSES	XXXXX	XXXXX	\$20,199.51

PART IV - SUBCONTRACTOR SERVICES (Itemized on Supplement Sheets)

Drilling	See attached sheet		\$72,711.17
Laboratory	See attached sheet		\$169,860.00
Survey	See attached sheet		\$37,248.00
Other	See attached sheet		\$28,204.00
Subtotal			\$308,023.17
X G&A (.0733)			\$22,578.10
TOTAL SUBCONTRACTOR EXPENSES	XXXXX	XXXXX	\$330,601.27

	TOTAL			
	LABOR HOURS	COST(S)		
TOTAL PART I (Direct Labor)	7374	\$373,874.74		
TOTAL PART II (Other Direct Costs)		\$9,074.75		
TOTAL PART III (Travel Expenses)		\$20,199.51		
SUBTOTAL (Parts I, II, & III)		\$403,149.00		
Award Fee Pool @ <u>10</u> % x Parts I, II, & III		\$40,314.90		
Enter Award Fee % here <u>10</u> %				
Parts I, II, & III TOTAL		443,463.90		
TOTAL PART IV (Subcontractor Expenses)		\$330,601.09		
Award Fee Pool @ <u>4.5</u> % x Part IV		\$14,877.05		
Enter Award Fee % here <u>4.5</u> %				
Part IV TOTAL		\$345,478.14		
TOTAL: (Parts I, II, & III)		\$443,463.90		
(Part IV)		\$345,478.14		
GRAND TOTAL		\$788,942.04		
A&E Signature	Date	Telephone		
	9-11-91			
EIC Signature	Date	Code	Code 18C Approval	Date

COST SUMMARY

PROJECT NAME: RCRA Facility Investigation - NS Mayport

RESPONSIBLE: Philip Georgariou

DESCRIPTION	BASE	RATE	AMOUNT
TASK ORDER MANAGER	612	\$29.00	\$17,748.00
QUALITY ASSURANCE MANAGER	26	\$25.50	\$663.00
SENIOR ENGINEER	930	\$29.00	\$26,970.00
SENIOR SCIENTIST	1677	\$29.10	\$48,800.70
ENGINEER	380	\$18.50	\$7,030.00
GEOLOGIST	950	\$19.00	\$18,050.00
HYDROLOGIST	676	\$20.00	\$13,520.00
TOXICOLOGIST	80	\$18.00	\$1,440.00
SENIOR HYDROLOGIST		\$33.79	
CHEMIST		\$16.35	
HEALTH & SAFETY MANAGER		\$24.00	
SENIOR CHEMIST	60	\$22.44	\$1,346.40
PUBLIC HEALTH SPECIALIST		\$29.58	
COMMUNITY RELATIONS SPECIALIST	164	\$19.23	\$3,153.72
TECHNICAL EXPERT	213	\$35.00	\$7,455.00
PROJECT ASSISTANT	356	\$13.00	\$4,628.00
CLERK/WORD PROCESSOR	442	\$10.00	\$4,420.00
CAD OPERATOR/SR DRAFTSMAN	140	\$15.60	\$2,184.00
QUALITY ASSURANCE ASSISTANT	544	\$19.71	\$10,722.24
TECHNICAL EDITOR	124	\$13.26	\$1,644.24
SUBTOTAL DIRECT LABOR	7374		\$169,775.30
OVERHEAD	169775.3	0.3312	\$56,229.58
FRINGE	226004.88	0.5413	\$122,336.44
G&A - LABOR	348341.32	0.0733	\$25,533.42
TOTAL LABOR			\$373,874.74
AIRFARE			\$3,680.00
CAR/FUEL		\$50.00	\$2,100.00
FIELD VAN/FUEL		\$80.00	\$4,000.00
PER DIEM		\$26.00	\$3,796.00
LODGING		\$46.00	\$5,244.00
SUBTOTAL TRAVEL			\$18,820.00
G&A - TRAVEL	18820	0.0733	\$1,578.51
TOTAL TRAVEL			\$20,398.51
PHONE & TELEX		\$5.00	\$1,790.00
SHIPPING			\$2,790.00
EQUIPMENT			\$1,250.00
EXPENDABLES			\$1,200.00
OTHER			\$1,425.00
SUBTOTAL OTHER DIRECT COSTS			\$8,455.00
G&A - OTHER DIRECT COSTS	8455.00	0.0733	\$619.75
TOTAL OTHER DIRECT COSTS			\$9,074.75
SUBCONTRACT			
DRILLING			\$72,711.00
LABORATORY			\$169,860.00
SURVEY			\$37,248.00
OTHER			\$28,204.00
SUBTOTAL SUBCONTRACT			\$308,023.00
G&A - SUBCONTRACT	308023	0.0733	\$22,578.09
TOTAL SUBCONTRACT			\$330,601.09
TOTAL COST			\$733,750.08
AWARD FEE - LABOR, TRAVEL, ODC	403148.99	0.1	\$40,314.90
AWARD FEE - SUBCONTRACT	330601.09	0.045	\$14,877.05
TOTAL PRICE			\$788,942.03

790,477

PANs
810,918
off by 17,999

735,578
1,778 surplus
by

TASK: 1 - Project Reports & Progress Reports
PROJECT NAME: RCRA Facility Investigation - NS Mayport
RESPONSIBLE: Philip Georgariou

DESCRIPTION	BASE	RATE	AMOUNT
TASK ORDER MANAGER	88	\$29.00	\$2,552.00
QUALITY ASSURANCE MANAGER		\$25.50	
SENIOR ENGINEER		\$29.00	
SENIOR SCIENTIST		\$29.10	
ENGINEER		\$18.50	
GEOLOGIST		\$19.00	
HYDROLOGIST		\$20.00	
TOXICOLOGIST		\$18.00	
SENIOR HYDROLOGIST		\$33.79	
CHEMIST		\$16.35	
HEALTH & SAFETY MANAGER		\$24.00	
SENIOR CHEMIST		\$22.44	
PUBLIC HEALTH SPECIALIST		\$29.58	
COMMUNITY RELATIONS SPECIALIST		\$19.23	
TECHNICAL EXPERT		\$35.00	
PROJECT ASSISTANT	44	\$13.00	\$572.00
CLERK/WORD PROCESSOR		\$10.00	
CAD OPERATOR/SR DRAFTSMAN		\$15.60	
QUALITY ASSURANCE ASSISTANT		\$19.71	
TECHNICAL EDITOR		\$13.26	
SUBTOTAL DIRECT LABOR			
	132		\$3,124.00
OVERHEAD	3124	0.3312	\$1,034.67
FRINGE	4158.67	0.5413	\$2,251.09
G&A - LABOR	6409.756	0.0733	\$469.84
TOTAL LABOR			\$6,879.59
AIRFARE			
CAR/FUEL		\$50.00	
FIELD VAN/FUEL		\$80.00	
PER DIEM		\$26.00	
LODGING			
SUBTOTAL TRAVEL			
G&A - TRAVEL		0.0733	
TOTAL TRAVEL			
PHONE & TELEX			
	11	\$5.00	\$55.00
SHIPPING			
EQUIPMENT			
EXPENDABLES			
OTHER			
SUBTOTAL OTHER DIRECT COSTS			\$55.00
G&A - OTHER DIRECT COSTS	55.00	0.0733	\$4.03
TOTAL OTHER DIRECT COSTS			\$59.03
SUBCONTRACT			
DRILLING			
LABORATORY			
SURVEY			
OTHER			
SUBTOTAL SUBCONTRACT			
G&A - SUBCONTRACT		0.0733	
TOTAL SUBCONTRACT			
TOTAL COST			\$6,938.62
AWARD FEE - LABOR, TRAVEL, ODC			
	6938.622	0.1	\$693.86
AWARD FEE - SUBCONTRACT			
		0.045	
TOTAL PRICE			\$7,632.49

TASK: 2 - Meetings

PROJECT NAME: RCRA Facility Investigation - NS Mayport

RESPONSIBLE: Philip Georgariou

DESCRIPTION	BASE	RATE	AMOUNT
TASK ORDER MANAGER	28	\$28.00	\$812.00
QUALITY ASSURANCE MANAGER		\$25.50	
SENIOR ENGINEER	200	\$29.00	\$5,800.00
SENIOR SCIENTIST		\$29.10	
ENGINEER		\$18.50	
GEOLOGIST		\$19.00	
HYDROLOGIST		\$20.00	
TOXICOLOGIST		\$18.00	
SENIOR HYDROLOGIST		\$33.79	
CHEMIST		\$16.35	
HEALTH & SAFETY MANAGER		\$24.00	
SENIOR CHEMIST		\$22.44	
PUBLIC HEALTH SPECIALIST		\$29.58	
COMMUNITY RELATIONS SPECIALIST		\$19.23	
TECHNICAL EXPERT	56	\$35.00	\$1,960.00
PROJECT ASSISTANT	48	\$13.00	\$624.00
CLERK/WORD PROCESSOR		\$10.00	
CAD OPERATOR/SR DRAFTSMAN		\$15.60	
QUALITY ASSURANCE ASSISTANT		\$19.71	
TECHNICAL EDITOR		\$13.26	
SUBTOTAL DIRECT LABOR	332		\$9,196.00
OVERHEAD	9196	0.3312	\$3,045.72
FRINGE	12241.72	0.5413	\$6,626.44
G&A - LABOR	18868.15	0.0733	\$1,383.04
TOTAL LABOR			\$20,251.19
AIRFARE	4	\$320.00	\$1,280.00
CAR/FUEL	8	\$50.00	\$400.00
FIELD VAN/FUEL		\$80.00	
PER DIEM	16	\$26.00	\$416.00
LODGING	8	\$46.00	\$368.00
SUBTOTAL TRAVEL			\$2,464.00
G&A - TRAVEL	2464	0.0733	\$180.61
TOTAL TRAVEL			\$2,644.61
PHONE & TELEX	6	\$5.00	\$30.00
SHIPPING	12	\$15.00	\$180.00
EQUIPMENT			
EXPENDABLES			
OTHER			
SUBTOTAL OTHER DIRECT COSTS			\$210.00
G&A - OTHER DIRECT COSTS	210.00	0.0733	\$15.39
TOTAL OTHER DIRECT COSTS			\$225.39
SUBCONTRACT			
DRILLING			
LABORATORY			
SURVEY			
OTHER			
SUBTOTAL SUBCONTRACT			
G&A - SUBCONTRACT		0.0733	
TOTAL SUBCONTRACT			
TOTAL COST			\$23,121.20
AWARD FEE - LABOR, TRAVEL, ODC	23121.19	0.1	\$2,312.12
AWARD FEE - SUBCONTRACT		0.045	
TOTAL PRICE			\$25,433.32

TASK: 4.2 - Point-by-Point Responses

PROJECT NAME: RCRA Facility Investigation - NS Mayport

RESPONSIBLE: Philip Georgariou

DESCRIPTION	BASE	RATE	AMOUNT
TASK ORDER MANAGER	40	\$29.00	\$1,160.00
QUALITY ASSURANCE MANAGER		\$25.50	
SENIOR ENGINEER	60	\$29.00	\$1,740.00
SENIOR SCIENTIST	24	\$29.10	\$698.40
ENGINEER		\$18.50	
GEOLOGIST	80	\$19.00	\$1,520.00
HYDROLOGIST	80	\$20.00	\$1,600.00
TOXICOLOGIST		\$18.00	
SENIOR HYDROLOGIST		\$33.79	
CHEMIST		\$16.35	
HEALTH & SAFETY MANAGER		\$24.00	
SENIOR CHEMIST		\$22.44	
PUBLIC HEALTH SPECIALIST		\$29.58	
COMMUNITY RELATIONS SPECIALIST		\$19.23	
TECHNICAL EXPERT	8	\$35.00	\$280.00
PROJECT ASSISTANT	16	\$13.00	\$208.00
CLERK/WORD PROCESSOR	24	\$10.00	\$240.00
CAD OPERATOR/SR DRAFTSMAN		\$15.60	
QUALITY ASSURANCE ASSISTANT		\$19.71	
TECHNICAL EDITOR	24	\$13.26	\$318.24
SUBTOTAL DIRECT LABOR			
	356		\$7,764.64
OVERHEAD	7764.64	0.3312	\$2,571.65
FRINGE	10336.29	0.5413	\$5,595.03
G&A - LABOR	15931.32	0.0733	\$1,167.77
TOTAL LABOR			\$17,099.09
AIRFARE			
CAR/FUEL		\$50.00	
FIELD VAN/FUEL		\$80.00	
PER DIEM		\$25.00	
LODGING			
SUBTOTAL TRAVEL			
G&A - TRAVEL		0.0733	
TOTAL TRAVEL			
PHONE & TELEX	16	\$5.00	\$80.00
SHIPPING	3	\$15.00	\$45.00
EQUIPMENT			
EXPENDABLES			
OTHER			
SUBTOTAL OTHER DIRECT COSTS			\$125.00
G&A - OTHER DIRECT COSTS	125.00	0.0733	\$9.16
TOTAL OTHER DIRECT COSTS			\$134.16
SUBCONTRACT			
DRILLING			
LABORATORY			
SURVEY			
OTHER			
SUBTOTAL SUBCONTRACT			
G&A - SUBCONTRACT		0.0733	
TOTAL SUBCONTRACT			
TOTAL COST			\$17,233.25
AWARD FEE - LABOR, TRAVEL, ODC	17233.25	0.1	\$1,723.33
AWARD FEE - SUBCONTRACT		0.045	
TOTAL PRICE			\$18,956.58

TASK: 4.3 - Revise RFI Work Plans

PROJECT NAME: RCRA Facility Investigation - NS Mayport

RESPONSIBLE: Philip Georgariou

DESCRIPTION	BASE	RATE	AMOUNT
TASK ORDER MANAGER	80	\$28.00	\$2,320.00
QUALITY ASSURANCE MANAGER		\$25.50	
SENIOR ENGINEER	120	\$28.00	\$3,480.00
SENIOR SCIENTIST	80	\$28.10	\$2,328.00
ENGINEER		\$18.50	
GEOLOGIST	120	\$18.00	\$2,280.00
HYDROLOGIST	120	\$20.00	\$2,400.00
TOXICOLOGIST		\$18.00	
SENIOR HYDROLOGIST		\$33.79	
CHEMIST		\$16.35	
HEALTH & SAFETY MANAGER		\$24.00	
SENIOR CHEMIST		\$22.44	
PUBLIC HEALTH SPECIALIST		\$29.58	
COMMUNITY RELATIONS SPECIALIST		\$19.23	
TECHNICAL EXPERT	24	\$35.00	\$840.00
PROJECT ASSISTANT	40	\$13.00	\$520.00
CLERK/WORD PROCESSOR	40	\$10.00	\$400.00
CAD OPERATOR/SR DRAFTSMAN	40	\$15.60	\$624.00
QUALITY ASSURANCE ASSISTANT		\$19.71	
TECHNICAL EDITOR	40	\$13.26	\$530.40
SUBTOTAL DIRECT LABOR	704		\$15,722.40
OVERHEAD	15722.4	0.3312	\$5,207.26
FRINGE	20928.66	0.5413	\$11,328.22
G&A - LABOR	32258.88	0.0733	\$2,364.58
TOTAL LABOR			\$34,623.46
AIRFARE			
CAR/FUEL		\$50.00	
FIELD VAN/FUEL		\$80.00	
PER DIEM		\$26.00	
LODGING			
SUBTOTAL TRAVEL			
G&A - TRAVEL		0.0733	
TOTAL TRAVEL			
PHONE & TELEX	15	\$5.00	\$75.00
SHIPPING	5	\$50.00	\$250.00
EQUIPMENT			
EXPENDABLES			
OTHER			
SUBTOTAL OTHER DIRECT COSTS			\$325.00
G&A - OTHER DIRECT COSTS	325.00	0.0733	\$23.82
TOTAL OTHER DIRECT COSTS			\$348.82
SUBCONTRACT			
DRILLING			
LABORATORY			
SURVEY			
OTHER - Report Production			\$700.00
SUBTOTAL SUBCONTRACT			\$700.00
G&A - SUBCONTRACT	700	0.0733	\$51.31
TOTAL SUBCONTRACT			\$751.31
TOTAL COST			\$35,723.59
AWARD FEE - LABOR, TRAVEL, ODC	34972.28	0.1	\$3,497.23
AWARD FEE - SUBCONTRACT	751.31	0.045	\$33.81
TOTAL PRICE			\$39,254.83

TASK: 5.1 thru 5.3 - Sampling/Assessment/Report
PROJECT NAME: RCRA Facility Investigation - NS Mayport
RESPONSIBLE: Philip Georgariou

DESCRIPTION	BASE	RATE	AMOUNT
TASK ORDER MANAGER	60	\$29.00	\$1,740.00
QUALITY ASSURANCE MANAGER	10	\$25.50	\$255.00
SENIOR ENGINEER	144	\$29.00	\$4,176.00
SENIOR SCIENTIST	60	\$29.10	\$1,746.00
ENGINEER		\$18.50	
GEOLOGIST	260	\$19.00	\$4,940.00
HYDROLOGIST	60	\$20.00	\$1,200.00
TOXICOLOGIST	80	\$18.00	\$1,440.00
SENIOR HYDROLOGIST		\$33.79	
CHEMIST		\$16.35	
HEALTH & SAFETY MANAGER	10	\$24.00	\$240.00
SENIOR CHEMIST		\$22.44	
PUBLIC HEALTH SPECIALIST		\$29.58	
COMMUNITY RELATIONS SPECIALIST		\$19.23	
TECHNICAL EXPERT	14	\$35.00	\$490.00
PROJECT ASSISTANT	66	\$13.00	\$858.00
CLERK/WORD PROCESSOR	56	\$10.00	\$560.00
CAD OPERATOR/SR DRAFTSMAN	30	\$15.60	\$468.00
QUALITY ASSURANCE ASSISTANT		\$19.71	
TECHNICAL EDITOR	24	\$13.26	\$318.24
SUBTOTAL DIRECT LABOR 874 \$18,431.24			
OVERHEAD	18431.24	0.3312	\$6,104.43
FRINGE	24535.67	0.5413	\$13,281.16
G&A - LABOR	37816.82	0.0733	\$2,771.97
TOTAL LABOR			\$40,588.80
AIRFARE			
CAR/FUEL	3	\$50.00	\$150.00
FIELD VAN/FUEL	6	\$80.00	\$480.00
PER DIEM	9	\$26.00	\$234.00
LODGING	8	\$46.00	\$368.00
SUBTOTAL TRAVEL			\$1,232.00
G&A - TRAVEL	1232	0.0733	\$90.31
TOTAL TRAVEL			\$1,322.31
PHONE & TELEX			
SHIPPING	6	\$35.00	\$210.00
EQUIPMENT			
EXPENDABLES	1	\$200.00	\$200.00
OTHER			
SUBTOTAL OTHER DIRECT COSTS			\$610.00
G&A - OTHER DIRECT COSTS	610.00	0.0733	\$44.71
TOTAL OTHER DIRECT COSTS			\$654.71
SUBCONTRACT			
DRILLING			
LABORATORY			
SURVEY			
OTHER - Report Production			\$60.00
SUBTOTAL SUBCONTRACT			\$60.00
G&A - SUBCONTRACT	60	0.0733	\$4.40
TOTAL SUBCONTRACT			\$64.40
TOTAL COST			\$42,630.21
AWARD FEE - LABOR, TRAVEL, ODC			
	42565.81	0.1	\$4,256.58
AWARD FEE - SUBCONTRACT			
	64.40	0.045	\$2.90
TOTAL PRICE			\$46,889.69

TASK: 6.1 thru 6.8 - Site Investigations
 PROJECT NAME: RCRA Facility Investigation - NS Mayport
 RESPONSIBLE: Philip Georgariou

DESCRIPTION	BASE	RATE	AMOUNT
TASK ORDER MANAGER	196	\$29.00	\$5,684.00
QUALITY ASSURANCE MANAGER	16	\$25.50	\$408.00
SENIOR ENGINEER	154	\$29.00	\$4,466.00
SENIOR SCIENTIST	1353	\$29.10	\$39,372.30
ENGINEER	220	\$18.50	\$4,070.00
GEOLOGIST	330	\$19.00	\$6,270.00
HYDROLOGIST	240	\$20.00	\$4,800.00
TOXICOLOGIST		\$18.00	
SENIOR HYDROLOGIST		\$33.79	
CHEMIST		\$16.35	
HEALTH & SAFETY MANAGER	24	\$24.00	\$576.00
SENIOR CHEMIST	60	\$22.44	\$1,346.40
PUBLIC HEALTH SPECIALIST		\$29.58	
COMMUNITY RELATIONS SPECIALIST		\$19.23	
TECHNICAL EXPERT	77	\$35.00	\$2,695.00
PROJECT ASSISTANT	90	\$13.00	\$1,170.00
CLERK/WORD PROCESSOR	170	\$10.00	\$1,700.00
CAD OPERATOR/SR DRAFTSMAN		\$15.60	
QUALITY ASSURANCE ASSISTANT	544	\$19.71	\$10,722.24
TECHNICAL EDITOR		\$13.26	
SUBTOTAL DIRECT LABOR			
	3474		\$83,279.94
OVERHEAD	83279.94	0.3312	\$27,582.32
FRINGE	110862.26	0.5413	\$60,009.74
G&A - LABOR	170871.99	0.0733	\$12,524.92
TOTAL LABOR			\$183,396.91
AIRFARE			
CAR/FUEL	18	\$50.00	\$900.00
FIELD VAN/FUEL	44	\$80.00	\$3,520.00
PER DIEM	108	\$26.00	\$2,808.00
LODGING	91	\$46.00	\$4,186.00
SUBTOTAL TRAVEL			\$11,414.00
G&A - TRAVEL	11414	0.0733	\$836.65
TOTAL TRAVEL			\$12,250.65
PHONE & TELEX	228	\$5.00	\$1,140.00
SHIPPING			\$1,790.00
EQUIPMENT (PCB Test Kits)			\$1,200.00
EXPENDABLES	5	\$200.00	\$1,000.00
OTHER - (Boat Rental, Trailer, etc.)			\$975.00
SUBTOTAL OTHER DIRECT COSTS			\$6,105.00
G&A - OTHER DIRECT COSTS	6105.00	0.0733	\$447.50
TOTAL OTHER DIRECT COSTS			\$6,552.50
SUBCONTRACT			
DRILLING			\$72,711.00
LABORATORY			\$169,860.00
SURVEY			\$37,248.00
OTHER - Copying/Biological Assessment			\$26,684.00
SUBTOTAL SUBCONTRACT			\$306,503.00
G&A - SUBCONTRACT	306503	0.0733	\$22,466.00
TOTAL SUBCONTRACT			\$328,969.00
TOTAL COST			\$531,169.00
AWARD FEE - LABOR, TRAVEL, ODC	202200.05	0.1	\$20,220.00
AWARD FEE - SUBCONTRACT	328969.67	0.045	\$14,803.00
TOTAL PRICE			\$566,193.37

61 64 65
 675 112 113
 2640 440 440
 2,106 351 351
 3,140 523 523
 855 142 143
 1,343 223 224
 700 150 150
 750 125 125
 731 122 122
 -62
 -66
 -62
 -65
 531,170

TASK: 6.9 - RFI Report

PROJECT NAME: RCRA Facility Investigation - NS Mayport

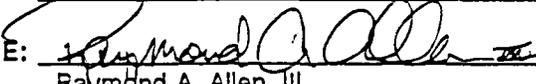
RESPONSIBLE: Philip Georgariou

DESCRIPTION	BASE	RATE	AMOUNT
TASK ORDER MANAGER	80	\$29.00	\$2,320.00
QUALITY ASSURANCE MANAGER		\$25.50	
SENIOR ENGINEER	160	\$29.00	\$4,640.00
SENIOR SCIENTIST	160	\$29.10	\$4,656.00
ENGINEER	160	\$18.50	\$2,960.00
GEOLOGIST	160	\$19.00	\$3,040.00
HYDROLOGIST	160	\$20.00	\$3,200.00
TOXICOLOGIST		\$18.00	
SENIOR HYDROLOGIST		\$33.79	
CHEMIST		\$16.35	
HEALTH & SAFETY MANAGER		\$24.00	
SENIOR CHEMIST		\$22.44	
PUBLIC HEALTH SPECIALIST		\$29.58	
COMMUNITY RELATIONS SPECIALIST		\$19.23	
TECHNICAL EXPERT	30	\$35.00	\$1,050.00
PROJECT ASSISTANT	40	\$13.00	\$520.00
CLERK/WORD PROCESSOR	80	\$10.00	\$800.00
CAD OPERATOR/SR DRAFTSMAN	40	\$15.60	\$624.00
QUALITY ASSURANCE ASSISTANT		\$19.71	
TECHNICAL EDITOR	20	\$13.26	\$265.20
SUBTOTAL DIRECT LABOR	1090		\$24,075.20
OVERHEAD	24075.2	0.3312	\$7,973.71
FRINGE	32048.91	0.5413	\$17,348.07
G&A - LABOR	49396.97	0.0733	\$3,620.80
TOTAL LABOR			\$53,017.78
AIRFARE			
CAR/FUEL		\$50.00	
FIELD VAN/FUEL		\$80.00	
PER DIEM		\$26.00	
LODGING			
SUBTOTAL TRAVEL			
G&A - TRAVEL		0.0733	
TOTAL TRAVEL			
PHONE & TELEX	20	\$5.00	\$100.00
SHIPPING	6	\$35.00	\$210.00
EQUIPMENT			
EXPENDABLES			
OTHER			
SUBTOTAL OTHER DIRECT COSTS			\$310.00
G&A - OTHER DIRECT COSTS	310.00	0.0733	\$22.72
TOTAL OTHER DIRECT COSTS			\$332.72
SUBCONTRACT			
DRILLING			
LABORATORY			
SURVEY			
OTHER - Report Production			\$700.00
SUBTOTAL SUBCONTRACT			\$700.00
G&A - SUBCONTRACT	700	0.0733	\$51.31
TOTAL SUBCONTRACT			\$751.31
TOTAL COST			\$54,101.81
AWARD FEE - LABOR, TRAVEL, ODC	53350.50	0.1	\$5,335.05
AWARD FEE - SUBCONTRACT	751.31	0.045	\$33.81
TOTAL PRICE			\$59,470.67

CERTIFICATE OF CURRENT COST OR PRICING DATA

This is to certify that, to the best of my knowledge and belief, the cost or pricing data (as defined in Section 15.801 of the Federal Acquisition Regulation (FAR) and required under FAR Subsection 15.804-2) submitted, either actually or by specific identification in writing, to the Contracting Officer or the Contracting Officer's representative in support of Contract Task Order No. 028, RCRA Facility Investigation, Naval Station Mayport, Florida are accurate, complete, and current as of 10 September 1991. This certification includes the cost or pricing data supporting any advance agreements and forward pricing rate agreements between the offeror and the Government that are part of the proposal.

FIRM: ABB-ENVIRONMENTAL SERVICES, INC.

NAME: 
Raymond A. Allen, III

TITLE: PROGRAM MANAGER

DATE: 11 SEPTEMBER 1991

Revision

9-12-91

CLEAN FEE ITEMIZATION FORM
SOUTH DIV ENVIRONMENTAL DIVISION

DATE OF SCOPE: 10 September 1991

A&E FIRM: ABB Environmental Services, Inc.

CTO: 0028

DATE OF ESTIMATE: 10 September 1991

CONTRACT NO.: N62467-89-D-0317

PROJECT: RCRA Facility Investigation

FUNDING: Defense Environmental Restoration Act (DERA)

ACTIVITY: Naval Station Mayport

ITEM	RATE/HR.	OFFICE		FIELDWORK		TOTAL	
		LABOR HOURS	COST(S)	LABOR HOURS	COST(S)	LABOR HOURS	COST(S)
Program Manager	36.50		\$0.00		\$0.00	0	\$0.00
Quality Assurance Manager	25.50	26	\$663.00		\$0.00	26	\$663.00
Task Order Manager	29.00	612	\$17,748.00		\$0.00	612	\$17,748.00
Senior Engineer	29.00	930	\$26,970.00		\$0.00	930	\$26,970.00
Senior Scientist	29.10	1677	\$48,800.70		\$0.00	1,677	\$48,800.70
Engineer	18.50	380	\$7,030.00		\$0.00	380	\$7,030.00
Geologist	19.00	950	\$18,050.00		\$0.00	950	\$18,050.00
Hydrologist	20.00	676	\$13,520.00		\$0.00	676	\$13,520.00
Toxicologist	18.00	80	\$1,440.00		\$0.00	80	\$1,440.00
Program Assistant	13.00	356	\$4,628.00		\$0.00	356	\$4,628.00
Clerical/Word Processing	10.00	442	\$4,420.00		\$0.00	442	\$4,420.00
Accounting	14.00		\$0.00		\$0.00	0	\$0.00
Contract Manager	19.50		\$0.00		\$0.00	0	\$0.00
Technical Editor	13.26	124	\$1,644.24		\$0.00	124	\$1,644.24
Public Health Specialist	29.58		0.00		0.00	0	0.00
Community Relations Specialist	19.23	164	3,153.72		0.00	164	3,153.72
Health & Safety Assistant	12.50		\$0.00		\$0.00	0	\$0.00
Health & Safety Manager (CIH)	24.00	34	\$816.00		\$0.00	34	\$816.00
Quality Assurance Assistant	19.71	544	\$10,722.24		\$0.00	544	\$10,722.24
Cad Operator/Sr. Draftsperson	15.60	140	\$2,184.00		\$0.00	140	\$2,184.00
Draftsperson	10.50		\$0.00		\$0.00	0	\$0.00
Air Quality Engineer/Scientist	16.94		\$0.00		\$0.00	0	\$0.00
Senior Hydrologist	33.79		\$0.00		\$0.00	0	\$0.00
Senior Chemist (CLP Qual.)	22.44	60	\$1,346.40		\$0.00	60	\$1,346.40
Public Relations	20.00		\$0.00		\$0.00	0	\$0.00
Technician	13.00		\$0.00		\$0.00	0	\$0.00
Technical Expert (PhD-Sci/Eng)	35.00	213	\$7,455.00		\$0.00	213	\$7,455.00
TOTAL DIRECT LABOR	XXXXX	7,408	\$170,591.30	0	\$0.00	7,408	\$170,591.30
X Fringe (.3312)	XXXXX	XXXXX	\$56,499.84	XXXXX	\$0.00	XXXXX	\$56,499.84
X Overhead (.5413)	XXXXX	XXXXX	\$122,924.43	XXXXX	\$0.00	XXXXX	\$122,924.43
X G&A (.0733)	XXXXX	XXXXX	\$25,656.14	XXXXX	\$0.00	XXXXX	\$25,656.14
Total Burdened Dir. Labor	XXXXX	XXXXX	\$375,671.71	XXXXX	\$0.00	XXXXX	\$375,671.71

PART II - OTHER DIRECT COSTS (Itemized on Supplement Sheets)

ITEM	UNIT COST(S)	QUANTITY	TOTAL
Telephone/Communications	\$5.00/Call		\$1,790.00
Postage/Freight	See attached sheet		\$2,790.00
Expendables	See attached sheet		\$1,200.00
Equipment	See attached sheet		\$1,250.00
Other	See attached sheet		\$1,425.00
Subtotal			\$8,455.00
X G&A (.0733)			\$619.75
TOTAL	XXXXXXXX	XXXXXXXX	\$9,074.75

PART III - TRAVEL (Itemized on Supplement Sheets)

Car/Fuel	See attached sheet		\$2,100.00
Field Van/Fuel	See attached sheet		\$4,000.00
Per Diem	See attached sheet		\$3,796.00
Lodging	See attached sheet		\$5,244.00
Airfare	See attached sheet		\$3,680.00
Subtotal			\$18,820.00
X G&A (.0733)			\$1,379.51
TOTAL TRAVEL EXPENSES	XXXXX	XXXXX	\$20,199.51

PART IV - SUBCONTRACTOR SERVICES (Itemized on Supplement Sheets)

Drilling	See attached sheet		\$72,711.17
Laboratory	See attached sheet		\$169,860.00
Survey	See attached sheet		\$37,248.00
Other	See attached sheet		\$28,204.00
Subtotal			\$308,023.17
X G&A (.0733)			\$22,578.10
TOTAL SUBCONTRACTOR EXPENSES	XXXXX	XXXXX	\$330,601.27

	TOTAL			
	LABOR HOURS	COST(S)		
TOTAL PART I (Direct Labor)	7408	\$375,671.71		
TOTAL PART II (Other Direct Costs)		\$9,074.75		
TOTAL PART III (Travel Expenses)		\$20,199.51		
SUBTOTAL (Parts I, II, & III)		\$404,945.97		
Award Fee Pool @ <u>10</u> % x Parts I, II, & III		\$40,494.60		
Enter Award Fee % here <u>10</u> %				
Parts I, II, & III TOTAL		445,440.57		
TOTAL PART IV (Subcontractor Expenses)		\$330,601.09		
Award Fee Pool @ <u>4.5</u> % x Part IV		\$14,877.05		
Enter Award Fee % here <u>4.5</u> %				
Part IV TOTAL		\$345,478.14		
TOTAL: (Parts I, II, & III)		\$445,440.57		
(Part IV)		\$345,478.14		
GRAND TOTAL		\$790,918.71		
A&E Signature <i>Carmel H. Aman</i>	Date <i>12 Sep 91</i>	Telephone <i>904-656-1293</i>		
EIC Signature	Date	Code	Code 18C Approval	Date

COST SUMMARY**PROJECT NAME: RCRA Facility Investigation - NS Mayport****RESPONSIBLE: Philip Georgariou**

DESCRIPTION	BASE	RATE	AMOUNT
TASK ORDER MANAGER	612	\$29.00	\$17,748.00
QUALITY ASSURANCE MANAGER	28	\$25.50	\$663.00
SENIOR ENGINEER	930	\$29.00	\$26,970.00
SENIOR SCIENTIST	1677	\$29.10	\$48,800.70
ENGINEER	380	\$18.50	\$7,030.00
GEOLOGIST	950	\$19.00	\$18,050.00
HYDROLOGIST	676	\$20.00	\$13,520.00
TOXICOLOGIST	80	\$18.00	\$1,440.00
SENIOR HYDROLOGIST		\$33.79	
CHEMIST		\$16.35	
HEALTH & SAFETY MANAGER	34	\$24.00	\$816.00
SENIOR CHEMIST	60	\$22.44	\$1,346.40
PUBLIC HEALTH SPECIALIST		\$29.58	
COMMUNITY RELATIONS SPECIALIST	164	\$19.23	\$3,153.72
TECHNICAL EXPERT	213	\$35.00	\$7,455.00
PROJECT ASSISTANT	356	\$13.00	\$4,628.00
CLERK/WORD PROCESSOR	442	\$10.00	\$4,420.00
CAD OPERATOR/SR DRAFTSMAN	140	\$15.60	\$2,184.00
QUALITY ASSURANCE ASSISTANT	544	\$19.71	\$10,722.24
TECHNICAL EDITOR	124	\$13.26	\$1,644.24
SUBTOTAL DIRECT LABOR	7408		\$170,591.30
OVERHEAD	170591.3	0.3312	\$56,499.84
FRINGE	227091.14	0.5413	\$122,924.43
G&A - LABOR	350015.57	0.0733	\$25,656.14
TOTAL LABOR			\$375,671.71
AIRFARE			\$3,680.00
CAR/FUEL		\$50.00	\$2,100.00
FIELD VAN/FUEL		\$80.00	\$4,000.00
PER DIEM		\$26.00	\$3,796.00
LODGING		\$46.00	\$5,244.00
SUBTOTAL TRAVEL			\$18,820.00
G&A - TRAVEL	18820	0.0733	\$1,379.51
TOTAL TRAVEL			\$20,199.51
PHONE & TELEX		\$5.00	\$1,790.00
SHIPPING			\$2,790.00
EQUIPMENT			\$1,250.00
EXPENDABLES			\$1,200.00
OTHER			\$1,425.00
SUBTOTAL OTHER DIRECT COSTS			\$8,455.00
G&A - OTHER DIRECT COSTS	8455.00	0.0733	\$619.75
TOTAL OTHER DIRECT COSTS			\$9,074.75
SUBCONTRACT			
DRILLING			\$72,711.00
LABORATORY			\$169,860.00
SURVEY			\$37,248.00
OTHER			\$28,204.00
SUBTOTAL SUBCONTRACT			\$308,023.00
G&A - SUBCONTRACT	308023	0.0733	\$22,578.09
TOTAL SUBCONTRACT			\$330,601.09
TOTAL COST			\$735,547.06
AWARD FEE - LABOR, TRAVEL, ODC	404945.97	0.1	\$40,494.80
AWARD FEE - SUBCONTRACT	330601.09	0.045	\$14,877.05
TOTAL PRICE			\$790,918.70