

N60201.AR.002561
NS MAYPORT
5090.3a

PRELIMINARY PLAN OF ACTION CONTAMINATION ASSESSMENT OILY WASTE
TREATMENT PLANT NS MAYPORT FL
12/3/1995
ABB ENVIRONMENTAL

PRELIMINARY PLAN OF ACTION

CONTAMINATION ASSESSMENT
OILY WASTE TREATMENT PLANT
NAVAL STATION, MAYPORT
JACKSONVILLE, FLORIDA

CONTRACT NO. N62467-89-D-0317

SOW NO. 72

3 December 1992

Submitted By:

ABB ENVIRONMENTAL SERVICES INC.
2590 EXECUTIVE CENTER CIRCLE EAST
TALLAHASSEE, FLORIDA 32301

I. INTRODUCTION

On June 8, 1992, Naval Station Mayport (NS Mayport), Public Works Department notified the United States Environmental Protection Agency (USEPA) of the presence of Light Non-Aqueous Phase Liquid (LNAPL) or "free product" in monitoring wells MPT-MW AND at the base Oily Waste Treatment Plant. The thickness of the LNAPL was not measured and no samples of the LNAPL were collected from the monitoring wells to determine the free product constituents. The monitoring wells were installed in _____ by _____ during a contamination assessment of the Oily Water Treatment Plant. Additional site background information is available in the 19 Contamination Assessment Report (_____ REFERENCE _____).

This Plan of Action describes the proposed services for the work elements described in the Statement of Work (SOW No. 72 dated 17 November 1992) for the contamination assessment at the Oily Waste Treatment Plant at NS Mayport. This Preliminary Plan of Action includes the following tasks:

- Management Activities

Management responsibilities include: cost tracking, internal and external cost reporting, communication, deliverable processing and review. Monthly progress reporting is considered separately under Task 1 below.

Task 1 - Monthly Progress Reports;

• Technical Activities

Task 2 - Preparation of a Contamination Assessment Plan (CAP) and a Health and Safety Plan (HASP);

Task 3 - Contamination Assessment Field Investigation;

Task 4 - Preparation of a Contamination Assessment Report; and

Task 5 - Preparation of a Follow-up Report.

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

II. SCOPE OF SERVICES

Task 1 - Monthly Progress Reports

ABB-ES will prepare Technical/Financial Monthly Reports (TFMR) 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 performed, problems encountered, and proposed problem resolutions.

It will also include an updated schedule in Gantt format. ABB-ES will notify SOUTHNAVFACENGCOM upon discovery of significant new site conditions, including imminent hazard or substantial endangerment, or deviation from the project schedule, plan, or budget.

Task 2 - Contamination Assessment Plan (CAP)

A CAP will be developed and submitted to SOUTHNAVFACENGCOM prior to beginning any field work at the site. The CAP will present site background information, the overall technical approach, a description of the field activities, field techniques and methodologies, and project milestones and time frames in Gantt Format.

Task 3 - Health and Safety Plan (HASP)

A HASP will be prepared and submitted to SOUTHNAVFACENGCOM prior to beginning any field work at the site. The HASP will contain site specific information on the contaminants of concern, routes to hospital(s), emergency phone number(s), emergency procedures, and health and safety concerns pertinent to the project site and anticipated contaminants to be encountered. Wherever possible, site specific information will be taken from previously approved HASPs for the site to avoid development of redundant data.

Task 4 - Contamination Assessment Field Investigations

The purpose of this Contamination Assessment field investigation is to assess the vertical and horizontal extent of contamination and identify the types of contaminants at the site. The contamination assessment will require the drilling of soil borings and installation of monitoring wells at the site.

Temporary monitoring wells will allow for assessment of the groundwater flow direction which will aid in the placement of subsequent soil borings. ABB-ES proposes that three to four temporary wells be installed along the site perimeter for this purpose.

Soil borings will be drilled by hand auger to collect soil samples where conditions permit, or by using a drill rig and a split-spoon sampling device. Soil samples will be collected at 2-foot vertical intervals to a depth approximately 1 foot above the saturated zone. The number and spacing of proposed soil borings needed for the contamination assessment field investigation are based on direction provided in the Guidelines for Assessment and Remediation of Petroleum Contaminated Soils, prepared by Florida Department of Environmental Regulation (FDER), Division of Waste Management, Bureau of Waste Cleanup, Engineering Support Section (May, 1992) and discussions with FDER on related matters.

Soil samples will be screened for petroleum hydrocarbons using an Organic Vapor Analyzer (OVA) in accordance with FDER Chapter 17-770, Florida Administrative Code (FAC). A minimum of one soil sample will be collected from each soil boring and analyzed for the parameters specified in FDER Chapter 17-770, FAC, for used oil contamination. In addition, a minimum of one soil sample will be collected at the water table from each soil boring for field analyses and comparison with Benzene, Toluene, Ethylbenzene, and Xylenes (BTEX) standards, using a portable gas chromatograph (GC). The screening of soil samples from these borings will be used to estimate the horizontal and vertical extent of soil contamination and provide information for placement groundwater monitoring wells.

Shallow and deep monitoring wells will be installed to characterize and assess the horizontal and vertical extent of the groundwater contamination. Soil samples will be collected at vertical intervals of 2 feet until the water table is encountered. Below the water table, soil samples will be collected at vertical intervals of 5 feet until total depth is reached.

Soil samples collected above the water table will be screened for petroleum hydrocarbons using OVA headspace analysis techniques. Samples collected below the water table will be analyzed with a portable gas chromatograph (GC) for comparison with BETX standards. In addition, monitoring well and soil sample lithologic information will be used to estimate hydraulic properties of the aquifer.

Groundwater samples will be collected from each monitoring well and analyzed for used oil analytical group constituents as described in FDER Chapter 17-770, FAC, and total dissolved solids for groundwater quality classification purposes. In addition, one soil sample will be collected from the area of highest contaminant concentrations and analyzed for the used oil group parameters specified in FDER Chapter 17-770, FAC,. QA/QC samples will be collected and analyzed as prescribed in ABB-ES' approved Comprehensive Quality Assurance Plan.

Slug tests will be performed in a minimum of two of the monitoring wells to estimate aquifer hydraulic conductivity.

A licensed Florida professional surveyor will be contracted to conduct a ground survey of the horizontal and vertical coordinates for each of the monitoring wells. This information will be incorporated into either the United States Coast and Geodetic Survey 1927 North Atlantic Datum (USGS NAD'27) or base coordinate grid system. With the assistance of the base Environmental Coordinator at NS Mayport, an inventory of potable water wells, on base, and within a 1/4-mile radius of the site will be conducted.

No precision tank testing will be conducted for this site.

In keeping with the requirements set forth in SOW No. 72, ABB-ES will report on a subtask level basis those labor resource efforts

associated with the development of 1) soil investigation; 2) well installation; 3) groundwater sampling and analyses; and 4) other field investigation tasks (eg. slug testing, tidal influence studies, etc.). In addition, major subcontracted costs for drilling and laboratory analyses will be segregated and reported in conjunction with their assigned task. These associated hours and subcontracted costs will be reported on a monthly basis as an addendum to the Technical Financial Monthly Report (TFMR).

Task 5 - Preparation of Contamination Assessment Reports

A Contamination Assessment Report (CAR) will be prepared and submitted to SOUTHNAVFACENGCOM and the activity after completion of the field investigation in accordance with guidance provided in the SOW. The CAR will include site background information, site conditions, a description of data collection and assembly, an analysis of data with conclusions and recommendations, provisions for review, and supporting graphics and maps for the Oily Waste Treatment Plant Site at NS Mayport.

Task 6 - Preparation of Follow-up Reports

Based on the levels of contamination reported in the CAR, an assessment will be made in conjunction with the Navy on the preparation of the appropriate follow-on action and report:

- No Further Action Proposal
- Monitoring Only Proposal
- Risk Assessment
- Remedial Action Plan

III. PROJECT PERSONNEL

The designated roles for the Contamination Assessment Program are as follows:

- Task Order Manager. The Task Order Manager for the Contamination Assessment at the NS Mayport Oily Waste Treatment Plant will be Mr. Peter Redfern. Mr. Redfern is responsible for maintaining the project schedule and budget and for evaluating the appropriateness of the services provided for the CTO. Mr. Redfern 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 review the on-going quality control during the performance of the work and the clarity and usefulness of all project work products.

Specific responsibilities of this role include:

- 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 EIC, the Program Manager, the Department Manager, the Technical Leader, and others as appropriate, on the status of the project.

- Technical Leader. Mr. Michael J. Williams, P.G. will be the Technical Leader of the Contamination Assessment. Mr. Williams will be responsible for evaluating the appropriateness and adequacy of the technical services provided for the CTO and for developing the technical approach and LOE required to address each of the Work Plan tasks. Mr. Williams will also be responsible for reviewing the on-going quality control during the performance of the work, and the technical integrity of conclusions and recommendations.

Specific responsibilities of this role include:

- overall technical responsibility for the project;
- initiating project activities;
- participating in the work plan preparation;

- . monitoring the technical adequacy of task activities; and
- . regularly interacting with the EIC, Program Manager, Task Order Manager, Technical Director, and others as appropriate, on the status of the project.

- . Quality Review Board. A Quality Review Board comprised of the Board of Technical Directors and senior technical staff from the ABB-ES team will assist the Task Order Manager and Technical Leader 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.

Kenneth Busen, P.G., and Willard Murray, Ph.D of the Board of Technical Directors will comprise the ABB-ES technical quality review board and will be actively involved in assuring the quality of the technical and engineering services and appropriateness of methodologies, conclusions and recommendations of the Contamination Assessment.

DEPARTMENT OF THE NAVY
SOUTHERN DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
2155 EAGLE DRIVE, P. O. BOX 10068
CHARLESTON, SC 29411-0068

a) POA due 1/8/93
b) site visit NEEDED

STATEMENT OF WORK
CONTRACT N62467-89-D-0317
72

I. INTRODUCTION

The objective of this investigation is to determine the extent of contamination at the Oily Waste Treatment Plant at Naval Station, Mayport and to assess if further action is required to remediate the site. The work shall include field screening investigations, the collection and analysis of soil samples for contaminants found, as well as the installation of groundwater monitoring wells to determine the direction of flow and if any contaminations have reached the water table. The results of the investigation should be submitted to the government in a Contamination Assessment Report (CAR). If the investigation concludes that remedial action is required, a Remedial Action Plan (RAP) will be developed and submitted to the Government. A no-further-action proposal (NOFAP) or a monitoring only proposal (MOP) may be submitted if the investigation concludes that remedial action is not required.

II. BACKGROUND

On June 8, 1992 Naval Station Mayport, Public Works Dept. notified EPA of the discovery of "free product" in two monitoring wells at its oily waste treatment plant site.

III. SPECIAL INSTRUCTIONS

1. The Navy CLEAN Contractor will be responsible for obtaining all necessary permits and authorizations necessary to perform this work.
2. Scheduling of all field activities (surveys and field investigations) will be coordinated with the activity representative.
3. The A/E is responsible for recording all minutes of all meetings and providing a copy to the Engineer-in-Charge (EIC), and the Environmental Coordinator at the activity.
4. The A/E is responsible for obtaining permission and clearance from the appropriate station security personnel to enter and perform any necessary work.
5. The A/E shall forward project deliverables/documentation directly to those concerned as directed herein.

6. The A/E shall coordinate the disposition of contaminated drill cuttings and fluids in excess of FDER Standards with the activity prior to starting field work.
7. The A/E shall adhere to quality control limits, established by the work plans.
8. All reports shall be formatted to adhere to the "Report Format Guidance Manual," Southern Division Naval Facilities Engineering Command, and the format agreed to in the NTC Orlando reports.

IV. APPLICABLE DOCUMENTS

The following documents shall be used in performing the investigation:

1. "Release Detection Program for Underground Storage Tanks", Naval Activities.
2. "Sampling and Chemical Analysis Quality Assurance Guide for Naval Assessment and Control of Installation Pollutants (NACIP) Program", NEESA 202.2-047.
3. Specifications for Monitoring Well Installation and Sampling, Southern Division, Naval Facilities Engineering Command Guide, March 1989.
4. "Recommended Practice for Handling Underground Leakage of Flammable and Combustible Liquids", NFPA 329-1983, National Fire Codes, Latest Edition.
5. Florida Department of Environmental Regulation (FDER) Chapter 17-770, Florida Administrative Codes (FAC).
6. Navy CLEAN Contractor's FDER approved Comprehensive Quality Assurance Plan.
7. "Guidelines for the Preparation of Contamination Assessment Reports for Petroleum Contaminated Sites", FDER.
8. "Guidelines for Assessment and Remediation of Petroleum Contaminated Soils", FDER.
9. "Guidance Manual for Review of Petroleum Remedial Action Plans", FDER.
10. "No Further Action and Monitoring Only Guidelines for Petroleum Contaminated Sites", FDER.
11. "Risk Assessment Guidelines for Non-Superfund Sites", FDER.
12. "Quality Assurance Standard Operating Procedures Manual for Soil Thermal Treatment Facilities", FDER Chapter 17-775, FAC.

The latest editions of documents should be used when applicable.

V. SCOPE OF WORK

Task #1 - Monthly Progress Reports.

The A/E shall prepare Technical/Financial Monthly Reports (TFMR) for the duration of the 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 and will summarize activities performed, any problems encountered, and proposed resolutions to include estimation of hours and cost in POA format of each element of cost growth not included in the original and modified POA. It will also include a schedule update in the form of a Gantt chart.

Task #2 - Contamination Assessment Plan

The A/E shall prepare a concisely written Contamination Assessment Plan (CAP) and submit it to the activity and SOUTH DIV prior to the beginning of any field work at the site. The CAP will contain a site description, site history, layout of the site, and the tentative locations of streets, structures, wells and soil borings. Using the information contained in the POA to the maximum extent possible, the A/E shall briefly present site background information, the technical approach, a description of the field activities, and project milestones and timeframes to include the dates of all major events and of each person assigned is scheduled for field work.

Task #3 - Health and Safety Plan

The A/E shall prepare a site specific Health and Safety Plan (HASP) to include a generic plan and a few pages containing site specific information, taken from previously approved HASPs for the activity whenever possible. The plan shall be present on site whenever field work is conducted. Consult personnel shall not work in an area for which he/she has not been specifically trained. The plan shall be submitted and approved by the Navy and in place prior to the contractor beginning any site work.

Task #4 - Field Investigation.

The A/E shall perform field work as outlined herein. The following is the government estimate of the level of effort required for field work and is to be used in the A/E fee proposal. The A/E shall provide the EIC a schedule showing dates and names of all personnel performing field work on this site. The schedule will be updated as dictated by actual conditions and in conjunction with the project EIC. The A/E shall subdivide components of field investigation into subtasks for reporting time and expense. At a minimum subtask identification shall allow for determining unit costs for 1) soil survey by technique, 2) installation of wells, 3) groundwater sampling, and 4) other costs. The A/E shall make recommendations on the proposed scope and subtask identification and provide this as part of the proposal:

(a) Soil Boring and Monitoring Wells (MWs)

The A/E shall install soil borings to the water table and assess the contamination of the soils using an organic vapor analyzer (OVA) with a flame ionization detector (FID) as described in FAC 17-770. A soil sample will be collected at the water table for field analyses and comparison with BTEX standards using a portable GC.

(b) Sampling and Testing

Groundwater and soil samples shall be collected in accordance with Southern Division "Specifications for Groundwater Monitoring Well Installation and Sampling". The samples shall be analyzed as required by

State and Federal Regulations. Sufficient samples shall be collected and analyzed to adequately assess the contamination of the soils and groundwater at the site. Additional field testing (aquifer testing, tidal influence studies, etc.) should be conducted as required by the governing regulatory agencies.

(c) Well Survey

All monitoring wells shall be located with respect to horizontal and vertical datum. Datum to be used shall be in accordance with either USGS NAD'27 or base coordinate grid system as deemed appropriate by the EIC and the activity Public Works Office. Monitoring well surveys conducted for this purpose shall be supervised and certified by a State Registered Land Surveyor.

Task #5 - Contamination Assessment Report

A Contamination Assessment Report (CAR) shall be submitted discussing findings and recommendations from the investigation. The schedule shall be as outlined in this scope. Addendums to the reports shall be made as necessary based on reviews by the EIC, the activity, and FDER. Addendums shall have the dates of the revised and additional pages and maps showed on each page and map. The cover sheet of the CAR shall show the dates of each numbered revision. The A/E shall subdivide components of CAP preparation into components for reporting time and expense. At a minimum subtask identification shall include 1) data assembly and narrative description, 2) data analysis, conclusions, and recommendations, 3) review, and 4) graphics and publication. See Section VI for submittal specifics.

Other efforts for a CAR are as follows:

- a. assess the horizontal and vertical extent of contamination;
- b. assess the depth and horizontal extent of free product;
- c. assess or confirm the contaminant source;
- d. assess geologic and hydrogeologic conditions at the site which may affect contaminant transport to include the rate and direction of groundwater flow;
- e. assess the aquifers beneath the site and their groundwater classification;
- f. assess the location of confining beds beneath the contaminant zone;
- g. assess the horizontal and vertical direction of groundwater flow for both the surficial and underlying aquifer directly beneath the contaminant zone;
- h. locate the closest potable water wells and potential to contaminate the wells.
- i. perform a tidal influence study at the site if the site is in close proximity to the ocean and the groundwater direction could be influenced by tidal fluctuations.

Task #6 - Follow-Up Report

Following the field investigation, the Navy and the A/E will assess which of the following reports is appropriate for the site, based on the level of contamination. One of the following reports will be prepared for submittal to FDER in final form. Addendums may be required following FDER and other reviews. The A/E shall subdivide components of Follow-up Report preparation into components for reporting time and expense. At a minimum subtask identification shall include 1) the writing phase, 2) the review phase, and 3) publication phase. The following is a description of the reports.

(a) **No Further Action Proposal (NOFAP)**

For sites that do not require further action as defined in FAC 17-770.600(5) after a CAR, a NOFAP shall be submitted pursuant to FAC 17-770.630(3).

(b) **Monitoring Only Proposal (MOP)**

For sites that qualify for monitoring only under FAC 17-770.600(6), the A/E shall submit a MOP pursuant to FAC 17-770.630(4) to include the information required under FAC 17-770.660.

(c) **Risk Assessment**

For sites that do not qualify for NOFAP or MOP, a risk assessment may be conducted to: (1) justify the NOFAP or MOP or (2) justify alternate cleanup levels. The Risk Assessments shall be developed to satisfy the requirements of FAC 17-770.640.

(d) **Remedial Action Plan (RAP)**

For sites requiring cleanup following the Contamination Assessment, a Remedial Action Plan shall be developed for the site.

The RAP will include, at a minimum, the following information:

- a. A brief summary of the CAR conclusions;
- b. A complete round of groundwater analyses completed within the last six (6) months;
- c. Rationale for the remedial action selected;
- d. A discussion of remedial alternatives and selection criteria, (cost estimates shall be provided under separate cover);
- e. Basis of Design - a description of the remedial system and how it works, including any special requirements or use of non-standard methods. The Basis of Design will follow the HTRW Code of Accounts format, and when necessary the USACE Code of Accounts;
- f. Design and construction details for the remedial action (non-construction grade drawings);
- g. Operational details for the remedial action;
- h. Dissolved constituents to be monitored in the recovery well(s) and in the effluent from the treatment system to include location to receive effluent;
- i. Designation of monitoring wells and proposed methodology to verify accomplishment of Remedial Action Plan goals;
- j. Details of the proposed treatment or disposition of contaminated soils or sediments. If excessively contaminated soils exists at the site and remedial action does not include treatment or removal of such soils, the basis for the decision to forego treatment or removal shall be provided; and
- k. Detailed cost estimates using HTWR Code of Accounts format. Cost estimates for the selected remedial alternative will be provided under separate cover. Drawings to support estimation of quantities will be prepared on 8½" by 11" paper. Cost estimates will be prepared to included unit costs by function and construction component.

VI SUBMITTALS AND SCHEDULES

1. The CAR shall be a complete document with all sketches or drawings. The submittal will be internally reviewed by the Navy and depending of the sufficiency may be reviewed without addendum by FDER.
2. If directed the CAR addendum shall be submitted by the A/E 15 days after receipt of the draft comments from the Navy (and/or FDER).
3. Following FDER review, the A/E will incorporate the comments into another addendum, as directed by the EIC, and submit a final addendum. The final addendum shall include a follow-up report, as described in Task #4 of Section V.
4. Following approval of the follow-up report, any comments shall be addressed, and the A/E shall submit a follow-up addendum if necessary.

SCHEDULE MATRIX

<u>Work Element</u>	<u>Submittal</u>	<u>No. EIC</u>	<u>Copies Activity</u>	<u>Submittal Due</u>
CAP	Final	2	2	40 days after award
HASP	Final	5	2	40 days after award
Meeting Minutes	Final	2	2	10 days after meeting
CAR	Initial	5	2	40 days after completion of field work.
CAR Addendum #1	Final	5	2	15 days after receipt of Navy comments if necessary
Follow-Up Report	Initial	5	2	15 days after receipt of Navy comments if necessary.
CAR Addendum #2	Final	5	2	15 days after approval if necessary.
Follow-Up Report	Final	5	2	15 days after approval if necessary.

VII ADDRESSES

A. Commanding Officer
Attn: Code 1847
Southern Division
Naval Facilities Engineering Command
2155 Eagle Drive, P.O. Box 10068
Charleston, SC 29411-0068

POC: Mr. Carl Loop

B. Commanding Officer
Attn: Code N42E
Naval Station
Mayport, Fl 32228

**PRELIMINARY
PLAN OF ACTION**

**PRELIMINARY SITE SCREENING
TANK 100
NS MAYPORT
MAYPORT, FLORIDA**

**CONTRACT NO. N62467-89-D-0317
SOW NO. 63**

30 December 1992

Submitted By:

**ABB ENVIRONMENTAL SERVICES INC.
2590 EXECUTIVE CENTER CIRCLE EAST
TALLAHASSEE, FLORIDA 32301**

I. INTRODUCTION

Tank 100 is located at the Naval Station (NS) Mayport tank farm area, north of the runways and immediately south of the St. John's River. The tank is a 210,000 gallon, field erected, steel, mounded, underground storage tank (UST) that contains waste oil. The tank was installed in 1954 and interior lined in 1982. In the 1950's and 1960's the tank contained JP-4 jet fuel. The waste oil that it now contains is burned in boilers on base. Tank 100 is contained in the base Spill Prevention, Control and Countermeasure (SPCC) Plan; has an Installation Restoration (IR) monitoring well network around the tank farm; and has an automatic tank gauging system. The tank is drained, cleaned and inspected every three years. The associated pipelines are constructed of steel.

On September 3, 1992, during a triennial cleaning and inspection, a 3/16-inch hole was discovered along the north base of the tank. On September 4, 1992, the Navy conducted an inspection and confirmed the presence of the hole. On September 8, 1992, the Florida Department of Environmental Regulation (FDER) was notified and a Discharge Reporting Form was submitted to the state on September 11, 1992. On September 14, 1992, Southern Division (SOUTHNAVFACOM) performed a soil boring along the base of a light pole, along the northern side of the tank mound and discovered contaminated soil using an Organic Vapor Analyzer (OVA).

This Preliminary Plan of Action describes the proposed services for the work elements described in the Statement of Work (SOW No. 63, dated 29 October 1992) for a preliminary site screening program. This Preliminary Plan of Action includes the following tasks:

- Management Activities

Management responsibilities include: cost tracking, internal and external cost reporting, communication, deliverable processing, and review. Monthly progress reporting is considered separately under Task 1.

Task 1 - Monthly Progress Reports;

- Technical Activities

Task 2 - Preparation of a Work Plan (WP);

Task 3 - Preparation of a Health and Safety Plan (HASP);

Task 4 - Field Investigation; and

Task 5 - Preparation and Submittal of Figures and Tables.

II. SCOPE OF SERVICES

Task 1 - Monthly Progress Reports

ABB-ES will prepare Technical/Financial Monthly Reports (TFMR) 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 performed, problems encountered, and proposed problem resolutions. It

will also include an updated schedule in Gantt format. ABB-ES will notify SOUTHNAVFACOM upon discovery of significant new site conditions, including imminent hazard or substantial endangerment, or deviation from the project schedule, plan, or budget.

Task 2 - Work Plan (WP)

A Work Plan outlining the tasks, technical approaches and methodologies that will be used during this project will be developed and submitted to SOUTHNAVFACOM prior to beginning any field work at the site. The WP will present site background information, the overall technical approach, a description of the field activities, field techniques and methodologies, and project milestones and time frames in Gantt format. The level of effort (LOE) and costs for performing this task will be based on the historical data of a similar project.

Task 3 - Health and Safety Plan (HASP)

A HASP will be prepared and submitted to SOUTHNAVFACOM prior to beginning any field work at the site. The HASP will contain site specific information on the contaminants of concern, routes to hospital(s), emergency phone number(s), emergency procedures, and health and safety concerns pertinent to the project site and anticipated contaminants to be encountered. Wherever possible, site specific information will be taken from previously approved HASPs for the site to avoid development of redundant data. The level of effort (LOE) and costs for performing this task will be based on the historical data of a similar project.

Task 4 - Field Investigation

The purpose of the preliminary site screening at the site is to assess the magnitude and extent of any petroleum contamination that may have occurred as a result of the discovered leak in Tank 100; assess whether any of the associated pipelines to the tank have caused subsurface contamination; and to assess whether the soil contamination associated with tank 100 and pipelines intermingles with other subsurface contamination from other sources in the area.

The preliminary site screening will be conducted by first performing a utility survey of the area. Information will be obtained from the activity on the location of buried utilities in the area of tank 100. This survey will include: electrical lines, telephone, sewers, fuel pipelines, and water lines. Following a utility survey, a field crew will arrive at the site to conduct an site soil screening.

It is proposed that up to 60 push probe borings will be performed over the majority of the site. For those areas where vehicles cannot reach or where underground utilities may be present, up to 20 manually installed soil borings will be performed. Soil samples will be collected from each soil boring at 1-foot below land surface (BLS), and at 2- to 3-foot increments into the vadose zone until a depth of approximately 1-foot above the water table is reached. The soil samples will be screened with an organic vapor analyzer (OVA) with a flame ionization detector (FID) following the guidelines as presented in the FDER Chapter 17-770, Florida Administrative Code (FAC). The soil samples will be confirmed by select samples being sent to a state approved laboratory for analysis. Soil samples will be collected in areas where high contamination is encountered or where other suspected contaminant plumes may exist and sent to the laboratory for analysis of the waste oil group as described in FDER Chapter 17-770.600(8)(c), FAC. A total of 10 soil samples, 1

duplicate, 1 equipment blank, and 1 trip blank will be collected. In addition to the OVA and laboratory analysis, soil samples will be collected at select boreholes at a depth immediately below the water table and screened on a field gas-chromatograph (GC) for benzene, toluene, ethylbenzene, and xylenes (BTEX) constituents to preliminarily assess the groundwater contamination at the site.

Task 5 - Preparation and Submittal of Figures and Tables

The deliverable presenting the findings of the preliminary site screening investigation at the Tank 100 site at NS Mayport will consist of site figures showing the locations of the soil borings and OVA and/or analytical values; tables presenting the OVA and analytical laboratory results; and the laboratory analytical report.

III. PROJECT PERSONNEL

The designated roles for the Contamination Assessment Program are as follows:

- **Task Order Manager.** The Task Order Manager for the Preliminary Site Screening at Tank 100 at NS Mayport will be Mr. Peter Redfern. Mr. Redfern is responsible for maintaining the project schedule and budget and for evaluating the appropriateness of the services provided for the CTO. Mr. Redfern 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 review the on-going quality control during the performance of the work and the clarity and usefulness of all project work products.

Specific responsibilities of this role include:

- 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 EIC, the Program Manager, the Department Manager, the Technical Leader, and others as appropriate, on the status of the project.
- **Technical Leader.** Mr. Michael J. Williams, P.G. will be the Technical Leader of the Preliminary Site Assessment. Mr. Williams will be responsible for evaluating the appropriateness and adequacy of the technical services provided for the CTO and for developing the technical approach and LOE required to address each of the Work Plan tasks. Mr. Williams will also be responsible for reviewing the on-going quality control during the performance of the work, and the technical integrity of conclusions and recommendations.

Specific responsibilities of this role include:

- overall technical responsibility for the project;

- . initiating project activities;
- . participating in the work plan preparation;
- . monitoring the technical adequacy of task activities; and
- . regularly interacting with the EIC, Program Manager, Task Order Manager, Technical Director, and others as appropriate, on the status of the project.

Quality Review Board. A Quality Review Board comprised of the Board of Technical Directors and senior technical staff from the ABB-ES team will assist the Task Order Manager and Technical Leader 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.

Kenneth Busen, P.G., and Willard Murray, Ph.D of the Board of Technical Directors will comprise the ABB-ES technical quality review board and will be actively involved in assuring the quality of the technical and engineering services and appropriateness of methodologies, conclusions and recommendations of the assessment.

DEPARTMENT OF THE NAVY
SOUTHERN DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
2155 EAGLE DRIVE, P. O. BOX 10068
CHARLESTON, SC 29411-0068

7581-16

STATEMENT OF WORK #63
CONTRACT N62467-89-D-0317

SITE VISIT NEEDED

contaminated waste oil
not to contain JP-4/JAS

I. INTRODUCTION

The objective of this investigation is to determine the extent of contamination at Naval Station Mayport Fuel Farm, Tank 100 and to assess if further action is required to remediate the site. The work shall include field screening investigations, the collection and analysis of soil samples for contaminants found, as well as the installation of groundwater monitoring wells to determine the direction of flow and if any contaminations have reached the water table. The results of the investigation should be submitted to the government in a Contamination Assessment Report (CAR). If the investigation concludes that remedial action is required, a Remedial Action Plan (RAP) will be developed and submitted to the Government. A no-further-action proposal (NOFAP) or a monitoring only proposal (MOP) may be submitted if the investigation concludes that remedial action is not required.

II. BACKGROUND

On 3 September 1992, Tank 100 underwent its triennial cleaning and inspection. Upon inspection, a 3/16" size hole was discovered in the base of the tank. On 4 September, the Navy conducted its own inspection of the tank. On 8 September, Florida Department of Environmental Regulation was notified and a Discharge Reporting Form was filed with the state on 11 September. On 15 September, a representative from Southern Division conducted OVA testing and determined the site to be contaminated. On 17 September, Southern Division informed NSC Jacksonville officials that the site would be eligible for DERA funding because the initial tank tightness testing conducted in 1975 detected no leaks.

III. SPECIAL INSTRUCTIONS

1. The Navy CLEAN Contractor will be responsible for obtaining all necessary permits and authorizations necessary to perform this work.
2. Scheduling of all field activities (surveys and field investigations) will be coordinated with the activity representative.
3. The A/E is responsible for recording all minutes of all meetings and providing a copy to the Engineer-in-Charge (EIC), and the Environmental Coordinator at the activity.

12. "Quality Assurance Standard Operating Procedures Manual for Soil Thermal Treatment Facilities", FDER Chapter 17-775, FAC.

The latest editions of documents should be used when applicable.

V. SCOPE OF WORK

Explain it in TFMR

① Task #1 - Monthly Progress Reports.

The A/E shall prepare Technical/Financial Monthly Reports (TFMR) for the duration of the 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 and will summarize activities performed, any problems encountered, and proposed resolutions to include estimation of hours and cost in POA format of each element of cost growth not included in the original and modified POA. It will also include a schedule update in the form of a Gantt chart.

+ \$ need to clarify for development of C-x.C. info will be incorp. in Ety/complete memo

② Task #2 - Contamination Assessment Plan

The A/E shall prepare a concisely written Contamination Assessment Plan (CAP) and submit it to the activity and SOUTH DIV prior to the beginning of any field work at the site. The CAP will contain a site description, site history, layout of the site, and the tentative locations of streets, structures, wells and soil borings. Using the information contained in the POA to the maximum extent possible, the A/E shall briefly present site background information, the technical approach, a description of the field activities, and project milestones and timeframes to include the dates of all major events and of each person assigned is scheduled for field work.

constitutes a premise of a job - can't do in this format

Heb's issue

③ Task #3 - Health and Safety Plan

The A/E shall prepare a site specific Health and Safety Plan (HASP) to include a generic plan and a few pages containing site specific information, taken from previously approved HASPs for the activity whenever possible. The plan shall be present on site whenever field work is conducted. Consult personnel shall not work in an area for which he/she has not been specifically trained. The plan shall be submitted and approved by the Navy and in place prior to the contractor beginning any site work.

NO

Task #4 - Field Investigation.

The A/E shall perform field work as outlined herein. The following is the government estimate of the level of effort required for field work and is to be used in the A/E fee proposal. The A/E shall provide the EIC a schedule showing dates and names of all personnel performing field work on this site. The schedule will be updated as dictated by actual conditions and in conjunction with the project EIC. The A/E shall subdivide components of field investigation into subtasks for reporting time and expense. At a minimum subtask identification shall allow for determining unit costs for (1) soil survey by technique (2) installation of wells (3) groundwater sampling, and (4) other costs. The A/E shall make recommendations on the proposed scope and subtask identification and provide these as part of the proposal:

what does this mean

(a) Soil Boring and Monitoring Wells (MWS)

The contractor shall install soil borings to the water table and assess the contamination of the soils using an organic vapor analyzer (OVA) with a flame ionization detector (FID) as described in FAC 17-770. A soil sample will be collected at the water table for field analyses and comparison with BTEX standards using a portable GC.

O/S EIC contracted boundaries to involve himself at this time

SEE IF IN CONFLICT

DOES THIS DOCUMENT SUPERCEDE ALL OTHERS?

(b) Sampling and Testing

Groundwater and soil samples shall be collected in accordance with Southern Division "Specifications for Groundwater Monitoring Well Installation and Sampling". The samples shall be analyzed as required by State and Federal Regulations. Sufficient samples shall be collected and analyzed to adequately assess the contamination of the soils and groundwater at the site. Additional field testing (aquifer testing, tidal influence studies, etc.) should be conducted as required by the governing regulatory agencies.

DOES THIS FOLLOW 5/92 FDER GUIDELINES?

(c) Well Survey

All monitoring wells shall be located with respect to horizontal and vertical datum. Datum to be used shall be in accordance with either USGS NAD'27 or base coordinate grid system as deemed appropriate by the EIC and the activity Public Works Office. Monitoring well surveys conducted for this purpose shall be supervised and certified by a State Registered Land Surveyor.

Task #5 - Contamination Assessment Report

A Contamination Assessment Report (CAR) shall be submitted discussing findings and recommendations from the investigation. The schedule shall be as outlined in this scope. Addendums to the reports shall be made as necessary based on reviews by the EIC, the activity, and FDER. Addendums shall have the dates of the revised and additional pages and maps showed on each page and map. The cover sheet of the CAR shall show the dates of each numbered revision. The A/E shall subdivide components of CAP preparation into components for reporting time and expense. At a minimum subtask identification shall include 1) data assembly and narrative description, 2) data analysis, conclusions, and recommendations, 3) review, and 4) graphics and publication. See Section VI for submittal specifics.

?

Other efforts for a CAR are as follows: NO

- a. assess the horizontal and vertical extent of contamination;
- b. assess the depth and horizontal extent of free product;
- c. assess or confirm the contaminant source;
- d. assess geologic and hydrogeologic conditions at the site which may affect contaminant transport to include the rate and direction of groundwater flow;
- e. assess the aquifers beneath the site and their groundwater classification;
- f. assess the location of confining beds beneath the contaminant zone;
- g. assess the horizontal and vertical direction of groundwater flow for both the surficial and underlying aquifer directly beneath the contaminant zone;
- h. locate the closest potable water wells and potential to contaminate the wells.
- i. perform a tidal influence study at the site if the site is in close proximity to the ocean ^{if it is suspected that} the groundwater direction could be influenced by tidal fluctuations.

12/1/92 MTA call agrees to remove to VAGUE

Task #6 - Follow-Up Report

Following the field investigation, the Navy and the A/E will assess which of the following reports is appropriate for the site, based on the level of contamination. One of the following reports will be prepared for submittal to FDER in final form. Addendums may be required following FDER and other reviews.

* when is this report to 17-770 FAE

The A/E shall subdivide components if Follow-up Report preparation into components for reporting time and expense. At a minimum subtask identification shall include 1) the writing phase, 2) the review phase, and 3) publication phase. The following is a description of the reports.

(a) No Further Action Proposal (NOFAP)

For sites that do not require further action as defined in FAC 17-770.600(5) after a CAR, a NOFAP shall be submitted pursuant to FAC 17-770.630(3).

(b) Monitoring Only Proposal (MOP)

For sites that qualify for monitoring only under FAC 17-770.600(6), the A/E shall submit a MOP pursuant to FAC 17-770.630(4) to include the information required under FAC 17-770.660.

(c) Risk Assessment

For sites that do not qualify for NOFAP or MOP, a risk assessment may be conducted to: (1) justify the NOFAP or MOP or (2) justify alternate cleanup levels. The Risk Assessments shall be developed to satisfy the requirements of FAC 17-770.640.

(d) Remedial Action Plan (RAP)

Is there a smarter way to do?
 12/1/92
 MTB

For sites requiring cleanup following the Contamination Assessment, a Remedial Action Plan shall be developed for the site.

SAY: "In Addition to FAC REG. . . ."

The RAP will include, at a minimum, the following information:

- a. A brief summary of the CAR conclusions;
- b. A complete round of groundwater analyses completed within the last six (6) months;
- c. Rationale for the remedial action selected;
- d. A discussion of remedial alternatives and selection criteria, (cost estimates shall be provided under separate cover); *1? %*
- e. Basis of Design - a description of the remedial system and how it works, including any special requirements or use of non-standard methods. The Basis of Design will follow the HTRW Code of Accounts format, and when necessary the USACE Code of Accounts; *How do we know when?*
- f. Design and construction details for the remedial action (non-construction grade drawings); *preliminary*
- g. Operational details for the remedial action;
- h. Dissolved constituents to be monitored in the recovery well(s) and in the effluent from the treatment system to include location to receive effluent;
- i. Designation of monitoring wells and proposed methodology to verify accomplishment of Remedial Action Plan goals; *AS defined by/IN, ...?*
- j. Details of the proposed treatment or disposition of contaminated soils or sediments. If excessively contaminated soils exists at the site and remedial action does not include treatment or removal of such soils, the basis for the decision to forego treatment or removal shall be provided; and
- k. Detailed cost estimates using HTWR Code of Accounts format. Cost estimates for the selected remedial alternative will be provided under separate cover. Drawings to support estimation of quantities will be prepared on 8 1/2" by 11" paper. Cost estimates will be prepared to include unit costs by function and construction

REMOVE
 some

EXECUTIVE
 summary type
 discussion
 CHECK w/
 M. DURAN

why so specific

Engineer's

- 3 or 4 paragraphs

2 formats

wants ASB to be designer of record based upon RAP

Can we get Orlando's cost est. any more detailed?

component

VI SUBMITTALS AND SCHEDULES

NO - STATE WHAT YOU WANT

1. The CAR shall be a complete document with all sketches or drawings. The submittal will be internally reviewed by the Navy and depending of the sufficiency may be reviewed without addendum by FDER.
2. If directed the CAR addendum shall be submitted by the A/E 15 days after receipt of the draft comments from the Navy (and/or FDER).
3. Following FDER review ^{of the CAR AND THE RAP} the A/E will incorporate the comments into another addendum, as directed by the EIC, and submit a final addendum. The final addendum shall include a follow-up report, as described in task # of ~~section V.~~ ^{when for ship of CAR & RAP DOESN'T MAKE SENSE!}
4. Following approval of the follow-up report, any comments shall be addressed, and the A/E shall submit a follow-up addendum if necessary.

SCHEDULE MATRIX

Site by-site basis, i.e. field survey, etc

<u>Work Element</u>	<u>Submittal</u>	<u>No. EIC</u>	<u>Copies Activity</u>	<u>Submittal Due</u>
CAP	Final	2	2	40 days after award ^{THERE IS ONLY ONE SUBMITTAL}
HASP	Final	5	2	40 days after award
Meeting Minutes	Final	2	2	10 days after meeting
CAR	Initial	5	2	40 days after completion of field work. ^{totally ready - could be 30 days after receipt of lab data}
CAR Addendum #1	Final	5	2	15 days after receipt of Navy comments if necessary
Follow-Up Report	Initial	5	2	15 days after receipt of Navy comments if necessary.
CAR Addendum #2	Final	5	2	15 days after approval if necessary.
Follow-Up Report	Final	5	2	15 days after approval if necessary.

VII ADDRESSES

A. Commanding Officer
Attn: Code 1847
Southern Division
Naval Facilities Engineering Command
2155 Eagle Drive, P.O. Box 10068
Charleston, SC 29411-0068

POC: Mr. Carl Loop

B. Commanding Officer
Attn: Code N42E
Naval Station
Mayport, Florida 32228



25 June 1992

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

Attention: Janet Morris
Code 0233JM

Subject: **Extension to Draft Plan of Action/Fee Proposal Submittal Date
Statement of Work #038 - Contamination Assessment, NS Mayport
Contract N62467-89-D-0317**

Dear Janet:

By previous letter, ABB-ES requested an extension to the Draft Plan of Action (POA) and Fee Proposal submittal date be authorized, until such time as the Contamination Assessment Report (CAR), prepared by the U.S. Army Corps of Engineers, was made available for review. Subsequently, the CAR has been provided to ABB-ES.

However, in conjunction with the EIC, Mr. Carl Loop, ABB-ES recommends that submittal of the Draft POA be deferred until such time as the Florida Department of Environmental Regulations (FDER) has responded to the U.S. Army Corps of Engineers Draft CAR. In order to prepare the Remedial Action Plan (RAP) required by SOW #038, ABB-ES will rely heavily on the data set forth in the U.S. Army Corps of Engineers CAR. Following ABB-ES's review of this Draft CAR, it is our opinion that FDER will require additional data concerning the physical extent of the contamination, which is currently missing from the report. Were we to proceed with proposal preparation for SOW #038 at this time, we would have to include in our POA conducting those additional field investigations ourselves, to ensure that this critical data is available to support the RAP. Specifically, ABB-ES would propose installation of a vertical extent well, better definition of the horizontal extent of contamination at the site, and conducting pump tests of the contaminated aquifer.

In summary, we strongly feel that it would be more cost and time effective to defer preparation of the Draft POA and Fee Proposal for SOW #038 until the FDER responds to the U.S. Army Corps of Engineers CAR, and the issue of additional field investigations is resolved.

ABB Environmental Services Inc.



25 June 1992

Page 2

Subject: **Extension to Draft Plan of Action/Fee Proposal Submittal Date
Statement of Work #038 - Contamination Assessment, NS Mayport
Contract N62467-89-D-0317**

Inquiries concerning this request may be directed to either Mr. Peter Redfern or myself at 904-656-1293.

Very truly yours,

ABB ENVIRONMENTAL SERVICES, INC.

Laurie Huffman
Contracts Manager



DEPARTMENT OF THE NAVY
SOUTHERN DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
2155 EAGLE DR., P. O. BOX 10068
CHARLESTON, S. C. 29411-0068

001
C: K. BUEA
M. DUNAWAY
J. WILLIAMS
file (orig)

PLEASE ADDRESS REPLY TO THE
COMMANDING OFFICER, NOT TO
THE SENIOR OF THIS LETTER
REFER TO:

4330
Code 0233JM
89-D-0317
01 June 1992

ABB Environmental Services, Inc.
Attn: Laurie Huffman
2590 Executive Center Circle East
Berkeley Bldg.
Tallahassee, FL 32301

CONTRACT N62467-89-D-0317, COST PLUS AWARD FEE CONTRACT FOR
COMPREHENSIVE LONG-TERM ENVIRONMENTAL ACTION, NAVY (C.L.E.A.N.)
DISTRICT I; SOW #38 dated 12 May 1992, Contamination Assessment,
Naval Station Mayport, FL

Gentlemen:

In accordance with the terms of the subject contract, the
Government wishes to procure the required services as stated in
enclosure (1), statement of work dated 12 May 1992.

This will be funded by DERA funds and a site visit has already
been conducted. Mr. Carl Loop is the Engineer-In-Charge for this
project and he may be contacted for technical inquiries at (803)
743-0528.

It is requested that you submit a proposal to this office,
attention Janet Morris, Code 0233JM, no later than close of
business 19 June 1992.

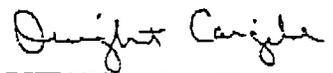
You are reminded that this letter does not constitute authority
to proceed with any work specified in the statement of work other
than attendance at a site visit and preparation of the cost
proposal. Issuance of a contract task order is dependent upon
the successful completion of negotiations. In the unlikely event
that these negotiations are unsuccessful, the Government cannot
be held liable for any expenses incurred by your firm for items
other than those previously negotiated under CTO 0036 (PMO).

Post-It™ brand fax transmittal memo 7671		# of pages ▶ 6
To Laurie Huffman Co. ABB Environmental	From Janet Morris Co. SOUTH DIV	
Dept.	Phone # 803-743-0908	
Fax # 904-877-0742	Fax # 803-743-0563	

RELEASE OF INFORMATION. Southern Division, Naval Facilities Engineering Command is the releasing authority for all information/documents regarding projects contracted out to private firms. Therefore, the contractor or any contractor personnel shall obtain approval before publicizing, discussing, or releasing any documents or information concerning this or any other project with anyone other than Government personnel associated with the project in question.

Please direct any inquiries to Janet Morris, Code 0233JM, at (803) 743-0908.

Sincerely,



DWIGHT CARGILE
Head, C.L.E.A.N. Contracts Branch
Contracting Officer

FOR OFFICIAL USE ONLY

12 May 1992
Code 1847

DEPARTMENT OF THE NAVY
SOUTHERN DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
2155 EAGLE DRIVE, P. O. BOX 10068
CHARLESTON, SC 29411-0068

STATEMENT OF WORK #38
CONTRACT N62467-89-D-0317
AMENDMENT # _____

I. INTRODUCTION

The objective of this task is to prepare a Remedial Action Plan (RAP) for the Building 25 Site at Mayport, Florida. The RAP will be prepared based upon information reported in the site Contamination Assessment Report (CAR) prepared by the U.S. Army Corps of Engineers (USACE). If the groundwater analytical results included in the CAR is over six months old, additional sampling will be required. A copy of the CAR will be sent to the A/E for review prior to the start of the RAP.

II. BACKGROUND

The USACE performed a Contamination Assessment investigation and report for the Building 25 site. Background information concerning this site is included in the CAR prepared by the USACE.

III. SPECIAL INSTRUCTIONS

1. The Navy CLEAN Contractor will be responsible for obtaining all necessary permits and authorizations necessary to perform this work.
2. Scheduling of all field activities (surveys and field investigations) will be coordinated with the activity representative.
3. The contractor is responsible for recording all minutes of all meetings and providing a copy to the Engineer-in-Charge (EIC), and the Environmental Coordinator at the activity.
4. The contractor is responsible for obtaining permission and clearance from the appropriate station security personnel to enter and perform any necessary work.
5. The contractor shall forward submissions directly to those concerned as directed herein.
6. The contractor shall coordinate the handling of drums for storage of

VI SUBMITTALS AND SCHEDULES

1. The draft RAP shall be a 90% complete document. The submittal will be internally reviewed by the Navy only.
2. The draft-final RAP shall be submitted by the A/E 10 days after receipt of the draft comments from the Navy. The draft-final RAP shall be a 100% complete draft document for submittal to FDER. The EIC will check the document for incorporation of all draft submittal comments.
3. Following FDER review, the A/E will incorporate the comments into the document, as directed by the EIC, and submit a Final document.
4. Following approval of the draft-final report, any comments shall be addressed, and the A/E shall submit a final report.

SCHEDULE MATRIX

<u>Work Element</u>	<u>Submittal</u>	<u>No. EIC</u>	<u>Copies Activity</u>	<u>Submittal Due</u>
Meeting Minutes	Final	2	2	10 days after meeting
RAP	Draft	2	2	60 days after completion of field work.
RAP	Draft-Final	5	2	15 days after receipt of
RAP	Final	5	2	15 days after approval

VII ADDRESSES

A. Commanding Officer
 Attn: Code 1847
 Southern Division
 Naval Facilities Engineering Command
 2155 Eagle Drive, P.O. Box 10068
 Charleston, SC 29411-0068

POC: Mr. Carl Loop

B. Commanding Officer

FDER.

13. "No Further Action and Monitoring Only Guidelines for Petroleum Contaminated Sites", FDER.

14. "Risk Assessment Guidelines for Non-Superfund Sites", FDER.

15. "Quality Assurance Standard Operating Procedures Manual for Soil Thermal Treatment Facilities", FDER Chapter 17-775, FAC.

The latest editions of documents should be used when applicable.

V. SCOPE OF WORK

This work shall be conducted as described in the following tasks:

Task - Remedial Action Plan

A draft, draft-final, and final RAP shall be submitted. The schedule shall be as outlined in this scope. See Section VI for submittal specifics.

The RAP will include, at a minimum, the following information:

- a. A brief summary of the CAR conclusions;
- b. A complete round of groundwater analyses completed within the last six (6) months;
- c. Rationale for the remedial action selected;
- d. A discussion of remedial alternatives and selection criteria, including gross cost estimates;
- e. Basis of Design - a detailed description of the remedial system and how it works, including any special requirements or use of non-standard methods. The Basis of Design will follow the ETRW Code of Accounts format, and when necessary the USACE Code of Accounts;
- f. Design and construction details for the remedial action (non-construction grade drawings);
- g. A pumping test to confirm slug test data and/or a soil vapor extraction test may need to be conducted should design alternatives dictate the need for further site definition.
- h. Operational details for the remedial action;
- i. Dissolved constituents to be monitored in the recovery well(s) and in the effluent from the treatment system;
- j. Designation of monitoring wells and proposed methodology to verify accomplishment of Remedial Action Plan goals;
- k. Details of any proposed treatment or disposition of contaminated soils or sediments. If excessively contaminated soils exists at the site and remedial action does not include treatment or removal of such soils, the basis for the decision to forego treatment or removal shall be provided; and
- l. Detailed cost estimates using MACACES-GOLD. Cost estimates for the selected remedial alternative will be deleted to allow RAC contractor to develop independent estimates. Drawings to support estimation of quantities will be prepared on 8½" by 11" paper. Cost estimates will be prepared as unit costs by function.
- m. Complete Site Ranking System for Petroleum Contaminated Sites

contaminated drill cuttings and fluids in excess of FDER Standards with the activity prior to starting field work.

7. The contractor shall adhere to quality control limits, set in the work plans.
8. All reports shall be formatted to adhere to the "Report Format Guidance Manual," Southern Division Naval Facilities Engineering Command, and the format agreed to in the NTC Orlando reports.
9. The Contractor is responsible for conforming to the requirements and guidelines for the preparation of the Remedial Action Contracts (RACs) requirement package should a Remedial Action Plan (RAP) be required.

IV. APPLICABLE DOCUMENTS

The following documents shall be used in performing the investigation:

1. Remedial Action Contracts Delivery Order Requirements Package Guide, NEESA 20.2-062.
2. Contamination Assessment Report, Building 25 site, NS Mayport by the USACE.
3. Initial Assessment Study of NS Mayport.
4. "Release Detection Program for Underground Storage Tanks", Naval Activities in the Jacksonville Area, January 1990.
5. "Sampling and Chemical Analysis Quality Assurance Guide for Naval Assessment and Control of Installation Pollutants (NACIP) Program", NEESA 202.2-047.
6. Specifications for Monitoring Well Installation and Sampling, Southern Division, Naval Facilities Engineering Command Guide, March 1989. *
7. "Recommended Practice for Handling Underground Leakage of Flammable and Combustible Liquids", NFPA 329-1983, National Fire Codes, Latest Edition.
8. Florida Department of Environmental Regulation (FDER) Chapter 17-770, Florida Administrative Codes (FAC).
9. Navy CLEAN Contractor's FDER approved Comprehensive Quality Assurance Plan.
10. "Guidelines for the Preparation of Contamination Assessment Reports for Petroleum Contaminated Sites", FDER.
11. "Guidelines for Assessment and Remediation of Petroleum Contaminated Soils", FDER.
12. "Guidance Manual for Review of Petroleum Remedial Action Plans",

77/02

PLAN OF ACTION

**CONTAMINATION ASSESSMENT
BASE ENLISTED MEN'S QUARTERS, BUILDING 1586
NAVAL STATION MAYPORT
MAYPORT, FLORIDA**

Unit Identification Code: N60201

Contract No. N62467-89-D-0317

Submitted by:

**ABB Environmental Services, Inc.
2590 Executive Center Circle, East
Tallahassee, Florida 32301**

March 1994

TABLE OF CONTENTS

Task	Title	Page No.
I.	INTRODUCTION	1
II.	SCOPE OF SERVICES	2
	Task 1 - Monthly Progress Reports	2
	Task 2 - Contamination Assessment Plan (CAP) and Health and Safety Plan (HASP) Preparation	2
	Task 3 - Contamination Assessment Field Investigations	2
	Task 4 - Preparation of a Contamination Assessment Report	3
	Task 5 - Preparation of Follow-up Reports	3
III.	PROJECT PERSONNEL	5
IV.	SCHEDULE	6
V.	COST	6
VI.	FEE ITEMIZATION FORM SCOPE LIMITATION	6

ATTACHMENTS

- Attachment A, Schedule
- Attachment B, Cost Estimate
- Attachment C, Organization Chart
- Attachment D, Glossary

I. INTRODUCTION

The Base Enlisted Men's Quarters (BEQ) is located at Building 1586 at Naval Station (NAVSTA) Mayport, Florida. According to activity personnel, approximately 3,000 gallons of diesel fuel No. 2 leaked from a heating fuel pipeline outside the BEQ. The leak in the pipeline was reportedly caused by galvanic corrosion. According to base personnel, the pipeline and associated 4,000-gallon underground storage tanks (USTs) have never been tested for tightness. The UST was installed in 1985 and is constructed of asphalt coated steel. The system has steel piping and no leak detection systems. A contractor replaced the corroded pipeline and removed much of the contaminated soil in early 1992. In addition, two recovery wells were installed at the site. The groundwater at the site is approximately 5 to 6 feet below land surface (bls).

In April 1993, ABB Environmental Services, Inc. (ABB-ES), conducted a preliminary contamination assessment (CA) to assess the presence of soil and/or groundwater contamination at the site in accordance with the statement of work (SOW) for CTO 77. A total of 21 soil samples were screened in the field for volatile organic compounds (VOCs) and 7 groundwater samples were collected for analysis of kerosene analytical group compounds. Findings of the preliminary assessment indicated the presence of soil and groundwater contamination that equals or exceeds standards of target levels established by the Florida Department of Environmental Protection (FDEP). The Preliminary Contamination Assessment Report (PCAR) recommended continuing with a CA.

This Plan of Action (POA) describes the scope of services, presents a milestone and Gantt schedule, and provides cost estimates for the work elements described in the SOW dated January 25, 1994, for the CA at Building 1586, NAVSTA Mayport. This POA includes the following tasks.

- Management Activities

Management responsibilities include: cost tracking, internal and external cost reporting, communication, and deliverable processing and review. Monthly progress reporting is considered separately under Task 1 below.

Task 1 - Monthly Progress Reports

- Technical Activities

Task 2 - preparation of a Contamination Assessment Plan (CAP) and a Health and Safety Plan (HASP)

Task 3 - contamination assessment field investigation

Task 4 - preparation of a Contamination Assessment Report (CAR)

Task 5 - preparation of a follow-up report based on recommendations in the CAR

The following sections present the scope of services (Section II), project personnel (Section III), schedule (Section IV), and cost estimates (Section V) for each task. Attachment A presents a scheduling chart, Attachment B presents cost estimates, and Attachment C presents an organizational chart for the CA.

II. SCOPE OF SERVICES

Task 1 - Monthly Progress Reports

ABB-ES will prepare Technical and Financial Monthly Reports (TFMR) 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 performed, problems encountered, and proposed problem resolutions. It will also include an updated schedule in Gantt format. ABB-ES will notify Southern Division, Naval Facilities Engineering Command (SOUTHNAVFACENGCOM) upon discovery of significant new site conditions, including imminent hazard or substantial endangerment, or deviation from the project schedule, plan, or budget.

In addition to these activities, ABB-ES will provide management responsibilities to include cost tracking, internal and external cost reporting, communication, and deliverable processing and review. The development of the TFMR is considered separately within this Task 1. This task also includes one trip to the site by the Project Manager.

Task 2 - Contamination Assessment Plan (CAP) and Health and Safety Plan (HASP) Preparation

A final CAP will be developed and submitted to SOUTHNAVFACENGCOM prior to beginning any field work at the site. The CAP will present site background information, the overall technical approach, a description of the field activities, field techniques and methodologies, and project milestones and time frames in Gantt format. As part of the CAP preparation, ABB-ES will coordinate with appropriate Navy personnel at NAVSTA Mayport to obtain readily available information pertinent to the site and related facilities. The PCAR produced in July 1992 together with a site visit will be the basis of this CAP.

A final HASP will be prepared and submitted to SOUTHNAVFACENGCOM prior to beginning any field work at the site. The HASP will contain site-specific information on the contaminants of concern, routes to hospital(s), emergency phone number(s), emergency procedures, and health and safety concerns pertinent to the project site and anticipated contaminants to be encountered. Wherever possible, site-specific information will be taken from the previously approved HASP for this site to avoid development of redundant data.

Task 3 - Contamination Assessment Field Investigations

Task 3 will include a start-up meeting at the site to initiate the field investigation program. The objective of this CA field investigation is to assess the vertical and horizontal extent of soil and groundwater contamination and identify the types of contaminants at the site. The contamination assessment will require drilling soil borings and installing monitoring wells at the site and is based on a two-person team for 14 days plus an additional individual during groundwater sampling and slug testing.

Monitoring wells will be installed in the soil borings along the site periphery to assess the direction of groundwater flow at the site. Assessment of groundwater flow direction will aid in the placement of subsequent soil borings and permanent monitoring wells.

Approximately 25 soil borings will be advanced manually. Soil samples will be collected at the surface and every 2 feet vertically thereafter until total depth is reached. The maximum depth for the boring will depend on the depth of groundwater. Based on information gathered during the PCAR, the estimated depth to groundwater is less than 5 feet bls.

Organic vapor analyzer (OVA) headspace analysis will be performed for each sample in accordance with Chapter 17-770, Florida Administrative Code (FAC). The screening of soil samples from these borings is required to estimate the horizontal and vertical extent of the soil contamination and provide information for placement of groundwater monitoring wells.

Approximately 10 shallow (13 feet bls), 2-inch inside diameter, permanent monitoring wells will be installed to characterize and assess the horizontal extent of the groundwater contaminant plume. One deep well will also be installed. Soil samples will be collected at intervals of 2 feet vertically until total depth is reached. Soil samples collected above the water table and, where FDEP regulatory criteria apply, below the water table will undergo OVA headspace analysis. Soil samples collected below the water table with a headspace measurement less than 1 part per million (ppm) will be screened with a portable gas chromatograph (GC) for comparison with petroleum standards.

Monitoring wells and soil sample descriptions will be used to develop data on the hydraulic properties of the surficial aquifer. Groundwater samples will be collected from each monitoring well and analyzed for kerosene analytical group compounds in accordance with Chapter 17-770, FAC. Quality assurance/quality control (QA/QC) samples will be collected and analyzed as prescribed in ABB-ES' approved Comprehensive Quality Assurance Plan.

A minimum of three slug tests will be conducted in two of the monitoring wells to assess the hydraulic conductivity of the aquifer. As required, an inventory of potable water wells within a ½-mile radius of the site will be conducted with the cooperation of the base Environmental Coordinator. A survey will be conducted of all permanently installed monitoring wells by a Florida-registered professional surveyor.

In keeping with the requirements set by SOUTHNAVFACENGCOM, ABB-ES will report on an activity level basis those labor resource efforts associated with the development of (1) soil investigation, (2) well installation, and (3) groundwater sampling and analyses. In addition, costs for drilling and laboratory analyses will be segregated and reported in conjunction with their assigned task. These associated hours and subcontracted costs will be reported on a monthly basis as an addendum to the TFMR.

Task 4 - Preparation of a Contamination Assessment Report

A CAR will be prepared and submitted to SOUTHNAVFACENGCOM and the activity upon completion of the field investigation. The report will discuss site background information, site conditions, investigative methodologies, findings, and recommendations for follow-up reports at the BEQ, Building 1586, site at NAVSTA Mayport. Site location maps, locations of soil borings and monitoring wells, and investigative summary maps will be included with the report. An addendum to the CAR will be prepared to address comments, if required. Because addendum may occur after Navy or FDEP review, the cost and time for the preparation of the addendum is included in this workplan.

Task 5 - Preparation of Follow-up Reports

If a Monitoring Only Plan (MOP) is recommended in the CAR, a MOP will be developed for the site. If the findings, conclusions, and recommendations of the CAR indicate the need for soil or groundwater remediation at the site, a Remedial Action Plan (RAP) will be prepared.

For the purpose of this POA it will be assumed that a RAP will be developed for the BEQ Building 1586. The RAP will compare remedial technologies for cleanup of both groundwater and soil, with the selected

technology justified based on its technical and economic feasibility. The RAP will include the following items:

- summary of the CAR and Addendum;
- general discussion of the technical and economic feasibility of the selected remedial system and why it was chosen over other remedial options;
- general discussion of the rationale of the selected system, which will be accompanied under separate cover by a preliminary cost estimate of each system reviewed;
- a brief description of the basis of design for the remedial system selected and a general description of its operational characteristics (the basis of design will follow the Navy Cost Estimating System);
- comparison of contaminant levels found with existing State cleanup criteria in table format;
- disposition and expected contaminant concentrations in any effluent from the proposed cleanup method;
- an engineer's preliminary cost estimate, using the Navy Cost Estimating System, and schedule for the design phase, construction start-up phase, and operation phase of the selected remedial option;
- designation of monitoring wells and proposed methodology for verifying accomplishment of RAP goals (cleanup levels);
- discussion of any proposed treatment of contaminated soils;
- details of general design and construction;
- schedule for completion of the remedial action;
- resampling of existing monitoring wells to comply with FDEP regulations; and
- recommendations for conducting pilot studies and obtaining additional information.

Although the general engineering design of the selected remedial system prepared as part of the RAP process will be provided, the document will not be biddable.

In keeping with the requirements outlined by SOUTHNAVFACENCOM, ABB-ES will report on a subtask level basis those labor resource efforts associated with (1) narrative preparation, (2) internal report review, and (3) FDEP review.

III. PROJECT PERSONNEL

The designated roles for the CA are as follows.

- **Task Order Manager.** The Task Order Manager for the CA at the BEQ at Building 1586 at NAVSTA Mayport will be John Kaiser. Mr. Kaiser is responsible for maintaining the project schedule and budget and for evaluating the appropriateness of the services provided for the contract task order (CTO). Mr. Kaiser 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 review the on-going quality control during the performance of the work and the clarity and usefulness of all project work products.

Specific responsibilities of this role include:

- initiating project activities;
 - participating in the workplan 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;
 - regularly interacting with the Engineer-in-Charge (EIC), the Program Manager, the Department Manager, the Technical Director, and others as appropriate, on the status of the project; and
 - visiting the site once to meet with the Environmental Coordinator and review progress, and to observe work practices of project personnel.
- **Technical Leader.** Mr. Michael J. Williams, P.G., will be the Technical Leader of the CA. Mr. Williams will be responsible for evaluating the appropriateness and adequacy of the technical services provided for the CTO and for developing the technical approach and LOE required to address each of the workplan tasks. Mr. Williams will also be responsible for reviewing the on-going quality control during the performance of the work, and the technical integrity of conclusions and recommendations. Mr. Williams will make one trip to the BEQ site.

Specific responsibilities of this role include:

- overall technical responsibility for the project,
- initiating project activities,
- participating in the workplan preparation,
- monitoring the technical adequacy of task activities, and
- regularly interacting with the EIC, Program Manager, Task Order Manager, and others as appropriate on the status of the project.

-
- Quality Review Board. A Quality Review Board comprised of the Board of Technical Directors and senior technical staff from the ABB-ES team will assist the Task Order Manager and Technical Leader 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.

Kenneth Busen, P.G., and Willard Murray, Ph.D., of the Board of Technical Directors will comprise the ABB-ES technical quality review board and will be actively involved in assuring the quality of the technical and engineering services and appropriateness of methodologies, conclusions, and recommendations of the CA and the follow-up reports.

IV. SCHEDULE

Attachment A depicts a Gantt Schedule, indicating the duration and initiation and completion dates of individual tasks for the CA at the BEQ at Building 1586 at NAVSTA Mayport.

V. COST

Attachment B (Table 1 and the Fee Itemization Form) presents the cost estimate to complete the scope of services described herein. Direct labor has been escalated to its midpoint.

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 Federal Acquisition Regulations (FAR) 52.243-2.

Specific Parameters:

As outlined specifically in Tasks 1 through 5 of the SOW dated January 25, 1994.

Period of Performance Parameters:

Costs presented are estimated to be incurred through July 1995.

ATTACHMENT A
SCHEDULE

ACTIVITY DESCRIPTION	EARLY START	EARLY FINISH	ORIG DUR	1994												1995											
				A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S						
				PROJECT MANAGEMENT																							
NOTICE TO PROCEED - CTO 077 MOD	14APR94		0	◇																							
DAY-TO-DAY MANAGEMENT	14APR94	16AUG95	341	▬																							
TFMR REVIEW & PREPARATION	14APR94	16AUG95	341	▬																							
SUBCONTRACT PREP	14APR94	25MAY94	30	▬																							
SUBCONTRACT AWARD		25MAY94	0	◇																							
PROJECT CLOSEOUT	17AUG95	14SEP95	20	▬																							
CTO NO. 077 COMPLETE		14SEP95	0	◇																							
				PLANNING DOCUMENTS																							
CAP PREPARATION	14APR94	27APR94	10	□																							
HASP PREPARATION	14APR94	20APR94	10	□																							
SUBMIT HASP TO NAVY		20APR94	0	◇																							
SUBMIT CAP TO NAVY		27APR94	0	◇																							
				FIELD INVESTIGATION																							
SOIL INVESTIGATION AND MOB PREP	28APR94	6MAY94	7	□																							
WELL INSTALLATION	26MAY94	2JUN94	5	□																							
GROUNDWATER SAMPLING	3JUN94	16JUN94	10	□																							
				LABORATORY ANALYSIS																							
LABORATORY ANALYSIS (SUBCONTRACT)	17JUN94	29JUL94	30	▬																							
				CONTAMINATION ASSESSMENT REPORT																							
NARRATIVE CAR PREPARATION	1AUG94	12SEP94	30	▬																							
SUBMIT NARRATIVE CAR TO NAVY		12SEP94	0	◇																							
NAVY REVIEW OF NARRATIVE CAR	13SEP94	14SEP94	2																								
ABB SUPPORT OF CAR NARRATIVE REVIEW ACTIVITIES	13SEP94	14NOV94	45	▬																							
FDEP REVIEW OF NARRATIVE CAR	20SEP94	21NOV94	45	▬																							
AMENDMENT #1 CAR PREPARATION	22NOV94	21DEC94	20	▬																							
SUBMIT AMENDMENT #1 CAR TO NAVY		21DEC94	0	◇																							
NAVY REVIEW AMENDMENT #1 CAR	23DEC94	27DEC94	2																								
ABB SUPPORT OF CAR REVIEW ACTIVITIES	23DEC94	31JAN95	26	▬																							
NAVY SUBMITS AMENDMENT #1 CAR TO FDEP		27DEC94	0	◇																							
FDEP REVIEW OF AMENDMENT #1 CAR	4JAN95	31JAN95	20	▬																							
				FOLLOW-UP REPORT																							
NARRATIVE RAP PREPARATION	1FEB95	21MAR95	35	▬																							
SUBMIT NARRATIVE RAP TO NAVY		21MAR95	0	◇																							
NAVY REVIEW RAP	22MAR95	23MAR95	2																								
NAVY SUBMITS RAP TO FDEP		23MAR95	0	◇																							

Plot Date 23MAR94
 Data Date 6JUL93
 Project Start 6JUL93
 Project Finish 14SEP95

▬ Activity Bar/Early Dates
 ▬ Critical Activity
 ▬ Progress Bar
 ◇ / * Milestone/Flag Activity

B015 A077

Sheet 1 of 2

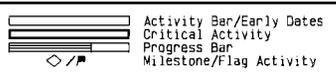
NAVY CLEAN
 SOW CTO NO. 077 MODIFICATION
 BASELINE PROJECT SCHEDULE

ABB ENVIRONMENTAL SERVICES, INC.

Date	Revision	Checked	Approved

ACTIVITY DESCRIPTION	EARLY START	EARLY FINISH	ORIG DUR	1994												1995											
				A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S						
				FOLLOW-UP REPORT																							
FDEP REVIEW RAP	24MAR95	25MAY95	45																								
RAP ADDENDUM PREP	26MAY95	23JUN95	20																								
SUBMIT RAP ADDENDUM TO NAVY		23JUN95	0																								
NAVY REVIEW RAP ADDENDUM	26JUN95	27JUN95	2																								
NAVY SUBMITS RAP TO FDEP		27JUN95	0																								
FDEP REVIEWS RAP ADDENDUM	28JUN95	16AUG95	35																								

Plot Date 23MAR94
 Data Date 6JUL93
 Project Start 6JUL93
 Project Finish 14SEP95



B015 A077

**NAVY CLEAN
 SOW CTO NO. 077 MODIFICATION
 BASELINE PROJECT SCHEDULE**

Sheet 2 of 2

ABB ENVIRONMENTAL SERVICES, INC.

Date	Revision	Checked	Approved

ATTACHMENT B
COST ESTIMATE

PART II - OTHER DIRECT COSTS (Itemized on Supplement Sheets)			
ITEM	UNIT COSTS(S)	QUANTITY	TOTAL
Telephone/Communications			\$156.20
Shipping - Correspondence			\$119.50
Shipping - Other			\$417.35
Expendable Supplies			\$2,631.47
Binders			\$457.80
Photocopying (Internal)			\$100.00
Other			
Subtotal			\$3,882.32
X G&A (.02)			\$77.65
TOTAL OTHER DIRECT COSTS	XXXXX	XXXXX	\$3,959.97

PART III - TRAVEL (Itemized on Supplement Sheets)			
Airfare			
Lodging			\$100.00
Per Diem			\$120.00
Car Rental/Fuel			\$900.00
Field Van/Fuel			\$1,120.00
Other			
Subtotal			\$2,240.00
X G&A (.02)			\$44.80
TOTAL TRAVEL EXPENSES	XXXXX	XXXXX	\$2,284.80

PART IV - SUBCONTRACTOR SERVICES (Itemized on Supplement Sheets)			
Drilling			\$10,000.00
Laboratory			\$10,350.00
Survey			\$2,500.00
Report Reproduction			
Other			\$400.00
Other			
Other			
Other			
Subtotal			\$23,250.00
X G&A (.02)			\$465.00
TOTAL SUBCONTRACTOR EXPENSES	XXXXX	XXXXX	\$23,715.00

	TOTAL			
	LABOR HOURS	COST(S)		
TOTAL PART I (DIRECT LABOR)	1544	\$70,461.81		
TOTAL PART II (Other Direct Costs)		\$3,959.97		
TOTAL PART III (Travel Expenses)		\$2,284.80		
SUBTOTAL (Parts I, II, & III)		\$76,706.58		
Award Fee Pool @ ___ % x Parts I, II, & III				
Enter Award Fee % here 8%		\$6,136.53		
Parts I, II, & III TOTAL		\$82,843.11		
TOTAL PART IV (Subcontractor Expenses)		\$23,715.00		
Award Fee Pool @ ___ % x Part IV				
Enter Award Fee % here 4.5%		\$1,067.18		
Part IV TOTAL		\$24,782.18		
TOTAL: (Parts I, II, & III)		\$82,843.11		
(Part IV)		\$24,782.18		
GRAND TOTAL		\$107,625.28		
A&E Signature  ABB ENVIRONMENTAL SERVICES, INC.	Date 3/24/94	Telephone 904-656-1293		
EIC Signature	Date	Code	Code 18C Approval	Date

ABB ENVIRONMENTAL SERVICES, INC.
TOTAL COST SUMMARY

PROJECT: CTO #077/Modification – UST Contamination Assessment @ BEQ, NS Mayport
MANAGER: John Kaiser

Description	Base	Rate	Subtotal	Multiplier	Total
Principal Program Manager					
Installation/Task Order Manager	180	\$37.74	\$6,793.20	1.93	\$13,110.88
Senior Project Manager					
Quality Assurance Manager	7	\$30.83	\$215.81	2.38	\$513.63
Project Manager					
Health & Safety Manager	2	\$25.81	\$51.62	1.93	\$99.63
Consulting Engineer/Scientist					
Technical Expert	34	\$36.25	\$1,232.50	1.93	\$2,378.73
Principal Engineer/Scientist					
Public Health Specialist/Toxicologist		\$29.66		1.93	
Senior Ecologist		\$29.66		1.93	
Senior Engineer	135	\$29.66	\$4,004.10	1.93	\$7,727.91
Senior Scientist	97	\$29.66	\$2,877.02	1.93	\$5,552.65
Senior Chemist		\$29.66		1.93	
Senior Hydrologist		\$29.66		1.93	
Senior Engineer/Scientist					
Senior Engineer		\$24.64		1.93	
Senior Scientist	34	\$24.64	\$837.76	1.93	\$1,616.88
Senior Chemist		\$24.64		1.93	
Senior Hydrologist		\$24.64		1.93	
Engineer/Scientist					
Engineer	200	\$19.41	\$3,882.00	1.93	\$7,492.26
Geologist/Hydrologist	332	\$19.41	\$6,444.12	1.93	\$12,437.15
Scientist	12	\$19.41	\$232.92	1.93	\$449.54
Chemist		\$19.41		1.93	
Associate Engineer/Scientist					
Engineer	42	\$15.46	\$649.32	1.93	\$1,253.19
Scientist/Geologist	254	\$15.46	\$3,926.84	1.93	\$7,578.80
Designer					
CAD Operator/Sr. Draftsperson	62	\$19.28	\$1,195.36	1.93	\$2,307.04
Senior Technician					
Project Assistant	90	\$14.25	\$1,282.50	1.93	\$2,475.23
Community Relations Specialist		\$14.25		1.93	
Technician		\$14.25		1.93	
Technical Editor	12	\$14.25	\$171.00	1.93	\$330.03
Clerical					
Clerk/Word Processor	51	\$11.05	\$563.55	1.93	\$1,087.65
Subtotal:	1544		\$34,359.62		\$66,411.18
Labor Escalation – Management/Administrative (Aug 94)			\$13,724.13	1.058	\$14,520.13
Labor Escalation – Technical/Professional (Aug 94)			\$51,599.40	1.062	\$54,798.56
Labor Escalation – Clerical (Aug 94)			\$1,087.65	1.051	\$1,143.12
TOTAL LABOR:			\$66,411.18		\$70,461.81

**ABB ENVIRONMENTAL SERVICES, INC.
TOTAL COST SUMMARY**

**PROJECT: CTO #077/Modification – UST Contamination Assessment @ BEQ, NS Mayport
MANAGER: John Kaiser**

Description	Base	Rate	Subtotal	Multiplier	Total
Air Fare				1.02	
Lodging	2	\$50.00	\$100.00	1.02	\$102.00
Per Diem	4	\$30.00	\$120.00	1.02	\$122.40
Car Rental/Fuel	18	\$50.00	\$900.00	1.02	\$918.00
Field Van Rental/Fuel	14	\$80.00	\$1,120.00	1.02	\$1,142.40
TOTAL TRAVEL:					\$2,284.80
Telephone/Telefax:	71	\$2.20	\$156.20	1.02	\$159.32
Shipping – Letter/Other	9	various	\$119.50	1.02	\$121.89
Shipping – Sample Cooler	5	\$83.47	\$417.35	1.02	\$425.70
Expendable Supplies			\$2,631.47	1.02	\$2,684.10
Copying, Internal	2000	\$0.05	\$100.00	1.02	\$102.00
Binders	44	various	\$457.80	1.02	\$466.96
Other				1.02	
Other				1.02	
TOTAL OTHER DIRECT COSTS:					\$3,959.97
Drilling Services			\$10,000.00	1.02	\$10,200.00
Analytical Services			\$10,350.00	1.02	\$10,557.00
Surveying Services			\$2,500.00	1.02	\$2,550.00
Data Validation Services				1.02	
Reproduction				1.02	
Geophysical Surveying Services				1.02	
Subconsultant			\$400.00	1.02	\$408.00
Other				1.02	
Other				1.02	
Other				1.02	
Other				1.02	
TOTAL SUBCONTRACT COSTS:					\$23,715.00
TOTAL COST:					\$100,421.58
Award Fee – Labor, Travel & ODCs			\$76,706.58	0.08	\$6,136.53
Award Fee – Subcontract			\$23,715.00	0.045	\$1,067.18
TOTAL COST PLUS AWARD FEE:					\$107,625.28

ABB ENVIRONMENTAL SERVICES, INC.

TASK: 1 – Project Management

PROJECT: CTO #077/Modification – UST Contamination Assessment @ BEQ, NS Mayport

MANAGER: John Kaiser

Description	Base	Rate	Subtotal	Multiplier	Total
Principal Program Manager					
Installation/Task Order Manager	180	\$37.74	\$6,793.20	1.93	\$13,110.88
Senior Project Manager/wir					
Quality Assurance Manager		\$30.83		2.38	
Project Manager					
Health & Safety Manager		\$25.81		1.93	
Consulting Engineer/Scientist					
Technical Expert		\$36.25		1.93	
Principal Engineer/Scientist					
Public Health Specialist/Toxicologist		\$29.66		1.93	
Senior Ecologist		\$29.66		1.93	
Senior Engineer		\$29.66		1.93	
Senior Scientist		\$29.66		1.93	
Senior Chemist		\$29.66		1.93	
Senior Hydrologist		\$29.66		1.93	
Senior Engineer/Scientist					
Senior Engineer		\$24.64		1.93	
Senior Scientist		\$24.64		1.93	
Senior Chemist		\$24.64		1.93	
Senior Hydrologist		\$24.64		1.93	
Engineer/Scientist					
Engineer		\$19.41		1.93	
Geologist/Hydrologist		\$19.41		1.93	
Scientist		\$19.41		1.93	
Chemist		\$19.41		1.93	
Associate Engineer/Scientist					
Engineer		\$15.46		1.93	
Scientist/Geologist		\$15.46		1.93	
Designer					
CAD Operator/Sr. Draftsperson		\$19.28		1.93	
Senior Technician					
Project Assistant	90	\$14.25	\$1,282.50	1.93	\$2,475.23
Community Relations Specialist		\$14.25		1.93	
Technician		\$14.25		1.93	
Technical Editor		\$14.25		1.93	
Clerical					
Clerk/Word Processor		\$11.05		1.93	
Subtotal:	270		\$8,075.70		\$15,586.10
Labor Escalation – Management/Administrative (Aug 94)			\$13,110.88	1.058	\$13,871.31
Labor Escalation – Technical/Professional (Aug 94)			\$2,475.23	1.062	\$2,628.69
Labor Escalation – Clerical (Aug 94)				1.051	
TOTAL LABOR:			\$15,586.10		\$16,500.00

ABB ENVIRONMENTAL SERVICES, INC.

TASK: 1 – Project Management

PROJECT: CTO #077/Modification – UST Contamination Assessment @ BEQ, NS Mayport

MANAGER: John Kaiser

Description	Base	Rate	Subtotal	Multiplier	Total
Air Fare				1.02	
Lodging	1	\$50.00	\$50.00	1.02	\$51.00
Per Diem	2	\$30.00	\$60.00	1.02	\$61.20
Car Rental/Fuel	2	\$50.00	\$100.00	1.02	\$102.00
Field Van Rental/Fuel		\$80.00		1.02	
TOTAL TRAVEL:					\$214.20
Telephone/Telefax:	24	\$2.20	\$52.80	1.02	\$53.86
Shipping – Letter/Other	3	\$6.50	\$19.50	1.02	\$19.89
Shipping – Sample Cooler				1.02	
Expendable Supplies				1.02	
Other				1.02	
Other				1.02	
Other				1.02	
Other				1.02	
TOTAL OTHER DIRECT COSTS:					\$73.75
Drilling Services				1.02	
Analytical Services				1.02	
Surveying Services				1.02	
Data Validation Services				1.02	
Reproduction				1.02	
Geophysical Surveying Services				1.02	
Subconsultant				1.02	
Other				1.02	
Other				1.02	
Other				1.02	
Other				1.02	
TOTAL SUBCONTRACT COSTS:					
TOTAL COST:					\$16,787.94
Award Fee – Labor, Travel & ODCs			\$16,787.94	0.08	\$1,343.04
Award Fee – Subcontract				0.045	
TOTAL COST PLUS AWARD FEE:					\$18,130.98

ABB ENVIRONMENTAL SERVICES, INC.

TASK: 2 – Contamination Assessment Plan & Health and Safety Plan Preparation

PROJECT: CTO #077/Modification – UST Contamination Assessment @ BEQ, NS Mayport

MANAGER: John Kaiser

Description	Base	Rate	Subtotal	Multiplier	Total
Principal Program Manager					
Installation/Task Order Manager		\$37.74		1.93	
Senior Project Manager					
Quality Assurance Manager	3	\$30.83	\$92.49	2.38	\$220.13
Project Manager					
Health & Safety Manager	2	\$25.81	\$51.62	1.93	\$99.63
Consulting Engineer/Scientist					
Technical Expert	3	\$36.25	\$108.75	1.93	\$209.89
Principal Engineer/Scientist					
Public Health Specialist/Toxicologist		\$29.66		1.93	
Senior Ecologist		\$29.66		1.93	
Senior Engineer		\$29.66		1.93	
Senior Scientist	12	\$29.66	\$355.92	1.93	\$686.93
Senior Chemist		\$29.66		1.93	
Senior Hydrologist		\$29.66		1.93	
Senior Engineer/Scientist					
Senior Engineer		\$24.64		1.93	
Senior Scientist		\$24.64		1.93	
Senior Chemist		\$24.64		1.93	
Senior Hydrologist		\$24.64		1.93	
Engineer/Scientist					
Engineer		\$19.41		1.93	
Geologist/Hydrologist		\$19.41		1.93	
Scientist	12	\$19.41	\$232.92	1.93	\$449.54
Chemist		\$19.41		1.93	
Associate Engineer/Scientist					
Engineer		\$15.46		1.93	
Scientist/Geologist		\$15.46		1.93	
Designer					
CAD Operator/Sr. Draftsperson	4	\$19.28	\$77.12	1.93	\$148.84
Senior Technician					
Project Assistant		\$14.25		1.93	
Community Relations Specialist		\$14.25		1.93	
Technician		\$14.25		1.93	
Technical Editor	2	\$14.25	\$28.50	1.93	\$55.01
Clerical					
Clerk/Word Processor	3	\$11.05	\$33.15	1.93	\$63.98
Subtotal:	41		\$980.47		\$1,933.93
Labor Escalation – Management/Administrative (Aug 94)			\$319.75	1.058	\$338.30
Labor Escalation – Technical/Professional (Aug 94)			\$1,550.20	1.062	\$1,646.31
Labor Escalation – Clerical (Aug 94)			\$63.98	1.051	\$67.24
TOTAL LABOR:			\$1,933.93		\$2,051.85

ABB ENVIRONMENTAL SERVICES, INC.

TASK: 2 – Contamination Assessment Plan & Health and Safety Plan Preparation

PROJECT: CTO #077/Modification – UST Contamination Assessment @ BEQ, NS Mayport

MANAGER: John Kaiser

Description	Base	Rate	Subtotal	Multiplier	Total
Air Fare				1.02	
Lodging				1.02	
Per Diem				1.02	
Car Rental/Fuel		\$50.00		1.02	
Field Van Rental/Fuel		\$80.00		1.02	
TOTAL TRAVEL:					
Telephone/Telefax:	2	\$2.20	\$4.40	1.02	\$4.49
Shipping – Letter/Other	2	\$10.00	\$20.00	1.02	\$20.40
Shipping – Sample Cooler				1.02	
Expendable Supplies				1.02	
Copying, Internal	400	\$0.05	\$20.00	1.02	\$20.40
Binders – 1"	6	\$6.95	\$41.70	1.02	\$42.53
Other				1.02	
Other				1.02	
TOTAL OTHER DIRECT COSTS:					\$87.82
Drilling Services				1.02	
Analytical Services				1.02	
Surveying Services				1.02	
Data Validation Services				1.02	
Reproduction				1.02	
Geophysical Surveying Services				1.02	
Subconsultant	4	\$50.00	\$200.00	1.02	\$204.00
Other				1.02	
Other				1.02	
Other				1.02	
Other				1.02	
TOTAL SUBCONTRACT COSTS:					\$204.00
TOTAL COST:					\$2,343.67
Award Fee – Labor, Travel & ODCs			\$2,139.67	0.08	\$171.17
Award Fee – Subcontract			\$204.00	0.045	\$9.18
TOTAL COST PLUS AWARD FEE:					\$2,524.02

ABB ENVIRONMENTAL SERVICES, INC.

TASK: 3 – Field Investigation

PROJECT: CTO #077/Modification – UST Contamination Assessment @ BEQ, NS Mayport

MANAGER: John Kaiser

Description	Base	Rate	Subtotal	Multiplier	Total
Principal Program Manager					
Installation/Task Order Manager		\$37.74		1.93	
Senior Project Manager					
Quality Assurance Manager		\$30.83		2.38	
Project Manager					
Health & Safety Manager		\$25.81		1.93	
Consulting Engineer/Scientist					
Technical Expert	3	\$36.25	\$108.75	1.93	\$209.89
Principal Engineer/Scientist					
Public Health Specialist/Toxicologist		\$29.66		1.93	
Senior Ecologist		\$29.66		1.93	
Senior Engineer		\$29.66		1.93	
Senior Scientist	30	\$29.66	\$889.80	1.93	\$1,717.31
Senior Chemist		\$29.66		1.93	
Senior Hydrologist		\$29.66		1.93	
Senior Engineer/Scientist					
Senior Engineer		\$24.64		1.93	
Senior Scientist		\$24.64		1.93	
Senior Chemist		\$24.64		1.93	
Senior Hydrologist		\$24.64		1.93	
Engineer/Scientist					
Engineer		\$19.41		1.93	
Geologist/Hydrologist	168	\$19.41	\$3,260.88	1.93	\$6,293.50
Scientist		\$19.41		1.93	
Chemist		\$19.41		1.93	
Associate Engineer/Scientist					
Engineer	42	\$15.46	\$649.32	1.93	\$1,253.19
Scientist/Geologist	164	\$15.46	\$2,535.44	1.93	\$4,893.40
Designer					
CAD Operator/Sr. Draftsperson		\$19.28		1.93	
Senior Technician					
Project Assistant		\$14.25		1.93	
Community Relations Specialist		\$14.25		1.93	
Technician		\$14.25		1.93	
Technical Editor		\$14.25		1.93	
Clerical					
Clerk/Word Processor		\$11.05		1.93	
Subtotal:	407		\$7,444.19		\$14,367.29
Labor Escalation – Management/Administrative (Aug 94)				1.058	
Labor Escalation – Technical/Professional (Aug 94)			\$14,367.29	1.062	\$15,258.06
Labor Escalation – Clerical (Aug 94)				1.051	
TOTAL LABOR:			\$14,367.29		\$15,258.06

ABB ENVIRONMENTAL SERVICES, INC.

TASK: 3 – Field Investigation

PROJECT: CTO #077/Modification – UST Contamination Assessment @ BEQ, NS Mayport

MANAGER: John Kaiser

Description	Base	Rate	Subtotal	Multiplier	Total
Air Fare				1.02	
Lodging	1	\$50.00	\$50.00	1.02	\$51.00
Per Diem	2	\$30.00	\$60.00	1.02	\$61.20
Car Rental/Fuel	16	\$50.00	\$800.00	1.02	\$816.00
Field Van Rental/Fuel	14	\$80.00	\$1,120.00	1.02	\$1,142.40
TOTAL TRAVEL:					\$2,070.60
Telephone/Telefax:	20	\$2.20	\$44.00	1.02	\$44.88
Shipping – Letter/Other				1.02	
Shipping – Sample Cooler	5	\$83.47	\$417.35	1.02	\$425.70
Expendable Supplies			\$2,631.47	1.02	\$2,684.10
Other				1.02	
Other				1.02	
Other				1.02	
Other				1.02	
TOTAL OTHER DIRECT COSTS:					\$3,154.68
Drilling Services			\$10,000.00	1.02	\$10,200.00
Analytical Services			\$9,800.00	1.02	\$9,996.00
Surveying Services			\$2,500.00	1.02	\$2,550.00
Data Validation Services				1.02	
Reproduction				1.02	
Geophysical Surveying Services				1.02	
Subconsultant				1.02	
Other				1.02	
Other				1.02	
Other				1.02	
Other				1.02	
TOTAL SUBCONTRACT COSTS:					\$22,746.00
TOTAL COST:					\$43,229.33
Award Fee – Labor, Travel & ODCs			\$20,483.33	0.08	\$1,638.67
Award Fee – Subcontract			\$22,746.00	0.045	\$1,023.57
TOTAL COST PLUS AWARD FEE:					\$45,891.57

ABB ENVIRONMENTAL SERVICES, INC.

TASK: 4 – Prepare Contamination Assessment Report

PROJECT: CTO #077/Modification – UST Contamination Assessment @ BEQ, NS Mayport

MANAGER: John Kaiser

Description	Base	Rate	Subtotal	Multiplier	Total
Principal Program Manager					
Installation/Task Order Manager		\$37.74		1.93	
Senior Project Manager					
Quality Assurance Manager	4	\$30.83	\$123.32	2.38	\$293.50
Project Manager					
Health & Safety Manager		\$25.81		1.93	
Consulting Engineer/Scientist					
Technical Expert	11	\$36.25	\$398.75	1.93	\$769.59
Principal Engineer/Scientist					
Public Health Specialist/Toxicologist		\$29.66		1.93	
Senior Ecologist		\$29.66		1.93	
Senior Engineer		\$29.66		1.93	
Senior Scientist	55	\$29.66	\$1,631.30	1.93	\$3,148.41
Senior Chemist		\$29.66		1.93	
Senior Hydrologist		\$29.66		1.93	
Senior Engineer/Scientist					
Senior Engineer		\$24.64		1.93	
Senior Scientist	5	\$24.64	\$123.20	1.93	\$237.78
Senior Chemist		\$24.64		1.93	
Senior Hydrologist		\$24.64		1.93	
Engineer/Scientist					
Engineer		\$19.41		1.93	
Geologist/Hydrologist	145	\$19.41	\$2,814.45	1.93	\$5,431.89
Scientist		\$19.41		1.93	
Chemist		\$19.41		1.93	
Associate Engineer/Scientist					
Engineer		\$15.46		1.93	
Scientist/Geologist	90	\$15.46	\$1,391.40	1.93	\$2,685.40
Designer					
CAD Operator/Sr. Draftsperson	28	\$19.28	\$539.84	1.93	\$1,041.89
Senior Technician					
Project Assistant		\$14.25		1.93	
Community Relations Specialist		\$14.25		1.93	
Technician		\$14.25		1.93	
Technical Editor	6	\$14.25	\$85.50	1.93	\$165.02
Clerical					
Clerk/Word Processor	24	\$11.05	\$265.20	1.93	\$511.84
Subtotal:	368		\$7,372.96		\$14,285.31
Labor Escalation – Management/Administrative (Aug 94)			\$293.50	1.058	\$310.52
Labor Escalation – Technical/Professional (Aug 94)			\$13,479.97	1.062	\$14,315.73
Labor Escalation – Clerical (Aug 94)			\$511.84	1.051	\$537.94
TOTAL LABOR:			\$14,285.31		\$15,164.19

ABB ENVIRONMENTAL SERVICES, INC.

TASK: 4 – Prepare Contamination Assessment Report

PROJECT: CTO #077/Modification – UST Contamination Assessment @ BEQ, NS Mayport

MANAGER: John Kaiser

Description	Base	Rate	Subtotal	Multiplier	Total
Air Fare				1.02	
Lodging				1.02	
Per Diem				1.02	
Car Rental/Fuel		\$50.00		1.02	
Field Van Rental/Fuel		\$80.00		1.02	
TOTAL TRAVEL:					
Telephone/Telefax:	20	\$2.20	\$44.00	1.02	\$44.88
Shipping – Letter/Other	2	\$20.00	\$40.00	1.02	\$40.80
Shipping – Sample Cooler				1.02	
Expendable Supplies				1.02	
Copying, Internal	800	\$0.05	\$40.00	1.02	\$40.80
Binders, 2"	18	\$10.95	\$197.10	1.02	\$201.04
Other				1.02	
Other				1.02	
TOTAL OTHER DIRECT COSTS:					\$327.52
Drilling Services				1.02	
Analytical Services				1.02	
Surveying Services				1.02	
Data Validation Services				1.02	
Reproduction				1.02	
Geophysical Surveying Services				1.02	
Subconsultant				1.02	
Other				1.02	
Other				1.02	
Other				1.02	
Other				1.02	
TOTAL SUBCONTRACT COSTS:					
TOTAL COST:					\$15,491.71
Award Fee – Labor, Travel & ODCs			\$15,491.71	0.08	\$1,239.34
Award Fee – Subcontract				0.045	
TOTAL COST PLUS AWARD FEE:					\$16,731.05

ABB ENVIRONMENTAL SERVICES, INC.

TASK: 5 – Follow – Up Reports

PROJECT: CTO #077/Modification – UST Contamination Assessment @ BEQ, NS Mayport

MANAGER: John Kaiser

Description	Base	Rate	Subtotal	Multiplier	Total
Principal Program Manager					
Installation/Task Order Manager		\$37.74		1.93	
Senior Project Manager					
Quality Assurance Manager		\$30.83		2.38	
Project Manager					
Health & Safety Manager		\$25.81		1.93	
Consulting Engineer/Scientist					
Technical Expert	17	\$36.25	\$616.25	1.93	\$1,189.36
Principal Engineer/Scientist					
Public Health Specialist/Toxicologist		\$29.66		1.93	
Senior Ecologist		\$29.66		1.93	
Senior Engineer	135	\$29.66	\$4,004.10	1.93	\$7,727.91
Senior Scientist		\$29.66		1.93	
Senior Chemist		\$29.66		1.93	
Senior Hydrologist		\$29.66		1.93	
Senior Engineer/Scientist					
Senior Engineer		\$24.64		1.93	
Senior Scientist	29	\$24.64	\$714.56	1.93	\$1,379.10
Senior Chemist		\$24.64		1.93	
Senior Hydrologist		\$24.64		1.93	
Engineer/Scientist					
Engineer	200	\$19.41	\$3,882.00	1.93	\$7,492.26
Geologist/Hydrologist	19	\$19.41	\$368.79	1.93	\$711.76
Scientist		\$19.41		1.93	
Chemist		\$19.41		1.93	
Associate Engineer/Scientist					
Engineer		\$15.46		1.93	
Scientist/Geologist		\$15.46		1.93	
Designer					
CAD Operator/Sr. Draftsperson	30	\$19.28	\$578.40	1.93	\$1,116.31
Senior Technician					
Project Assistant		\$14.25		1.93	
Community Relations Specialist		\$14.25		1.93	
Technician		\$14.25		1.93	
Technical Editor	4	\$14.25	\$57.00	1.93	\$110.01
Clerical					
Clerk/Word Processor	24	\$11.05	\$265.20	1.93	\$511.84
Subtotal:	458		\$10,486.30		\$20,238.56
Labor Escalation – Management/Administrative (Aug 94)				1.058	
Labor Escalation – Technical/Professional (Aug 94)			\$19,726.72	1.062	\$20,949.78
Labor Escalation – Clerical (Aug 94)			\$511.84	1.051	\$537.94
TOTAL LABOR:			\$20,238.56		\$21,487.72

ABB ENVIRONMENTAL SERVICES, INC.

TASK: 5 – Follow – Up Reports

PROJECT: CTO #077/Modification – UST Contamination Assessment @ BEQ, NS Mayport

MANAGER: John Kaiser

Description	Base	Rate	Subtotal	Multiplier	Total
Air Fare				1.02	
Lodging				1.02	
Per Diem				1.02	
Car Rental/Fuel		\$50.00		1.02	
Field Van Rental/Fuel		\$80.00		1.02	
TOTAL TRAVEL:					
Telephone/Telefax:	5	\$2.20	\$11.00	1.02	\$11.22
Shipping – Letter/Other	2	\$20.00	\$40.00	1.02	\$40.80
Shipping – Sample Cooler				1.02	
Expendable Supplies				1.02	
Copying, Internal	800	\$0.05	\$40.00	1.02	\$40.80
Binders, 2"	20	\$10.95	\$219.00	1.02	\$223.38
Other				1.02	
Other				1.02	
TOTAL OTHER DIRECT COSTS:					\$316.20
Drilling Services				1.02	
Analytical Services			\$550.00	1.02	\$561.00
Surveying Services				1.02	
Data Validation Services				1.02	
Reproduction				1.02	
Geophysical Surveying Services				1.02	
Subconsultant	4	\$50.00	\$200.00	1.02	\$204.00
Other				1.02	
Other				1.02	
Other				1.02	
Other				1.02	
TOTAL SUBCONTRACT COSTS:					\$765.00
TOTAL COST:					\$22,568.92
Award Fee – Labor, Travel & ODCs			\$21,803.92	0.08	\$1,744.31
Award Fee – Subcontract			\$765.00	0.045	\$34.43
TOTAL COST PLUS AWARD FEE:					\$24,347.66

ABB Environmental Services, Inc.
Level of Effort Estimate by Subtask
CTO #077/Modification – Contamination Assessment @ BEQ, NS Mayport

Task: 1 – Project Management

Description	Labor Hour Estimate		
	TM 4	PA 2	Total:
TFMR	72	36	108
Daily Management	108	54	162
Total LOE:	180	90	270

Task 2 – CAP & HASP

Description	Labor Hour Estimate								Total
	QM/F	HM	EX 1	SS 4	XU 2	CD	TE	CL	
CAP	2		3	8	8	4	2	3	30
HASP	1	2		4	4				11
Total LOE:	3	2	3	12	12	4	2	3	41

Task 3 – Field Investigation

Description	Labor Hour Estimate					Total
	EX 1	SS 4	GE 2	GE 1	EN 1	
Drilling		8	80	80	8	176
GW Sampling		8	60	60		128
Mob/Preparation		4	8	4	14	30
SOW	3	10	20	20	20	73
Total LOE:	3	30	168	164	42	407

ABB Environmental Services, Inc.
Level of Effort Estimate by Subtask
CTO #077/Modification – Contamination Assessment @ BEQ, NS Mayport

Task 4 – Contamination Assessment Reports

Description	Labor Hour Estimate									
	QM/F	EX 1	SS 4	GE 2	GE 1	SS 3	CD	TE	CL	Total
CAR Preparation			35	110	80	5	20		16	266
CAR Review	3	5	10	15				4	4	41
Addendum Preparation	1	6	10	20	10		8	2	4	61
Total LOE:	4	11	55	145	90	5	28	6	24	368

Task 5 – Follow-up Reports

Description	Labor Hour Estimate								
	EX 1	SE 4	EN 2	SS 3	GE 2	CD	TE	CL	Total
Alternative Review	3	28	32	6	6	2			77
Design		41	74			4			119
Cost & Schedule		10	10						20
Report Preparation	12	48	56	3	13	16		20	168
Review	2	8	8			4	4	2	28
Addendum			20	20		4		2	46
Total LOE:	17	135	200	29	19	30	4	24	458

ABB Environmental Services, Inc.
Equipment and Expendable Supply Costs
CTO #077/Modification – Contamination Assessment at BEQ, Building 1586, NS Mayport

Item Description	U/M	Qty	Unit Price	Total Price
Field Office Trailer				
Hard – cover field books	each	3	\$9.95	\$29.85
Soil Sampling				
Munsell soil color charts	each	1	\$68.75	\$68.75
Ziploc baggies, quart	500/box	1	\$56.59	\$56.59
Ziploc baggies, gallon	250/box	2	\$12.87	\$25.73
Spray paint, fluorescent	each	2	\$4.00	\$8.00
Wire survey flags	package	1	\$3.50	\$3.50
Groundwater Sampling				
0.75" X 2" teflon bailer	each	10	\$57.50	\$575.00
Calibration standards, pH meters	set	1	\$25.51	\$25.51
Calibration standards, conductivity meters	each	1	\$8.00	\$8.00
Silicon MasterFlex tubing for peristaltic pump	25 ft	3	\$56.00	\$168.00
Metals filters	each	15	\$11.75	\$176.25
pH paper	box	2	\$10.65	\$21.30
Quart Mason jars	12/case	1	\$4.68	\$4.68
Short–hasped well locks	each	12	\$5.12	\$61.44
Well tags, preprinted	each	12	\$3.35	\$40.20
Sample Shipping Materials				
Bubble pack	roll	1	\$83.35	\$83.35
Paper towels	case	1	\$30.00	\$30.00
Duct	roll	5	\$2.97	\$14.85
Strapping	roll	5	\$3.10	\$15.50
Wrapping	roll	5	\$1.77	\$8.85
Surveying	12 rolls	1	\$12.60	\$12.60
Decontamination of Sampling Equipment				
Specialty bailer brushes	each	2	\$7.28	\$14.55
Decon brushes	each	2	\$1.99	\$3.98
Alconox	case	1	\$62.64	\$62.64
Teflon squeeze bottles	2/box	2	\$116.97	\$233.94
Visqueene	roll	2	\$3.30	\$6.60
Cleaning Solvent – – Storage & Disposal				
Nitric acid, 70% reagent grade	1 liter	1	\$32.08	\$32.08

ABB Environmental Services, Inc.
Equipment and Expendable Supply Costs
CTO #077/Modification – Contamination Assessment at BEQ, Building 1586, NS Mayport

Item Description	U/M	Qty	Unit Price	Total Price
Clean Storage				
Large garbage bags	roll	1	\$5.97	\$5.97
Regular garbage bags	box	1	\$4.44	\$4.44
Aluminum foil, 1000' roll	each	1	\$45.00	\$45.00
Dermal Body Protection				
Tyvek -- PVC	12/pack	1	\$49.08	\$49.08
Foot Gear				
Pull-on boot protectors	10 pairs	1	\$32.00	\$32.00
Gloves				
Powder-free gloves	box	5	\$10.50	\$52.50
Nitrile -- N-Dex	12 pairs	1	\$10.00	\$10.00
Respiratory Protection				
Full-face respirators, MSA	each	1	\$155.70	\$155.70
Respirator cartridges, organic with HEPA filter, MSA	6/box	1	\$56.30	\$56.30
Air Monitoring Equipment				
Detector tubes for pump: benzene	each	1	\$35.45	\$35.45
Health & Safety Precautionary Equipment				
Caution tape	package	1	\$35.10	\$35.10
First aid boxes	each	1	\$32.15	\$32.15
Field Laboratory				
GC carrier gas, "C" size	bottle	1	\$75.00	\$75.00
GC Analytical Standards – BTEX, w/septa caps	each	1	\$73.00	\$73.00
40 – ml VOA Vials	case	2	\$89.02	\$178.04

Total Estimated Cost:

\$2,631.47

ABB Environmental Services, Inc.
Travel Estimate
CTO #077/Modification – Contamination Assessment @ BEQ, NS Mayport

Task: 1 – Project Management

Purpose	Traveller	Origin	Destina- tion	Air Fare Costs			Lodging Costs			Per Diem Costs			Car/Van Rental Costs		
				No. Flites	Unit Rate	Total Cost	No. Nites	Unit Rate	Total Cost	No. Days	Unit Rate	Total Cost	No. Days	Unit Rate	Total Cost
Site Visit	TOM	Talla.	Mayport				1	\$50	\$50	2	\$30	\$60	2	\$50	\$100
Total Travel:							1		\$50	2		\$60	2		\$100

Task: 3 – Field Investigation

Purpose	Traveller	Origin	Destina- tion	Air Fare Costs			Lodging Costs			Per Diem Costs			Car/Van Rental Costs		
				No. Flites	Unit Rate	Total Cost	No. Nites	Unit Rate	Total Cost	No. Days	Unit Rate	Total Cost	No. Days	Unit Rate	Total Cost
Drilling	Sr. Sci.	Talla.	Mayport				1	\$50	\$50	2	\$30	\$60	2	\$50	\$100
	Geologist	Jack'ville	Mayport										8	\$80	\$640
	Geologist	Jack'ville	Mayport										8	\$50	\$400
GW Sampling	Geologist	Jack'ville	Mayport										6	\$80	\$480
	Geologist	Jack'ville	Mayport										6	\$50	\$300
Total Travel:							1		\$50	2		\$60	30		\$1,920

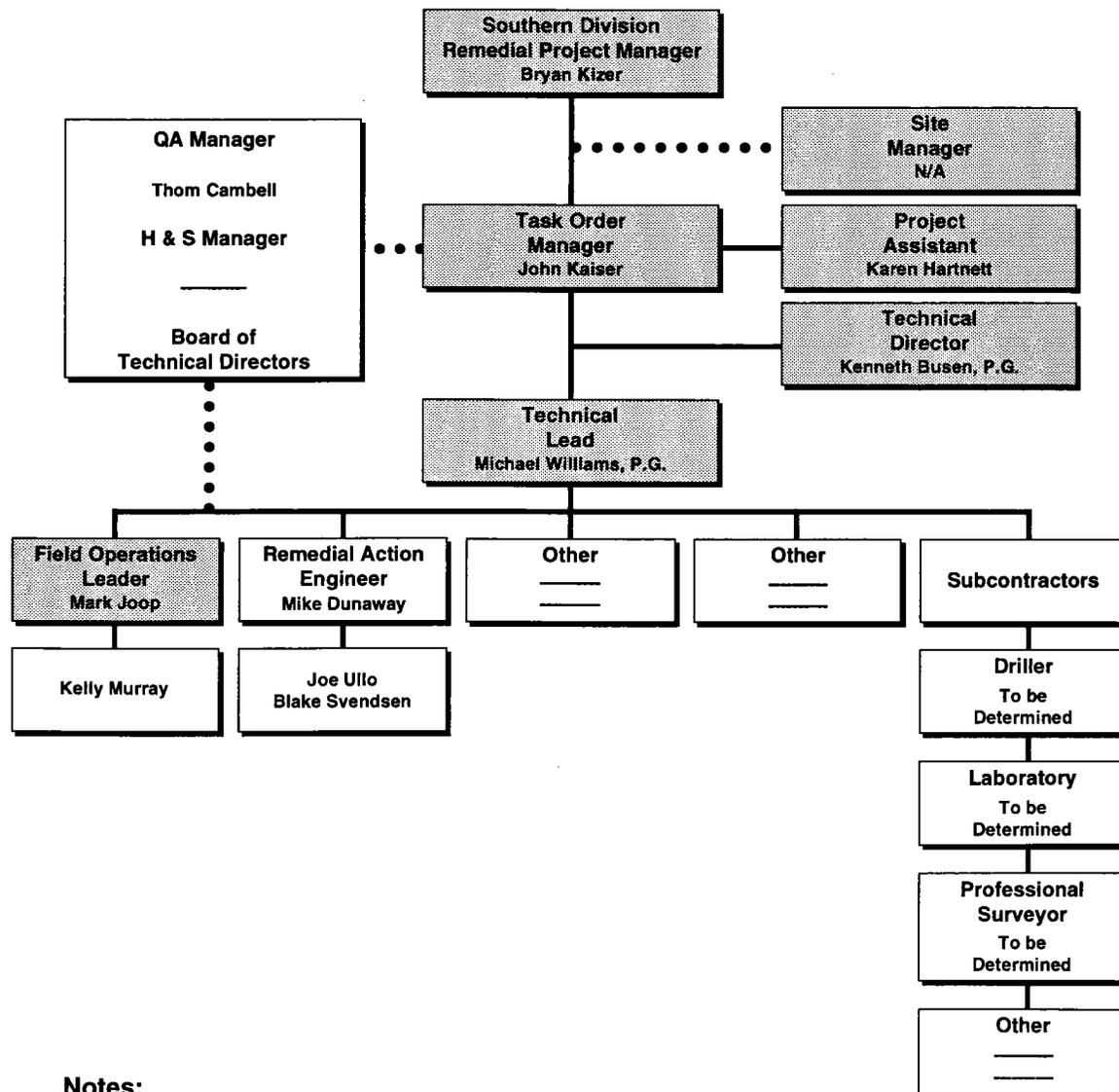
ATTACHMENT C
ORGANIZATION CHART

NAVY CLEAN I UST PROJECTS CTO FUNCTIONAL ORGANIZATION

Project Title: Base Enlisted Mens' Quarters

CTO No. 77

Date: March 1994



Notes:

- Principal Team Members

The Technical Lead and the Field Operations Leader may be the same Professional.

ATTACHMENT D

GLOSSARY

GLOSSARY

ABB-ES	ABB Environmental Services, Inc.
BEQ	Base Enlisted Men's Quarters
bls	below land surface
CA	contamination assessment
CAP	Contamination Assessment Plan
CAR	Contamination Assessment Report
CTO	contract task order
EIC	Engineer-in-Charge
FAC	Florida Administrative Code
FAR	Federal Acquisition Regulations
FDEP	Florida Department of Environmental Protection
HASP	Health and Safety Plan
GC	gas chromatograph
LOE	level of effort
MOP	Monitoring Only Plan
NAVSTA	Naval Station
OVA	organic vapor analyzer
PCAR	Preliminary Contamination Assessment Report
POA	Plan of Action
ppm	part per million
QA/QC	quality assurance/quality control
RAP	Remedial Action Plan
SOUTHNAV- FACENCOM	Southern Division, Naval Facilities Engineering Command
SOW	statement of work
TFMR	Technical and Financial Monthly Report
UST	underground storage tank
VOCs	volatile organic compounds