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FINAL PLAN OF ACTION ALPHA-DELTA PIER CONTAMINATION ASSESSMENT STUDY NS MAYPORT FL

3/1/1991

ABB ENVIRONMENTAL SERVICES

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FINAL

PLAN OF ACTION
ALPHA - DELTA PIER
CONTAMINATION ASSESSMENT STUDY
NAVAL STATION MAYPORT
MAYPORT, FLORIDA

CONTRACT TASK ORDER NO. 0016
NAVY CLEAN DISTRICT I
CONTRACT NO. N62467-89-D-0317

MARCH 1991

ABB Environmental Services, Inc.

ASEA BROWN BOVERI

WORK PLAN

CONTRACT NO. N62467-89-D-0317
CTO NO. 0016

ALPHA-DELTA PIER CONTAMINATION ASSESSMENT STUDY
NAVAL STATION MAYPORT
JACKSONVILLE, FLORIDA

March 1991

Submitted By:

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

TABLE OF CONTENTS

SECTION	TITLE	PAGE NO.
I.	INTRODUCTION	1
II.	SCOPE OF SERVICES	2
III.	KEY PERSONNEL	6
IV.	SCHEDULE	8
V.	COST	9
VI.	FEE ITEMIZATION FORM SCOPE LIMITATION	9

ATTACHMENTS

Attachment A - Schedule
Attachment B - Cost Estimate

I. INTRODUCTION

On September 6, 1990, Southern Division (SOUTHDIV) Naval Facilities Engineering Command (NAVFACENGCOM) contracted ABB Environmental Services, Inc. (ABB-ES) (Contract No. N62467-89-D-0317) to assist the Navy's Environmental Engineering Program by providing environmental and engineering support services for the Underground Storage Tank (UST) Program. The first step in the process of executing a Contract Task Order (CTO) is for ABB-ES to respond to a Statement of Work (SOW) by participating in a site visit to define the SOW and to develop a Work Plan. The Work Plan presents a description of the scope of services, a schedule showing the duration of the tasks, and estimated costs associated with the defined tasks.

The pier area consists of sheet pile bulkheads with a predominantly asphalt roadway cap. There are many existing underground utilities throughout the pier area, which may interfere with the investigation and migration of contaminants. The source of the petroleum contamination is believed to be pipeline systems that transport waste oil, Diesel Fuel Marine (DFM), and JP-5 fuel. All pipelines are connected to the fuel farm. The pipelines vary between 6 and 12 inches in diameter and are all constructed of steel. The area under investigation is estimated to be approximately 1,500 feet by 150 feet.

This Work Plan describes the scope of services, presents milestone and Gantt schedules, and provides cost estimates for the work elements described in the SOW (CTO No. 0016 dated January 3, 1991) for the contamination assessment study of the Alpha-Delta Pier. This Work Plan includes the following tasks:

- <u>Management Activities</u>

  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

- <u>Technical Activities</u>

  Task 2 - Preparation of Contamination Assessment Plans (CAPs), a Health and Safety Plan (HASP), and a Quality Assurance Plan (QAP)

  Task 3 - Phase I Soil Boring Field Investigation and Screening

  Task 4 - Phase II Monitoring Well Installation, Sampling, and Surveying

  Task 5 - Preparation of Contamination Assessment Reports

  Task 6 - Preparation of Follow-up Reports.

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

II. SCOPE OF SERVICES

Task 1 - Monthly Progress Reports

ABB-ES will 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 (Part IX, Attachment A) and will summarize activities performed, any problems encountered, and proposed problem resolutions. It will also include a schedule update in the form of a Gantt chart. ABB-ES will notify SOUTHDIV immediately upon discovery of any significant new site conditions, including imminent hazard or substantial endangerment, and any deviation from the project schedule, plan, or budget.

The Phase I cost estimates reflect the preparation of 8 monthly reports for this purpose.

The key personnel and level of effort (LOE) estimated for this task include: Task Order Manager (64 hours) and Program Assistant (32 hours).

Other direct costs (ODCs) include: phone costs.

Task 2 - Preparation of CAPs, a HASP, and a QAP

Draft and final Contamination Assessment Plans (CAPs) and Health and Safety Plans (HASPs) will be developed and submitted to SOUTHDIV prior to beginning any field work at the site. The CAPs will present site background information, the overall technical approach, a description of the field activities, field techniques and methodologies, and project milestones and timeframes. The contamination assessment activities and subsequent reports (except PRAPs) will follow Florida Department of Environmental Regulations (FDER) guidelines, as outlined in the Florida Administrative Code (FAC) Chapter 17-770 and the SOUTHDIV report format guidance manual.

In lieu of a Quality Assurance Plan, ABB-ES will submit to SOUTHDIV copies of ABB-ES's FDER approved Comprehensive Quality Assurance Plan (ComQAP) that includes contamination assessments at petroleum sites. State regulations no longer require a separate Quality Assurance Project Plan for each site, only an approved Comprehensive Plan. It has been agreed between SOUTHDIV and ABB-ES that the submittal of ABB-ES's approved ComQAP will satisfy SOUTHDIV's Quality Assurance/Quality Control Plan requirement for sites under the CLEAN Underground Storage Tank (UST) Program.

The key personnel and LOE estimated for this task include: Health and Safety Manager (2 hours), Task Order Manager (18 hours), Senior Scientist (40 hours), Hydrologist (34 hours), Technical Editor (4 hours), Health and Safety Assistant (2 hours), Project Assistant (8 hours), Draftsperson (16 hours) and Clerical (36 hours).

Other direct costs (ODCs) include: photocopying costs and report binding costs.

Task 3 - Phase I Soil Boring Field Investigation and Screening

Task 3 will include a start-up meeting at the site to initiate the field work and the field investigation operations. The purpose of the Phase I Soil Boring Program is to assess the horizontal extent, quantitative extent, and characterization of the petroleum contamination at the Alpha-Delta Pier and to determine if it extends much beyond the pier area. A shallow soil gas/groundwater wellpoint will be pushed into the fill material beneath the asphalt cap at select points at the pier site and soil gas and/or groundwater samples will be collected and screened for benzene, ethylbenzene, toluene, and xylene (BETX) using a portable gas chromatograph. The screening of soil and/or groundwater samples from wellpoints will help in defining the extent of the contamination and to provide information for better placement of monitoring wells at the site.

Up to 65 shallow soil borings will be conducted during Task 3 along with up to 8 temporary wellpoints for collecting soil gas or groundwater samples using the KV Macho System or equivalent.

The key personnel and LOE estimated for this task include: Quality Assurance Manager (16 hours), Task Order Manager (22 hours), Senior Scientist (40 hours), Engineer (80 hours), Hydrologist (80 hours), Project Assistant (8 hours), and Clerical (5 hours).

Other direct costs (ODCs) include: field expendables, car rental, communications charges, and travel charges. In addition, there are subcontractor costs for the wellpoint drilling and GC services. All necessary field equipment that will be necessary to complete this task will be purchased under a separate Navy CTO.

Task 4 - Phase II Monitoring Well Installation, Sampling, and Surveying

Task 4 will be conducted upon completion of the Phase I field investigation and will include the installation of monitoring wells, collection and analysis of groundwater samples from the monitoring wells, conducting slug tests from select wells, and surveying of the wells. The purpose of the Phase II investigation is to assess the vertical and horizontal extent and to quantitatively characterize the petroleum contaminated groundwater at the pier. Information obtained from the Phase I investigation will be used in the placement of the monitoring wells. Placement of wells will also be aided by a field gas chromatograph for measuring levels of benzene, ethylbenzene, toluene, and xylenes (BETX). Groundwater samples will be collected from the monitoring wells and analyzed for parameters

required by FDER Chapter 17-770.600(8), FAC. Slug tests will be performed on wells at each of the sites for estimating aquifer hydraulic conductivity. Finally, a licensed Florida professional surveyor will survey the horizontal and vertical coordinates for each of the monitoring wells into either the USGS NAD'27 or base coordinate grid system. With the help of the base Environmental Coordinator, a survey of all potable water wells within 1/4 mile radius of each site will be conducted.

Twenty-five (25) shallow monitoring wells are scheduled to be installed at the Alpha-Delta Pier site. From the soil borings during the installation of the wells up to 10 soil samples will be collected and analyzed for waste oil parameters at an analytical laboratory. Five QA/QC samples will be collected with the soil samples. Groundwater samples will be collected from each of the 25 shallow monitoring wells at the site and analyzed for waste oil parameters. In addition 3 duplicate samples, 2 equipment blanks, 2 field blanks and 5 trip blanks will be collected.

No precision tank testing or pipeline testing has been scheduled for this site.

It should be noted that during the field investigation of this program ABB-ES personnel and their subcontractors will coordinate efforts with site personnel to dispose of contaminated fluids and soils on site. No drums will be supplied by ABB-ES or the subcontractors. It will be the Navy's responsibility to dispose of any hazardous waste.

The key personnel and LOE estimated for this task include: Task Order Manager (15 hours), Senior Scientist (24 hours), Engineer (150 hours), Hydrologist (170 hours), Project Assistant (8 hours), and Clerical (4 hours).

Other direct costs (ODCs) include: field expendables, car rental, communications charges, and travel charges. In addition, there are subcontractor costs for the drilling services, analytical laboratory services, and professional surveying services. All necessary field equipment that will be necessary to complete this task will be purchased under a separate Navy CTO.

Task 5 - Preparation of Contamination Assessment Reports

Draft (90%), draft final (100%), and final Contamination Assessment Reports (CARs) will be prepared and submitted to SOUTHDIV and the activity upon completion of the field investigation. The reports will discuss site background information, site conditions, findings, and recommendations for the Alpha-Delta Pier site at NS Mayport pursuant to FDER Chapter 17-770.630(1) FAC. Recommendations shall be made as to the need for any follow-up reports. Site location maps, locations of soil borings and monitoring wells, and contamination delineation maps will be included with the reports.

The key personnel and LOE estimated for this task include: Task Order Manager (36 hours), Senior Engineer (6 hours), Senior Scientist (62 hours), Hydrologist (60 hours), Technical Editor (4 hours), Project Assistant (8 hours), Draftsperson (40 hours), and Clerical (32 hours).

Other direct costs (ODCs) include: report photocopying costs and binding costs.

Task 6 -Preparation of Follow-up Reports

Based on the findings, conclusions, and recommendations of the final CAR, draft (90%), draft-final (100%), and final follow-up reports will be prepared for the Alpha-Delta Pier site at NS Mayport. The reports shall be either No Further Action Proposals (NOFAPs), Monitoring Only Proposals (MOPs), or Preliminary Remedial Action Plans (PRAPs).

For the purpose of costing it will be assumed that PRAPs will be developed for the Alpha-Delta Pier site. The PRAPs will include the following items

- summary sheet of the Contamination Assessment Report,
- 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,
- comparison of contaminant levels found with existing state and EPA cleanup criteria in table format,
- disposition and expected contamination concentrations in any effluent from the proposed cleanup method,
- cost estimates and schedules for the design phase, construction/ startup phase and the operation phase,
- designation of monitoring wells and proposed methodology for verifying accomplishment of PRAP goals (cleanup levels),
- general discussion of the treatment of contaminated soils, and
- recommendations for conducting pilot studies and obtaining additional information.

The PRAPs, as outlined herein, are not intended to fulfill the Remedial Action Plan (RAP) requirements of Chapter 17.770 FAC. The PRAPs will compare (two to four) remedial technologies for cleanup of both groundwater and soil, and the selected technology will be justified based on its technical and economic

feasibility. A conceptual design and rationale for the design will be provided for the selected remedial technology.

It is our understanding that Southern Division will develop performance specifications for construction that are based on the PRAP and the CAR. While these documents will provide some of the information necessary to develop performance specifications, neither document will be biddable. Additional site information that may be needed to develop the performance specifications but not included in this scope is as follows:

- existing conditions site survey plans,
- locations of existing utilities, and
- location and available amount of electric power.

The key personnel and LOE estimated for this task include: Task Order Manager (24 hours), Senior Engineer (24 hours), Senior Scientist (8 hours), Engineer (80 hours), Technical Editor (4 hours), Technician (24 hours), Project Assistant (16 hours), Draftsperson (32 hours), and Clerical (16 hours).

Other direct costs (ODCs) include: report copying and binding costs.

III. KEY PERSONNEL

The designated roles for the Alpha-Delta Pier Contamination Assessment Program work at NS Mayport are as follows:

- Program Manager. The Program Manager, Tony Allen, is responsible for oversight and management of the overall multi-installation Navy CLEAN contract for District I. In this position, Mr. Allen is able to identify overall program needs, promote technology and other information transfer between various Navy CLEAN projects, and direct resources as appropriate, for effective and timely completion of program activities.

- Task Order Manager. The Task Order Manager for the Contamination Assessment at the Alpha-Delta Pier will be Peter Redfern, C.P.E. 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 Technical Director, and others as appropriate, on the status of the project.

- Technical Director. Mr. Kenneth L. Busen, P.G. will be the Technical Director of the Contamination Assessment at the Alpha-Delta Pier. Mr. Busen 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. Busen 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, and others as appropriate, on the status of the project.

- Quality Review Board. A Quality Review Board comprised of senior technical staff from the ABB-ES team will assist the Task Order Manager and Technical Director 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 U.S. Navy Southern Division.

  Michael Keirn, Ph.D., Kathleen O'Neil, P.G., and Margaret Layne, P.E. 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 at the Alpha Delta Pier.

- Contract Manager. The position of contract manager is established because of the importance of day-to-day scope, schedule and budget monitoring for the Alpha-Delta Pier Contamination Assessment Program between ABB-ES and SOUTHDIV contracts. It is expected that program decisions will be occurring frequently. Therefore, it is necessary to anticipate and immediately implement contractual actions (i.e., amend subcontracts, initiate procurement actions, etc.) to carry out the program plans. Laurie Huffman will be responsible to the Task Order Manager and will be the principal communication link to the U.S. Navy Southern Division contract officer. Three specific tasks for which Ms. Huffman will be responsible are the following:

  - establish and oversee all subcontract actions to support the project;
  - review technical/financial monthly reports for contractual conformance;
  - ensure that appropriate financial record and reporting requirements are met.

IV. SCHEDULE

Attachment A depicts a Gantt and Pert schedule, indicating the duration and initiation/completion dates of individual tasks for the following activity sites:

- NS Mayport-CTO No. 0016;
- NCSC Panama-CTO No. 0011;
- NAS Key West-CTO No.0007;
- NADEP Pensacola-CTO No. 0008;
- NAS Pensacola (DFM Line)-CTO No. 0013;
- NAS Pensacola (Sherman Field)-SOW No. 0001
- NTC Orlando-CTO No. 0015;
- NAS Whiting Field-CTO No. 0009;
- NAS Cecil Field-CTO No. 0002;
- NCBC Gulfport-CTO No. 0012; and
- DFSP Hanahan Field-CTO No. 0010.

The schedule as shown is in conformance with those agreed dates sighted in the Department of the Navy November 20, 1990 letter to Mr. Eric Nuzie, Project Manager-State of Florida Department of Environmental Regulation entitled: Site Management Plan For Petroleum Contamination Agreement.

V. COST

Attachment B (Table 1 and the fee itemization form) presents the cost estimate to complete the scope of services described herein. A supplement sheet has been added to allow the itemization of field equipment and supplies proposed for Task 3 (Contamination Assessment Field Investigation), this supplement refers only to Task 3.

VI. FEE ITEMIZATION FORM SCOPE LIMITATION

The purpose of this paragraph is to clearly define the scope and assumptions made for this fee proposal should it be necessary to enact provisions delineated at Part VII, Para. 22 of the subject contract in accordance with FAR 5243-2.

Specific Parameters:
As outlined specifically in Work Elements 1 through 10 of the SOW dated January 3, 1991.

Period of Performance Parameters:
Costs presented are estimated to be incurred through November 15, 1991.

ATTACHMENT A

SCHEDULE

NAVY CLEAN GANTT SCHEDULE

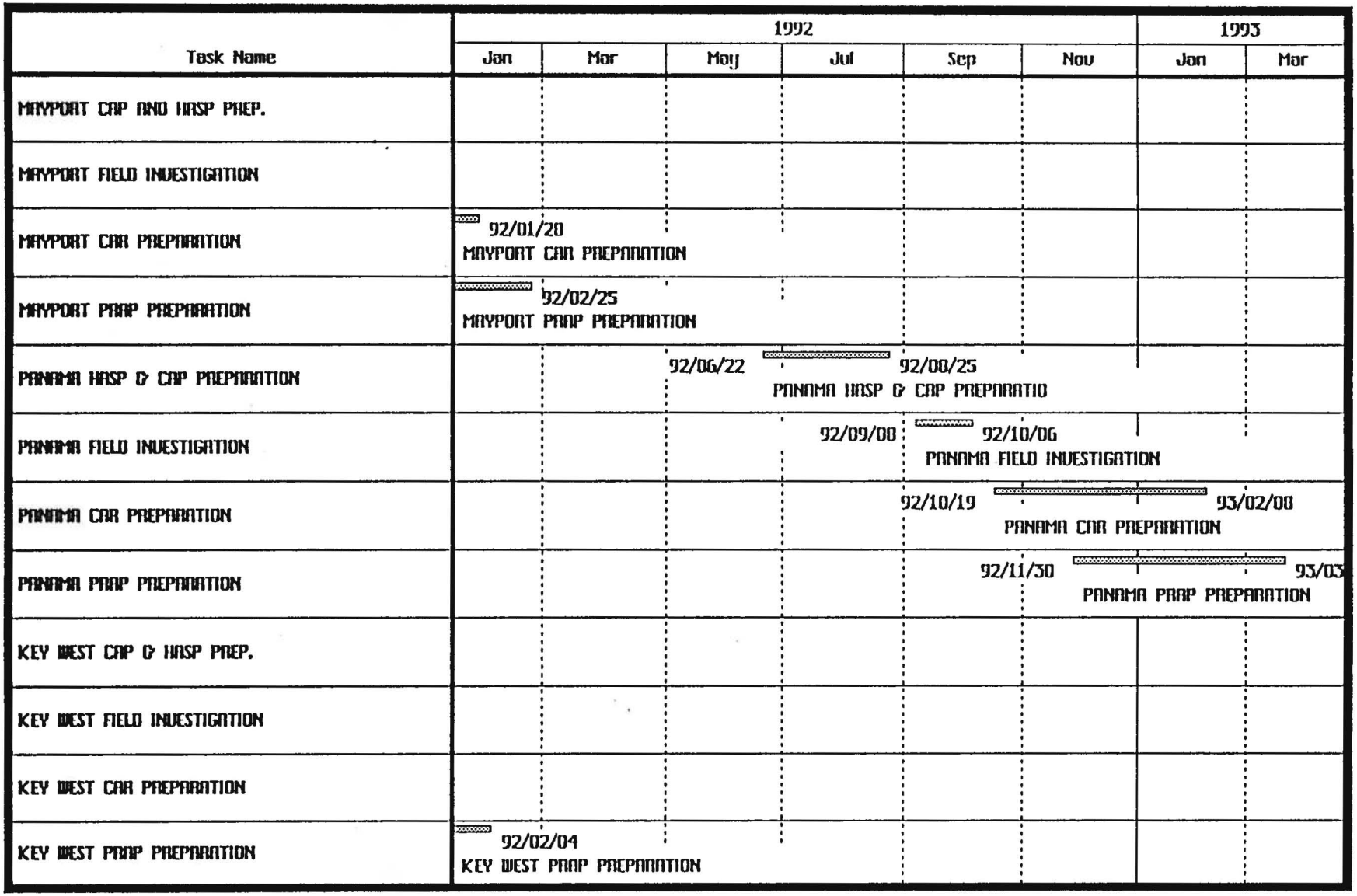
Task Name	Start Status	Status	1991 Mar	May	Jul	Sep	Nov	19 J
MAYPORT CAP AND HASP PREP.	Future	C		91/06/17		91/08/13 MAYPORT CAP AND HASP PREP.		
MAYPORT FIELD INVESTIGATION	Future	C			91/08/26	91/10/01 MAYPORT FIELD INVESTIGATION		
MAYPORT CAR PREPARATION	Future	C				91/10/15	MAYPORT CAR PREP	
MAYPORT PRAP PREPARATION	Future	C				91/11/04	MAYPORT PRAP	
PANAMA HASP & CAP PREPARATION	Future	C						
PANAMA FIELD INVESTIGATION	Future	C						
PANAMA CAR PREPARATION	Future	C						
PANAMA PRAP PREPARATION	Future	C						
KEY WEST CAP & HASP PREP.	Future	C	91/05/06		91/07/02 KEY WEST CAP & HASP PREP.			
KEY WEST FIELD INVESTIGATION	Future	C		91/07/08		91/08/26 KEY WEST FIELD INVESTIGATION		
KEY WEST CAR PREPARATION	Future	C			91/09/09			91 KEY WEST CAR PREPARATION
KEY WEST PRAP PREPARATION	Future	C				91/10/07	KEY WEST PRAP PREP	

SCHEDULE DEVELOPED UTILIZING NAVY COMMITMENT DATES SPECIFIED IN NAVY LETTER OF NOVEMBER 20, 1990-SITE MANAGEMENT PLAN FOR PETROLEUM CONTAMINATION AGREEMENT

Baseline | Actual | Milestone

REVISED MARCH 13, 1991

NAVY CLEAN GANTT SCHEDULE



SCHEDULE DEVELOPED UTILIZING NAVY COMMITMENT DATES SPECIFIED IN NAVY LETTER OF NOVEMBER 20, 1990-SITE MANAGEMENT PLAN FOR PETROLEUM CONTAMINATION AGREEMENT

Baseline

Actual

Milestone

REVISED MARCH 13, 1991

NAVY CLEAN GANTT SCHEDULE

Task Name	Start Status	Status	1991 Mar	May	Jul	Sep	Nov	19 J
NADEP PENSACOLA HASP & CAP	Future	C				91/10/07 NADEP PENSACOLA HA		91/12
NADEP PENSACOLA PH I FLD INVST	Future	C					92/01/06	
NADEP PENSACOLA PHII FLD INVST	Future	C						
NADEP PENSACOLA CAR PREP.	Future	C						
NADEP PENSACOLA PRAP PREP.	Future	C						
ORLANDO HASP & CAP PREP.	Future	C	91/ ORLANDO HASP & CAP PREP.		91/06/11			
ORLANDO FIELD INVESTIGATION	Future	C		91/06/17	91/07/01 ORLANDO FIELD INVESTIGATION			
ORLANDO CAR PREPARATION	Future	C			91/07/15 ORLANDO CAR PREPARATION		91/10/30	
ORLANDO PRAP PREPARATION	Future	C			91/08/19 ORLANDO PRAP PREPARATION			91/12/
ORLANDO 1ST QUARTER	Future	C						
ORLANDO 2ND QUARTER	Future	C			91/09/16	91/10/15 ORLANDO 2ND QUARTER		
ORLANDO 3RD QUARTER	Future	C					91/12/16	ORLA

SCHEDULE DEVELOPED UTILIZING NAVY COMMITMENT DATES SPECIFIED IN NAVY LETTER OF NOVEMBER 20, 1990-SITE MANAGEMENT PLAN FOR PETROLEUM CONTAMINATION AGREEMENT

Baseline | Actual | Milestone

REVISED MARCH 13, 1991

NAVY CLEAN GANTT SCHEDULE

Task Name	1992						1993	
	Jan	Mar	May	Jul	Sep	Nov	Jan	Mar
NADEP PENSACOLA HASP & CAP								
NADEP PENSACOLA PH I FLD INVST	92/02/11 NADEP PENSACOLA PH I FLD INV							
NADEP PENSACOLA PHII FLD INVST	92/02 NADEP PENSACOLA PHII FLD INV			92/07/09				
NADEP PENSACOLA CAR PREP.			92/07/20	NADEP PENSACOLA CAR PREP.		92/11/12		
NADEP PENSACOLA PRAP PREP.				92/08/24	NADEP PENSACOLA PRAP PREP.	92/11/12		
ORLANDO HASP & CAP PREP.								
ORLANDO FIELD INVESTIGATION								
ORLANDO CAR PREPARATION								
ORLANDO PRAP PREPARATION								
ORLANDO 1ST QUARTER			92/06/17	92/07/16 ORLANDO 1ST QUARTER				
ORLANDO 2ND QUARTER								
ORLANDO 3RD QUARTER	92/01/15 ORLANDO 3RD QUARTER							

SCHEDULE DEVELOPED UTILIZING NAVY COMMITMENT DATES SPECIFIED IN NAVY LETTER OF NOVEMBER 20, 1990-SITE MANAGEMENT PLAN FOR PETROLEUM CONTAMINATION AGREEMENT

Baseline | Actual | Milestone

REVISED MARCH 13, 1991

NAVY CLEAN GANTT SCHEDULE

Task Name	Start Status	Status	1991 Mar	May	Jul	Sep	Nov	19 J
ORLANDO 4TH QUARTER	Future	C						
PENSACOLA MOP & HASP	Future	C	91	91/05/20 PENSACOLA MOP & HASP				
PENSACOLA 1ST QUARTER MONITOR	Future	C	91/05/20	91/07/02 PENSACOLA 1ST QUARTER MONITO				
PENSACOLA 2ND QUARTER MONITOR	Future	C			91/08/20	91/10/03 PENSACOLA 2ND QUARTER MONI		
PENSACOLA 3RD QUARTER MONITOR	Future	C					91/11/25 PENSACOL	9
PENSACOLA 4TH QUARTER MONITOR	Future	C						
WAITING HASP AND CAP PREP.	Future	C			91/08/12	91/10/16 WAITING HASP AND CAP PREP.		
WAITING PHASE I FIELD INVEST.	Future	C				91/10/21	WAITING PHASE I F	91/1
WAITING PH II FIELD INVEST.	Future	C					92/01/06	
WAITING CAR PREPARATION	Future	C						
WAITING PRAP PREPARATION	Future	C						
CECIL FIELD-FIELD INVEST.	Future	C	91/05/06	CECIL FIELD-FIELD INVEST.	91/07/31			

SCHEDULE DEVELOPED UTILIZING NAVY COMMITMENT DATES SPECIFIED IN NAVY LETTER OF NOVEMBER 20, 1990-SITE MANAGEMENT PLAN FOR PETROLEUM CONTAMINATION AGREEMENT

Baseline | Actual | Milestone

REVISED MARCH 13, 1991

NAVY CLEAN GANTT SCHEDULE

Task Name	1992						1993	
	Jan	Mar	May	Jul	Sep	Nov	Jan	Mar
ORLANDO 4TH QUARTER	92/03/16	92/04/27 ORLANDO 4TH QUARTER						
PENSACOLA MOP & HASP								
PENSACOLA 1ST QUARTER MONITOR								
PENSACOLA 2ND QUARTER MONITOR								
PENSACOLA 3RD QUARTER MONITOR								
PENSACOLA 4TH QUARTER MONITOR	92/02/2	92/04/17 PENSACOLA 4TH QUARTER MONITO						
WHITING HASP AND CAP PREP.								
WHITING PHASE I FIELD INVEST.								
WHITING PH II FIELD INVEST.	WHITING PH II FIELD INVEST.			92/07/10				
WHITING CAP PREPARATION			92/07/20	WHITING CAP PREPARATION		92/11/04		
WHITING PRAP PREPARATION				92/08/24	WHITING PRAP PREPARATION	92/12/10		
CECIL FIELD-FIELD INVEST.								

SCHEDULE DEVELOPED UTILIZING NAVY COMMITMENT DATES SPECIFIED IN NAVY LETTER OF NOVEMBER 20, 1990-SITE MANAGEMENT PLAN FOR PETROLEUM CONTAMINATION AGREEMENT

Baseline | Actual | Milestone

REVISED MARCH 13, 1991

NAVY CLEAN GANTT SCHEDULE

Task Name	Start Status	Status	1991 Mar	May	Jul	Sep	Nov	19 J
CECIL FIELD-CAR PREPARATION	Future	C			91/08/19		91/10/30 CECIL FIELD-CAR PREPARATION	
CECIL FIELD-PRAP PREPATION	Future	C				91/10/11	CECIL FIELD-PRAP PR	9
SHERMAN DESIGN UPGRADE EQUIP	Future	C	91/03/27 SHERMAN DESIGN UPGRADE EQUIP					
SHERMAN WRITE OPER. MANUAL	Future	CR	91/0 91/04/23 SHERMAN WRITE OPER. MANUAL					
SHERMAN EQUIP. INSTALLATION	Future	CR	91/ 91/04/18 SHERMAN EQUIP. INSTALLATION					
SHERMAN REMOVE CONTMNATED SOIL	Started	C						
SHERMAN PROGRESS REPORT	Future	C	91/04 91/04/17 SHERMAN PROGRESS REPORT					
SHERMAN PROGRESS REPORT	Future	C	91/05/15 91/05/17 SHERMAN PROGRESS REPORT					
HANAHAN HASP & CAP	Future	C	91/04 HANAHAN HASP & CAP		91/07/24			
HANAHAN FIELD INVESTIGATION	Future	C			91/08/12	91/10/01 HANAHAN FIELD INVESTIGATION		
HANAHAN CAR PREPARATION	Future	C				91/10/15	HANAHAN CAR PREP	
HANAHAN PRAP	Future	C					91/11/12 HANAHAN PR	

SCHEDULE DEVELOPED UTILIZING NAVY COMMITMENT DATES SPECIFIED IN NAVY LETTER OF NOVEMBER 20, 1990-SITE MANAGEMENT PLAN FOR PETROLEUM CONTAMINATION AGREEMENT

Baseline | Actual | Milestone

REVISED MARCH 13, 1991

NAVY CLEAN GANTT SCHEDULE

Task Name	1992						1993	
	Jan	Mar	May	Jul	Sep	Nov	Jan	Mar
CECIL FIELD-CAR PREPARATION								
CECIL FIELD-PRAP PREPATION								
SHERMAN DESIGN UPGRADE EQUIP								
SHERMAN WRITE OPER. MANUAL								
SHERMAN EQUIP. INSTALLATION								
SHERMAN REMOVE CONTMNATED SOIL								
SHERMAN PROGRESS REPORT								
SHERMAN PROGRESS REPORT								
HANAHAN HASP & CAP								
HANAHAN FIELD INVESTIGATION								
HANAHAN CAR PREPARATION	92/02/11 HANAHAN CAR PREPARATION							
HANAHAN PRAP	92/04/14 HANAHAN PRAP							

SCHEDULE DEVELOPED UTILIZING NAVY COMMITMENT DATES SPECIFIED IN NAVY LETTER OF NOVEMBER 20, 1990-SITE MANAGEMENT PLAN FOR PETROLEUM CONTAMINATION AGREEMENT

Baseline

Actual

Milestone

REVISED MARCH 13, 1991

NAVY CLEAN GANTT SCHEDULE

Task Name	Start Status	Status	1991 Mar	May	Jul	Sep	Nov	19 J
GULFPORT HASP & CAP	Future	C		91/06/03		91/08/06 GULFPORT HASP & CAP		
GULFPORT FIELD INVESTIGATION	Future	C			91/08/19	91/09/10 GULFPORT FIELD INVESTIGATION		
GULFPORT CAR PREPARATION	Future	C				91/09/23	GULFPORT CAR PREPARAT	
GULFPORT PRAP PREPARATION	Future	C				91/10/20	GULFPORT PRAP	

SCHEDULE DEVELOPED UTILIZING NAVY COMMITMENT DATES SPECIFIED IN NAVY LETTER OF NOVEMBER 20, 1990-SITE MANAGEMENT PLAN FOR PETROLEUM CONTAMINATION AGREEMENT

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NAVY CLEAN GANTT SCHEDULE

Task Name	1992						1993	
	Jan	Mar	May	Jul	Sep	Nov	Jan	Mar
GULFPORT HASP & CAP								
GULFPORT FIELD INVESTIGATION								
GULFPORT CAR PREPARATION								
GULFPORT PRAP PREPARATION	92/02/18 GULFPORT PRAP PREPARATION							

SCHEDULE DEVELOPED UTILIZING NAVY COMMITMENT DATES SPECIFIED IN NAVY LETTER OF NOVEMBER 20, 1990-SITE MANAGEMENT PLAN FOR PETROLEUM CONTAMINATION AGREEMENT

Baseline | Actual | Milestone

REVISED MARCH 13, 1991

Feb	Mar	Apr	May

SHERMAN DESIGN UPGRADE EQUIP	
91/03/15	91/03/27

SHERMAN REMOVE CONTMNATED SOIL	
91/03/08	91/03/14

ORLANDO HASP & CAP PREP.	
91/04/08	91/06/11

PENSACOLA MOP & HASP	
91/04/01	91/05/28

SHERMAN WHITE OPER. MANUAL	
91/04/11	91/04/23

SHERMAN EQUIP. INSTALLATION	
91/04/04	91/04/18

SHERMAN PROGRESS REPORT	
91/04/15	91/04/17

HANAHAN HASP & CAP	
91/04/15	91/07/24

KEY WEST CAP & HASP PREP.	
91/05/06	91/07/02

PENSACOLA 1ST QUARTER MONITOR	
91/05/28	91/07/02

CECIL FIELD-FIELD INVEST.	
91/05/06	91/07/31

SHERMAN PROGRESS REPORT	
91/05/15	91/05/17

REVISED MARCH 13, 1991

1991

Jun	Jul	Aug	
MAYPORT CAP AND HASP PREP. 91/06/17 – 91/08/13	KEY WEST FIELD INVESTIGATION 91/07/08 – 91/08/26	MAYPORT FIELD INVESTIGATION 91/08/26 – 91/10/01	KEY WEST (91/09/09
ORLANDO FIELD INVESTIGATION 91/06/17 – 91/07/01	ORLANDO CAR PREPARATION 91/07/15 – 91/10/30	ORLANDO PRAP PREPARATION 91/08/19 – 91/12/06	ORLANDO 91/09/16
GULFPORT HASP & CAP 91/06/03 – 91/08/06		PENSACOLA 2ND QUARTER MONITOR 91/08/28 – 91/10/03	GULFPORT (91/09/23
		WHITING HASP AND CAP PREP. 91/08/12 – 91/10/16	
		CECIL FIELD-CAR PREPARATION 91/08/19 – 91/10/30	
		HANAHAN FIELD INVESTIGATION 91/08/12 – 91/10/01	
		GULFPORT FIELD INVESTIGATION 91/08/19 – 91/09/10	

Sep	Oct	Nov	Dec
CAR PREPARATION 91/12/27	MAYPORT CAR PREPARATION 91/10/15 – 92/01/20	MAYPORT PRAP PREPARATION 91/11/04 – 92/02/25	ORLANDO 3RD QUARTER 91/12/16 – 92/01/15
2ND QUARTER 91/10/15	KEY WEST PRAP PREPARATION 91/10/07 – 92/02/04	PENSACOLA 3RD QUARTER MONITOR 91/11/25 – 92/01/02	
CAR PREPARATION 92/01/13	NADEP PENSACOLA HASP & CAP 91/10/07 – 91/12/12	HANAHAN PRAP 91/11/12 – 92/04/14	
	WHITING PHASE I FIELD INVEST. 91/10/21 – 91/12/18		
	CECIL FIELD-PRAP PREPATION 91/10/11 – 92/01/03		
	HANAHAN CAR PREPARATION 91/10/15 – 92/02/11		
	GULFPORT PRAP PREPARATION 91/10/28 – 92/02/18		

Jan	Feb	Mar	
NADEP PENSACOLA PH I FLD INVST 92/01/06 — 92/02/11	NADEP PENSACOLA PHII FLD INVST 92/02/10 — 92/07/09	ORLANDO 4TH QUARTER 92/03/16 — 92/04/27	PANAMA HASP & 92/06/22
WAITING PH II FIELD INVEST. 92/01/06 — 92/07/10	PENSACOLA 4TH QUARTER MONITOR 92/02/20 — 92/04/17		ORLANDO 1 92/06/17

1992

Jun	Jul	Aug	Sep
CAP PREPARATION 92/08/25	NADEP PENSACOLA CAR PREP. 92/07/20 – 92/11/12	NADEP PENSACOLA PROP PREP. 92/08/24 – 92/11/12	PANAMA FIELD INVESTIGATION 92/09/08 – 92/10/06
ST QUARTER 92/07/16	WAITING CAR PREPARATION 92/07/20 – 92/11/04	WAITING PROP PREPARATION 92/08/24 – 92/12/18	

	Oct	Nov

PANAMA CAR PREPARATION	
92/10/19	93/02/08

PANAMA PRAP PREPARATION	
92/11/30	93/03/19

Task Name	
Start Date	End Date

ATTACHMENT B

COST ESTIMATE

TABLE 1
Cost Estimate for CLEAN Contract Number N62467-89-D-0317
NS Mayport Alpha-Delta Pier Contamination Assessment Work Plan, CTO No. 016
Naval Station Mayport, Florida

TASK	Contract Manager	QA Manager	H&S Manager	Task Order Manager	Senior Scientist	Sci/ Eng.	Hydrologist	Senior Engineer	Technicia	Technical Editor	H&S Ass't	Project Ass'l	Drafts-person	Clerical	TOTAL LOE	TOTAL LABOR COSTS	Shipping & Fed-Ex	Phone & Telex	Subcontract Report Binding	Other Subcontract	Auto Expense	Per Diem	Air Fare	Health & Safety	Equipment/ Expendables	SUBTOTAL ODC's	TOTAL ODC's	TOTAL PROJECT COSTS
	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	$	$	$	$	$	$	$	$	$	$	$	$	$
Task 1 - Monthly Progress Reports	0	0	0	64	0	0	0	0	0	0	0	32	0	0	96	$5,003	0	40	0	0	0	0	0	0	0	40	43	$5,500
Task 2 - Draft & Final HASP and CAP	0	0	2	18	40	0	34	0	0	4	2	8	16	36	160	$6,880	0	0	192	0	0	0	0	0	0	192	206	$7,714
Task 3 - Phase I Field Investigation	0	16	0	22	40	80	80	0	0	0	0	8	0	5	251	$11,969	0	75	0	16960	450	1110	0	0	100	18695	20065	$34,120
Task 4 - Phase II Field Work	0	0	0	15	24	150	170	0	0	0	0	8	0	4	371	$16,411	945	165	0	60184.5	1000	2590	0	0	150	65035	69602	$91,065
Task 5 - 90%, 100% & Final CAR Preparation	0	0	0	36	62	0	60	6	0	4	0	8	40	32	248	$11,273	150	50	384	0	100	148	0	0	0	832	893	$13,243
Task 6 - Prepare Follow-up Report	0	0	0	24	8	80	0	24	24	4	0	16	32	16	228	$9,192	50	100	112	0	0	0	0	0	0	262	281	$10,320
TOTAL Hours & Cost	0	16	2	179	174	310	344	30	24	12	2	80	88	93	1354	$60,748	$1,145	$430	$688	$77,145	$1,550	$3,848	$0	$0	$250	$85,056	$91,290	$161,962

NOTES:

1. Tasks correspond to the Work Plan dated February 22, 1991.
2. Total Labor Costs include overhead, fringe, and G & A.
3. Total ODC's (Other Direct Costs) include G & A.
4. Total Project Costs include 9% fee on Total Labor and Total ODC's.

Project Name: CLEAN - NS Mayport (CTO #016)
Task Manager: Peter Redfern
Date Prepared: March 13,1991
Job # & File Name: 750._-__ / CTO-016.WK1

CONFIDENTIAL INFORMATION - DO NOT QUOTE, CITE OR DUPLICATE

CLEAN FEE ITEMIZATION FORM
SOUTHDIV ENVIRONMENTAL DIVISION

DATE OF SCOPE: 22 February 1991 A&E FIRM: ABB Environmental Services, Inc.
CTO: 0016 DATE OF ESTIMATE: 22 February 1991 CONTRACT NO.: N62467-89-D-0317

PROJECT: ALpha-Delta Pier Contamination Assessment Study
FUNDING: Defense Environmental Restoration Act (DERA)
ACTIVITY: Naval Station Mayport
UIC CODE: N60201 LOCATION: Mayport, Florida

		OFFICE		FIELDWORK		TOTAL	
ITEM	RATE/HR.	LABOR HOURS	COST($)	LABOR HOURS	COST($)	LABOR HOURS	COST($)
Program Manager	$36.50		$0.00		$0.00	0	$0.00
Quality Assurance Manager	25.50	16	$408.00		$0.00	16	$408.00
Task Order Manager	29.00	179	$5,191.00		$0.00	179	$5,191.00
Senior Engineer	29.00	30	$870.00		$0.00	30	$870.00
Senior Scientist	29.10	110	$3,201.00	64	$1,862.40	174	$5,063.40
Engineer	18.50	80	$1,480.00	230	$4,255.00	310	$5,735.00
Geologist	19.00		$0.00		$0.00	0	$0.00
Hydrologist	20.00	94	$1,880.00	250	$5,000.00	344	$6,880.00
Technician**	13.00	24	$312.00		$0.00	24	$312.00
Program Assistant	13.00	80	$1,040.00		$0.00	80	$1,040.00
Clerical/Word Processing	10.00	93	$930.00		$0.00	93	$930.00
Accounting	14.00		$0.00		$0.00	0	$0.00
Contract Manager	19.50		$0.00		$0.00	0	$0.00
Technical Editor	13.26	12	$159.12		$0.00	12	$159.12
Health & Safety Assistant	12.50	2	$25.00		$0.00	2	$25.00
Health & Safety Manager (CIH)	24.00	2	$48.00		$0.00	2	$48.00
Quality Assurance Assistant	19.71		$0.00		$0.00	0	$0.00
Cad Operator/Sr. Draftsperson	15.60		$0.00		$0.00	0	$0.00
Draftsperson	10.50	88	$924.00		$0.00	88	$924.00
Air Quality Engineer/Scientist	16.94		$0.00		$0.00	0	$0.00
Senior Hydrologist	33.79		$0.00		$0.00	0	$0.00
Senior Chemist (CLP Qual.)	22.44		$0.00		$0.00	0	$0.00
Chemist	16.35		$0.00		$0.00	0	$0.00
Computer Programmer	19.71		$0.00		$0.00	0	$0.00
Senior Contract Manager	28.50		$0.00		$0.00	0	$0.00
Technical Expert (PhD-Sci/Eng)	35.00		$0.00		$0.00	0	$0.00
TOTAL DIRECT LABOR	XXXXX	810	$16,468.12	544	$11,117.40	1,354	$27,585.52
X Fringe (.3312)	XXXXX	XXXXX	$5,454.24	XXXXX	$3,682.08	XXXXX	$9,136.32
X Overhead (.5413)	XXXXX	XXXXX	$11,866.57	XXXXX	$8,010.96	XXXXX	$19,877.53
X G&A (.0733)	XXXXX	XXXXX	$2,476.73	XXXXX	$1,672.01	XXXXX	$4,148.73
Total Burdened Dir. Labor	XXXXX	XXXXX	$36,265.66	XXXXX	$24,482.45	XXXXX	$60,748.10

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

ITEM	UNIT COST(S)	QUANTITY	TOTAL
Telephone/Communications	$/call	86	$430.00
Postage/Freight	(See Attached Sheets)		$1,145.00
Equipment/Expendables	$50/week	5	$250.00
Subtotal			$1,825.00
X G&A (.0733)			$133.77
TOTAL	XXXXXXX	XXXXXXX	$1,958.77

PART III - TRAVEL (Itemized on Supplement Sheets)

Subsistence	$74/person/day	52	$3,848.00
Car/Van Rental and Fuel	$50/day	31	$1,550.00
Airfare			
Subtotal			$5,398.00
X G&A (.0733)			$395.67
TOTAL TRAVEL EXPENSES	XXXXX	XXXXX	$5,793.67

PART IV - SUBCONTRACTOR SERVICES (Itemized on Supplement Sheets)

Drilling/Laboratory/Survey	(See Attached Sheets)		$77,145.00
Copies & Report Binding	(See Attached Sheets)		$688.00
Subtotal			$77,833.00
X G&A (.0733)			$5,705.16
TOTAL SUBCONTRACTOR EXPENSES	XXXXX	XXXXX	$83,538.16

	TOTAL	
	LABOR HOURS	COST(S)
TOTAL PART I (Direct Labor)	1,354	$60,748.10
TOTAL PART II (Other Direct Costs)		$1,958.77
TOTAL PART III (Travel Expenses)		$5,793.67
SUBTOTAL (Parts I, II, & III)		$68,500.54
Award Fee Pool @ 9 % x Parts I, II, & III Enter Award Fee % here 9 %		$6,165.05
Parts I, II, & III TOTAL		$74,665.59
TOTAL PART IV (Subcontractor Expenses)		$83,538.16
Award Fee Pool @ 4.5 % x Part IV Enter Award Fee % here 4.5 %		$3,759.22
Part IV TOTAL		$87,297.38
TOTAL: (Parts I, II, & III)		$74,665.59
(Part IV)		$87,297.38
GRAND TOTAL		$161,962.97

A&E Signature	Date		Telephone	
Raymond A Allen III	3-13-91		(904) 656-1293	
EIC Signature	**Date**	**Code**	**Code 18C Approval**	**Date**

TASK:	Task 1 – Monthly Progress Reports	Compiled By:	K. Busen
DURATION:		Checked By:	P. Redfern
PROJECT NAME:	NS Mayport Alpha–Delta Pier		
RESPONSIBLE:	Peter Redfern		
FILE NAME:	CTO–016.WK1		
TASK/SUBTASK:		Job Number:	750_–__
		Date :	03/13/91
TASK/SUBTASK DESCRIPTION:	Prepare Monthly Progress Reports		

ITEM DESCRIPTION	QUANTITY		HOUR	ODC**
PROFESSIONAL TITLE	DAYS	HR/DAY		
Contract Manager	0		0	
Quality Assurance Manager			0	
Health and Safety Manager			0	
Task Order Manager	8	8	64	
Senior Engineer	0	0	0	
Senior Scientist	0	0	0	
Engineer			0	
Hydrologist	0	0	0	
Quality Assurance Assistant			0	
Technician			0	
Technical Expert			0	
Health and Safety Assistant			0	
Project Assistant	8	4	32	
Drafting			0	
Clerical/Wordprocessor	0	0	0	

		TIME	UNITS	$/UNIT	
EXPENSES:	Airfare (#Tickets,$/Ticket) To/From:	0	0	$0.00	$0
	Car/Fuel (#Days,#Cars,$/Day)	0	0	$0.00	$0
	Subsistence(#Days,#People,$/Day)	0	0	$0.00	$0
					$0
	Phone & Telex (#Calls,$/Call)	1	8	$5.00	$40
					$0
	Computer Time (#Hours,$20/Hour)	0	0		$0
	Shipping (#Packages,$/Package)	0	0	$0.00	$0
SUBCONTRACT:					$0
	Outside Copies & Binding	0	0	$0.00	$0
EQUIPMENT:					
					$0
					$0
EXPENDABLES:					$0
					$0
SAFETY:					$0
					$0

TOTALS:		MANHOURS	96
	**	OTHER DIRECT COSTS	$40

TASK:	Prepare Draft & Final HASP and CAP	Compiled By:	K. Busen
DURATION:		Checked By:	P. Redfern
PROJECT NAME:	NS Mayport Alpha-Delta Pier		
RESPONSIBLE:	Peter Redfern		
FILE NAME:	CTO-016.WK1		
TASK/SUBTASK:		Job Number:	750_-__
		Date:	03/13/91
TASK/SUBTASK DESCRIPTION:	Prepare Draft & Final HASP and CAP		

ITEM DESCRIPTION	QUANTITY		HOUR	ODC**
PROFESSIONAL TITLE	DAYS	HR/DAY		
Contract Manager	0	0	0	
Quality Assurance Manager	0	0	0	
Health and Safety Manager	2	1	2 ✓	
Task Order Manager	6	3	18 ✓	
Senior Engineer	0	0	0	
Senior Scientist	5	8	40 ✓	
Engineer			0	
Hydrologist	4.25	8	34 ✓	
Quality Assurance Assistant	0	0	0	
Technician	0	0	0	
Technical Editor	2	2	4 ✓	
Health and Safety Assistant	1	2	2 ✓	
Project Assistant	4	2	8 ✓	
Drafting	4	4	16 ✓	
Clerical/Wordprocessor	6	6	36 ✓	

		TIME	UNITS	$/UNIT	
EXPENSES:	Airfare (#Tickets,$/Ticket) To/From:				$0
	Car/Fuel (#Days,#Cars,$/Day)				$0
	Subsistence(#Days,#People,$/Day)				$0
					$0
	Phone (#Calls,$/Call)	0	0	$0.00	$0
					$0
	Computer Time (#Hours,$20/Hour)	0	0	$0.00	$0
	Shipping (#Packages,$/Package)	0	0	$0.00	$0
					$0
SUBCONTRACT:					$0
	Binders	1	12	$6.00	$72
	Copying	12	100	$0.10	$120
EQUIPMENT:					
					$0
					$0
EXPENDABLES:					$0
					$0
SAFETY:					$0
					$0
TOTALS:				MANHOURS	160
		**	OTHER DIRECT COSTS		$192

TASK:	Task 3 – Phase I Field Investigation	Compiled By:	K. Buseen
DURATION:		Checked By:	P. Redfern
PROJECT NAME:	NS Mayport Alpha–Delta Pier		
RESPONSIBLE:	Peter Redfern		
FILE NAME:	CTO–016.WK1		
TASK/SUBTASK:		Job Number:	750_–__
		Date:	03/13/91
TASK/SUBTASK DESCRIPTION:	Soil Boring Investigation using Tracer Research and Macho System along with Portable GC for soil gas and/or groundwater screening and start–up meeting.		

ITEM DESCRIPTION	QUANTITY		HOUR	ODC**
PROFESSIONAL TITLE	DAYS	HR/DAY		
Contract Manager	0	0	0	
Quality Assurance Manager	2	8	16 ✓	
Health and Safety Manager			0	
Task Order Manager	5.5	4	22 ✓	
Senior Engineer			0	
Senior Scientist	5	8	40 ✓	
Engineer	8	10	80 ✓	
Hydrologist	8	10	80 ✓	
Quality Assurance Assistant			0	
Technician			0	
Technical Editor	0	0	0	
Health and Safety Assistant			0	
Project Assistant	4	2	8 ✓	
Drafting	0	0	0	
Clerical/Wordprocessor	5	1	5 ✓	

		TIME	UNITS	$/UNIT	
EXPENSES:	Airfare (#Tkts,$/Tkt) To/From:			$0.00	$0
	Car Fuel	1	9	$50.00	$450
	Subsistence(#Days,#People,$/Day)	1	15	$74.00	$1,110
	Airfare (#Tkts,$/Tkt) To/From:			$0.00	$0
	Phone (#Calls,$/Call)	1	15	$5.00	$75
		0	0	$0.00	$0
		0	0	$0.00	$0
	Shipping (#Packages,$/Package)	0	0	$0.00	$0
EQUIPMENT:					$0
	Expendables	1	2	$50.00	$100
		0	0	$0.00	$0
		0	0	$0.00	$0
		0	0	$0.00	$0
SUBCONTRACT:					$0
	Drilling	1	1	$16,960.00	$16,960
					$0
					$0
SAFETY:		0	0	$0.00	$0
					$0
		0	0	$0.00	$0
TOTALS:				MANHOURS	251
		**	OTHER DIRECT COSTS		$18,695

TASK:	Task 4 – Phase II Field Work, Monitoring Well Installation, Sampling, Surve	Compiled By:	K. Busen
DURATION:		Checked By:	P. Redfern
PROJECT NAME:	NS Mayport Alpha–Delta Pier		
RESPONSIBLE:	Peter Redfern		
FILE NAME:	CTO–018.WK1		

TASK/SUBTASK:		Job Number:	750_–__
		Date:	03/13/91
TASK/SUBTASK DESCRIPTION:	Phase II Field Work, Monitoring Well Installation Sampling and Survey		

ITEM DESCRIPTION	QUANTITY		HOUR	ODC**
PROFESSIONAL TITLE	DAYS	HR/DAY		
Contract Manager	0	0	0	
Quality Assurance Manager			0	
Health and Safety Manager			0	
Task Order Manager	15	1	15 ✓	
Senior Engineer			0	
Senior Scientist	3	8	24 ✓	
Engineer	15	10	150 ✓	
Hydrologist	17	10	170 ✓	
Quality Assurance Assistant	0	0	0	
Technician			0	
Technical Expert			0	
Health and Safety Assistant	0	0	0	
Project Assistant	4	2	8 ✓	
Drafting	0	0	0	
Clerical/Wordprocessor	2	2	4 ✓	

		TIME	UNITS	$/UNIT	
EXPENSES:	Airfare (#Tickets,$/Ticket) To/From:	0	0		$0
	Car/Fuel (#Days,#Cars,$/Day)	1	20	$50.00	$1,000
	Subsistence(#Days,#People,$/Day)	1	35	$74.00	$2,590
	Phone (#Calls,$/Call)	1	33	$5.00	$165
	Shipping (#Packages,$/Package)	1	7	$135.00	$945
SUBCONTRACTO		0	0	$0.00	$0
	Drilling	1	1	$19,575.00	$19,575
	Laboratory	1	1	$37,949.50	$37,950
	Survey	1	1	$2,660.00	$2,660
EQUIPMENT		0	0	$0.00	$0
	Expendables	1	3	$50.00	$150
		0	0	$0.00	$0
		0	0	$0.00	$0
		0	0	$0.00	$0
		0	0	$0.00	$0
		0	0	$0.00	$0
		0	0	$0.00	$0
		0	0	$0.00	$0
		0	0	$0.00	$0
		0	0	$0.00	$0
		0	0	$0.00	$0
SAFETY:		0	0	$0.00	$0

TOTALS:		MANHOURS	371
	**	OTHER DIRECT COSTS	$65,035

TASK:	Task 5 – Preparation of 90%, 100% and Final CAR	Compiled By:	K. Busen
DURATION:		Checked By:	P. Redfern
PROJECT NAME:	NS Mayport Alpha–Delta Pier		
RESPONSIBLE:	Peter Redfern		
FILE NAME:	CTO–016.WK1		
TASK/SUBTASK:		Job Number:	750_–__
		Date:	03/13/91
TASK/SUBTASK DESCRIPTION:	Preparation of 90%, 100% adn Final CAR and meeting at NS Mayport (Ken & Peter)		

ITEM DESCRIPTION	QUANTITY		HOUR	ODC**
PROFESSIONAL TITLE	DAYS	HR/DAY		
Contract Manager			0	
Quality Assurance Manager			0	
Health and Safety Manager	0	0	0	
Task Order Manager	6	6	36 ✓	
Senior Engineer	3	2	6 ✓	
Senior Scientist	7.75	8	62 ✓	
Engineer	0	0	0	
Hydrologist	10	6	60 ✓	
Quality Assurance Assistant			0	
Technician	0	0	0	
Technical Editor	4	1	4	
Health and Safety Assistant	0	0	0	
Project Assistant	4	2	8 ✓	
Drafting	5	8	40 ✓	
Clerical/Wordprocessor	8	4	32 ✓	

		TIME	UNITS	$/UNIT	
EXPENSES:	Airfare (#Tickets,$/Ticket) To/From:	0	0		$0
	Car/Fuel (#Days,#Cars,$/Day)	1	2	$50.00	$100
	Subsistence(#Days,#People,$/Day)	1	2	$74.00	$148
	Phone (#Calls,$/Call)	1	10	$5.00	$50
	Shipping (#Packages,$/Package)	1	6	$25.00	$150
		0	0	$0.00	$0
		0	0	$0.00	$0
		0	0		$0
SUBCONTRACT:					$0
	Binders	1	24	$6.00	$144
	Copying	24	100	$0.10	$240
EQUIPMENT:					
					$0
EXPENDABLES:					$0
					$0
SAFETY:					$0
					$0

TOTALS:	MANHOURS	248
**	OTHER DIRECT COSTS	$832

TASK:	Task 6 – Preparation of Follow-up Report	Compiled By:	$0
DURATION:		Checked By:	$0
PROJECT NAME:	NS Mayport Alpha-Delta Pier		
RESPONSIBLE:	Peter Redfern		
FILE NAME:	CTO-016.WK1		
TASK/SUBTASK:		Job Number:	$0
		Date:	$0
TASK/SUBTASK DESCRIPTIO	Preparation of Follow-up Report		

ITEM DESCRIPTION	QUANTITY		HOU	ODC**
PROFESSIONAL TITLE	DAYS	HR/DAY		
Contract Manager			0	
Quality Assurance Manager			0	
Health and Safety Manager	0	0	0	
Task Order Manager	8	3	24 ✓	
Senior Engineer	8	3	24 ✓	
Senior Scientist	4	2	8 ✓	
Engineer	10	8	80 ✓	
Hydrologist	0	0	0	
Quality Assurance Assistant			0	
Technician	8	3	24 ✓	
Technical Editor	4	1	4 ✓	
Health and Safety Assistant	0	0	0	
Project Assistant	4	4	16 ✓	
Drafting	4	8	32 ✓	
Clerical/Wordprocessor	4	4	16	

		TIME	UNITS	$/UNIT	
EXPENSES:	Airfare (#Tickets,$/Ticket) To/From:	0	0		$0
	Car/Fuel (#Days,#Cars,$/Day)	0	0	$0.00	$0
	Subsistence(#Days,#People,$/Day)	0	0	$0.00	$0
	Phone (#Calls,$/Call)	1	20	$5.00	$100
		0	0	$0.00	$0
		0	0	$0.00	$0
	Shipping (#Packages,$/Package)	1	2	$25.00	$50
		0	0		$0
SUBCONTRACT:					$0
	Binders	1	7	$6.00	$42
	Copying	7	100	$0.10	$70
EQUIPMENT:					
					$0
EXPENDABLES:					$0
					$0
SAFETY:					$0
					$0
TOTALS:				MANHOUR	228
		**	OTHER DIRECT COSTS		$262