

N00213.AR.001407
NAS KEY WEST
5090.3a

PLAN OF ACTION AND COST ESTIMATE FOR HUMAN HEALTH RISK EVALUATION,
ECOLOGICAL RISK EVALUATION AND COMMUNITY RELATIONS SUPPORT AT TRUMBO
POINT FUEL FARM NAS KEY WEST FL
8/27/1993
ABB ENVIRONMENTAL



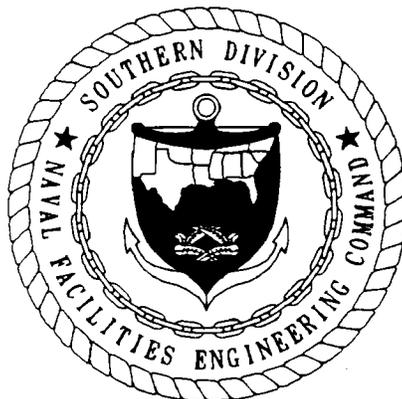
PLAN OF ACTION AND COST ESTIMATE

**MODIFICATION TO CONTRACT TASK ORDER 095
HUMAN HEALTH RISK EVALUATION,
ECOLOGICAL RISK EVALUATION, AND
COMMUNITY RELATIONS SUPPORT**

**NAVAL AIR STATION KEY WEST
TRUMBO POINT FUEL FARM
KEY WEST, FLORIDA**

**UNIT IDENTIFICATION CODE: N00213
PLAN OF ACTION NUMBER: 08551.22
CONTRACT NO.: N62467-89-D-0317/095**

SEPTEMBER 1997



**SOUTHERN DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
NORTH CHARLESTON, SOUTH CAROLINA
29419-9010**



26 September 1997

REF: 855122-02

Commanding Officer
Southern Division
Naval Facilities Engineering Command
2155 Eagle Drive
North Charleston, SC 29418

Attention: Mr. Robert Rivers Code 0233RR
Contracting Specialist

Subject: **Final Plan of Action**
Human Health/Ecological Assessment and Community Relations Support
Contract N62467-89-D-0317
NAS Key West, FL

Reference: 1) Your Request for Proposal (RFP) dated 25 July 1997
2) Negotiations dated 10 September 1997

Dear Mr. Rivers:

ABB Environmental Services, Inc. (ABB-ES) is pleased to submit the subject Final Plan of Action for the Human Health/Ecological Assessment and Community Relations Support at NAS Key West, FL. This proposal was prepared in accordance with the reference 1) RFP and reflects all agreements made during the reference 2) negotiations.

If you have any questions regarding this matter, or require any additional information, please contact the undersigned at (904) 656-1293.

Sincerely,

ABB ENVIRONMENTAL SERVICES, INC.

Cricket Shea
Senior Contracts Manager, CPCM

ABB Environmental Services Inc.

Sponsor
Special Olympics
World Games
Connecticut 1995



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PLAN OF ACTION AND COST ESTIMATE

**Modification to Contract Task Order 095
Human Health Risk Evaluation,
Ecological Risk Evaluation, and
Community Relations Support**

**Naval Air Station Key West
Trumbo Point Fuel Farm
Key West, Florida**

Unit Identification Code: N00213

Plan of Action Number: 8551.22

Contract No.: N62467-89-D-0317/095

Submitted by:

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

September 1997

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I. INTRODUCTION

The Naval Air Station (NAS) Trumbo Point Fuel Farm (TPFF) is located along the northern shore of Key West, south of Fleming Key Cut, Monroe County, Florida. The TPFF and an adjacent U.S. Coast Guard facility occupy approximately 46 acres. Presently, there are several aboveground storage tanks (ASTs) and associated piping at the site that are used for the storage and transportation of jet propellant 5 jet fuel, used oil, motor gasoline, Bunker C oil, and marine diesel fuel. The ASTs' capacities range from 1,000 gallons to 2,310,000 gallons. There is one inactive underground storage tank at the site, which is used for the storage of aviation gasoline.

A preliminary contamination assessment was conducted at the site by ABB Environmental Services, Inc. (ABB-ES), in August 1993. A preliminary contamination assessment report (PCAR) was submitted to Southern Division, Naval Facilities Engineering Command (SOUTHNAVFACENGCOM) in April 1994. The PCAR was followed by a contamination assessment conducted from January 1996 to April 1996. A Contamination Assessment Report was prepared and received approval from the Florida Department of Environmental Protection (FDEP) on December 27, 1996.

This Plan of Action (POA) describes the proposed services for the work elements contained in the Statement of Work (SOW), dated June 25, 1996. This SOW requests ABB-ES to provide the necessary level of effort (LOE) to conduct three additional tasks: (1) a human health risk evaluation, (2) an ecological risk evaluation, and (3) community relations support. Each of these tasks supports ABB-ES's risk-based approach to writing the Remedial Action Plan for this site. This approach was discussed with and approved by FDEP representative Jorge Caspary, SOUTHNAVFACENGCOM Engineer-in-Charge Byas Glover, and the activity.

The Scope of Work will be provided in Section II of this POA. Section III outlines the project personnel who will implement these efforts. Section IV lists the schedule of events, and Section V contains the associated cost information. Finally, Section VI provides the Fee Itemization Form Scope Limitation.

II. SCOPE OF SERVICES

Task 1.0 Human Health Risk Evaluation (Work Breakdown Structure [WBS] 8.0).

A human health risk evaluation will be conducted to evaluate whether or not exposure to petroleum-related contaminants identified in the soil and groundwater at NAS Key West TPFF pose unacceptable health risks at the site. These results will help determine if protective action is required.

Although this evaluation is not a full baseline risk assessment, for simplicity, it will be conducted following the four traditional phases of a human health risk assessment: (1) data collection and evaluation, (2) exposure assessment, (3) toxicity assessment, and (4) risk characterization and uncertainty analysis.

- **Data Collection and Evaluation.** The adequacy of the data for conducting a risk evaluation will be reviewed as will the analytical methods and quantitation limits. Analytes not detected at least once in a medium will be eliminated. Comparison with background samples will be conducted to identify naturally occurring or other anthropogenic contaminants at the site.

A screening process will be implemented to identify those analytes potentially posing the greatest health risk to receptors at the site. U.S. Environmental Protection Agency (USEPA) Region IV guidance will be used to select those contaminants with the greatest potential to result in adverse health risks. Applicable or relevant and appropriate requirements for chemicals present at the site will also be identified.

- **Exposure Assessment.** In the exposure assessment, the frequency, duration, magnitude, and routes of potential human exposures to site-related contaminants will be evaluated. At least two populations were identified during a brief site visit: occupation receptors and fishing receptors. The occupation receptors can be evaluated using standard USEPA exposure assumptions. The fishing receptors, however, will be evaluated differently.

Experience in evaluating fishing receptors has demonstrated that the standard fishing exposure assumptions greatly overpredict risks due to fish consumption. Discussions with Federal and State risk reviewers have indicated a willingness to accept well-documented, site-related fishing exposure assumption data in place of the default, highly conservative, exposure assumptions. Because of the complexities of this task, it will be completed in several stages. These stages include the following:

- characterization of the potentially exposed human population;
- characterization of the exposure setting (i.e., the diverse geographic and demographic populations present at the site);
- identification of all potential exposure pathways, both direct and indirect; and
- construction of a site conceptual model.

-
- **Toxicity Assessment.** A brief discussion of the known toxicity of each chemical evaluated will also be part of the assessment. In this step, the carcinogenic potential for each chemical is evaluated using USEPA toxicity factors. Known noncarcinogenic toxicity resulting from exposure to each chemical is also presented along with the relevant USEPA toxicity factors.
 - **Risk Characterization and Uncertainty Analysis.** In the risk characterization, the potential carcinogenic and noncarcinogenic risks are calculated for each exposure pathway. The methodology is also briefly reviewed. Next, the underlying assumptions used in calculating these values are reviewed. Assumptions that may tend to under- or overestimate the actual carcinogenic and noncarcinogenic risks at the site will be identified and discussed.

The end result of the risk evaluation is to determine if unacceptable human health risks are either present or likely to be present in the future and to establish potential cleanup levels if unacceptable health risks are calculated. These cleanup levels are presented in the form of remedial goal options that provide risk managers with information on the chemical-, site-, and receptor-specific risks for each complete human exposure pathway. These data help the risk managers determine the potential effectiveness and risk reduction associated with specific cleanup levels.

This information will be presented in the Remedial Action Plan (RAP) and will help shape the recommendations made concerning the best cleanup options. All labor hours and associated other direct costs (ODC) and/or travel costs for these personnel will be included in this task. The durations assumed for estimating purposes are based on extending the project to July 1998.

Task 2.0 Ecological Risk Evaluation (WBS 8.0). ABB-ES will conduct an ecological risk evaluation to assess the risks associated with past releases of petroleum products from the site to terrestrial and aquatic organisms. The ecological risk evaluation will include a site characterization and habitat assessment for terrestrial areas of the site. Due to the limited number of species and habitats likely to be present at an industrial site, the site characterization and habitat assessment will be very limited in scope.

Surface soil, subsurface soil, and groundwater samples were collected and analyzed as part of the contamination assessment. Subsurface soil and groundwater will not be considered as direct exposure routes for ecological receptors. However, subsurface soil and groundwater may represent a source of continuing release of contaminants and will be discussed as part of the surface water and sediment evaluation. For each medium having analytical results, the reasonable maximum detected concentration (the lower of the maximum detected or 95 percent upper confidence level) will be compared to screening

levels to determine if these media present a potential problem to ecological receptors. For chemicals without screening concentrations available, the reasonable maximum concentration will be compared to literature values as a "weight-of-evidence" to evaluate the potential for ecological impact. Food-web models will be used to model the cumulative effect of chemicals exceeding the screening criteria.

TPFF is located next to a marine sanctuary. The ecological risk assessment will use a combination of quantitative and qualitative methods to evaluate ecological risks resulting from a potential release of petroleum into the surface water and sediment around the piers. If required by the State, ABB-ES will design an ecological sampling program that will assess the effects to a site organism or population resulting from exposure to site contaminants; a typical endpoint is to measure the contaminant concentration in an organism's tissue. The contaminant at this site consists of a variety of petroleum products.

Reference and control areas will need to be used to evaluate the effects of contaminants on a localized system. For the comparison between the site and the reference area to be valid, the primary differences between the two areas should be the contaminants released from the site. ABB-ES and State regulators will work together at finding ways to measure and discriminate between the contaminant (petroleum products) released from the TPFF as a result of past activities and petroleum products released from other sources within Key West Bight. Other potential sources of petroleum contaminants identified in the site vicinity include the Key West utility plant, municipal marina, current fueling of Coast Guard and Navy ships, and petroleum released from boats traveling through the area. Information gathered in this regard will be reported in the site's RAP.

The LOE estimates for this task address the labor necessary to conduct literature searches, perform food-web modeling, subcontract fish collection, and perform field coordination and oversight. These estimates also include time for report writing and attendance at onsite meetings and Restoration Advisory Board (RAB) meetings. Estimated subcontractor costs for fish collection have been included in this estimate although future onsite discussions with State regulators concerning this particular activity may negate its completion.

Task 3.0 Community Relations Support (WBS 02). ABB-ES will provide community relations support for attendance at all appropriate onsite Key West meetings with State regulators and for RAB meetings to discuss ABB-ES's approach and efforts regarding the risk assessment and remedial action plans at the site. Community relations support is anticipated at a minimum of two onsite community relations planning meetings and two RAB meetings. These meetings will be scheduled so as to minimize the number of required site visits.

Support at RAB meetings will likely involve presentations on the remedial action planning process and objectives (first meeting) and on remedial action planning results (second

meeting). Depending on the level of community interest reflected by the first two meetings, a third RAB meeting presentation may be needed to discuss the proposed remedial action plans for the site. Each RAB meeting will require development of posters and supporting slide presentations and handouts to present project information to nontechnical audiences.

Preparation of at least two fact sheets is also anticipated under this modification. The fact sheets will be prepared prior to and in support of the first two RAB meetings discussed above and will cover the approach and results, respectively. Prior to the RAB meetings, fact sheets will be distributed to the site mailing list, made available at public locations (including the Information Repository at the Monroe County Public Library), and sent to other interested parties who are identified in the course of the project. Fact sheets will also be available at the meetings themselves.

All labor hours and associated ODC/travel costs for these personnel are included in this task. Estimates are based on the project's extended duration to July 1998.

III. PROJECT PERSONNEL

In addition to the Program Management Office personnel, the designated roles for these scope changes to Contract Task Order (CTO)-095 are included below.

- **Task Order Manager.** The task order manager will be Kathleen Hodak. Ms. Hodak is responsible for maintaining the project schedule and budget and for evaluating the appropriateness of the services provided for the CTO. Ms. Hodak is also responsible for the day-to-day conduct of the work, including the integration of the input of supporting disciplines and subcontractors. She will ensure quality control during the performance of the work as well as the clarity and usefulness of all project work products. Some specific responsibilities of this role include the following:
 - staff assignments and project execution oversight,
 - project budget and schedule control,
 - communication between all of the Key West project personnel,
 - addressing regulatory and technical issues that may affect more than a single project, and
 - regularly interacting with the SOUTHNAVFACENGCOM remedial project manager (RPM), facility Installation Restoration (IR) manager, Comprehensive

Long-Term Environmental Action, Navy (CLEAN) program manager, and others, as appropriate, on the status of the project.

- Technical Leader. The technical leader will be Mr. Mike Dunaway. Mr. Dunaway is responsible for evaluating the appropriateness of the services provided for the CTO and for leading project execution. He will provide a consistent technical and regulatory approach for the duration of the project. Some specific responsibilities of this role include the following:
 - project initiation and overall responsibility for RAP task completion;
 - participating in staff assignments and project execution;
 - monitoring task activities to ensure compliance with established schedules and scope of work; and
 - regularly interacting with the SOUTHNAVFACENGCOM RPM, facility IR manager, and others, as appropriate, on the status of the project.
- Human Health Risk Assessor. Dr. Marland Dulaney will be conducting the human health risk evaluation at NAS Key West TPF. As a board-certified Ph.D. toxicologist, Dr. Dulaney has conducted and reviewed numerous risk assessments on the potential effects of hazardous chemicals on humans. He also has considerable first-hand experience in evaluating fishing exposures and conducting exposure assessments such as the one needed for this evaluation. In the past year alone, he has led a 6-week, 1,700-household study of the fishing population at Naval Construction Battalion Center Gulfport, reevaluated the fishing ban at NAS Cecil Field's Lake Fretwell, and conducted a preliminary evaluation of the fishing population at NAS Key West Trumbo Point.

He has considerable experience as a risk communicator. He has participated in dozens of public information sessions, community meetings, RAB meetings, and other community and media outreach projects. He is well recognized as a risk communicator by several states and USEPA Region IV and is the risk communication lead for ABB-ES. His responsibilities on this project will include the following:

- initiating and overall responsibility for the human health evaluation;
- preparing briefing materials for attendance of RAB and/or public meetings in support of the project;

-
- interacting with SOUTHNAVFACENGCOCM RPM, facility IR manager and others, as appropriate, on the status of the project; and
 - participating in project team and regulatory meetings.
 - Ecological Risk Assessor. Mr. Charles Donahue will be the ecological toxicologist on this project. Mr. Donahue was a marine biology instructor and has participated in both human health and ecological assessments. Mr. Donahue has participated in risk assessments at NAS Cecil Field; NAS Whiting Field; Naval Submarine Base, Kings Bay; and U.S. Naval Station Mayport. Before joining the Navy CLEAN program, Mr. Donahue worked for 8 years as a hazardous waste technical reviewer for the Florida Department of Environmental Regulation (now FDEP) in the Bureau of Waste Cleanup.

The ecological risk evaluation is designed to quantify the risks to ecological receptors from chemicals originating from TPF. Mr. Donahue is responsible for design and execution of the ecological evaluation. Mr. Donahue's role and responsibilities include the following:

- coordinating surface water and sediment sampling programs,
 - designing fish and invertebrate studies,
 - coordinating and overseeing ecological subcontractors,
 - evaluating the results from the fish and invertebrate studies and surface water/sediment studies, and
 - integrating relative chemical and toxicological studies into a site-specific risk evaluation.
- Community Relations Specialist. Mr. Bill Kollar will prepare the fact sheets and RAB presentations requested in this modification. Mr. Kollar has directed community relations programs in support of a number of CLEAN projects, including Naval Training Center, Orlando; NAS Whiting Field; Marine Corps Logistics Base, Albany; and NAS Jacksonville. For NAS Key West, Mr. Kollar prepared the 1996 Community Relations Plan (CRP) update, managed RAB recruitment and establishment activities, and maintained the local Information Repository. Mr. Kollar's specific responsibilities under this modification will include the following:

-
- community relations planning and coordination with the Navy, State regulators, and ABB-ES project personnel;
 - reviewing the existing CRP, site mailing list, and other site records in order to work with the RAB to identify key community stakeholders;
 - developing and implementing a public outreach strategy (including media contacts) to encourage community attendance at RAB meetings;
 - preparing fact sheets, presentations, and other public information materials, as required;
 - conducting dry runs of public presentations to ensure that appropriate risk communication techniques are employed; and
 - interacting with the SOUTHNAVFACENCOM RPM, facility IR manager, and others, as appropriate, on the status of the project.

IV. SCHEDULE

Attachment A presents a Gantt schedule indicating the proposed initiation, duration, and completion dates for the entire project, to include the other tasks already funded and on contract - project management and RAP preparation.

V. COST

Attachment B presents the cost estimate to complete the scope of services described herein.

VI. FEE ITEMIZATION FORM SCOPE LIMITATION

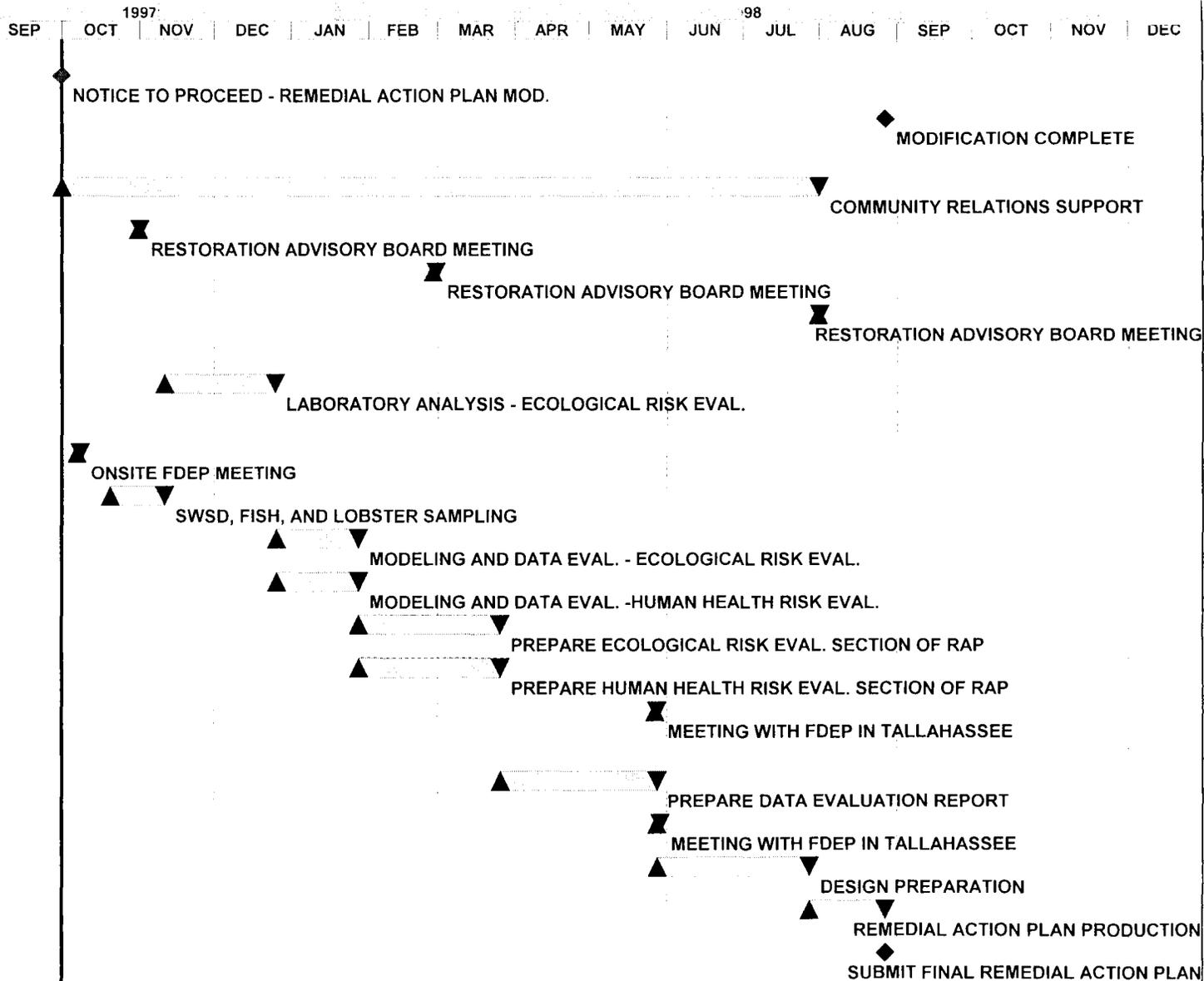
The purpose of this section is to clearly define the scope and assumptions made for this fee proposal should it be necessary to enact provisions delineated in Part VII, Paragraph 22, of the subject contract in accordance with Federal Acquisition Regulations 52.243-2.

Specific Parameters: as outlined specifically in the Scope of Services section of this cost modification dated August 25, 1997.

Period of Performance Parameters: costs presented are estimated to be incurred from Notification to Proceed through July 1998.

ATTACHMENT A
PROJECT SCHEDULE

Activity ID	Early start	Early finish	Orig dur
01 PROJECT MANAGEMENT			
Z3010001	01OCT97		0
Z3010030		26AUG98	0
02 COMMUNITY RELATIONS			
Z3020001	01OCT97	31JUL98	212
Z3020010	31OCT97*	31OCT97	1
Z3020020	27FEB98*	27FEB98	1
Z3020030	31JUL98*	31JUL98	1
06 LABORATORY ANALYSIS			
Z3060001	11NOV97	24DEC97	30
08 RISK ASSESSMENT & RA REPORT			
Z3080001	07OCT97*	07OCT97	1
Z3080010	20OCT97	10NOV97	16
Z3080020	26DEC97	27JAN98	22
Z3080070	26DEC97	27JAN98	22
Z3080030	28JAN98	25MAR98	41
Z3080080	28JAN98	25MAR98	41
Z3080040	27MAY98	27MAY98	1
16 FOLLOW-UP REPORT			
Z3160001	26MAR98	27MAY98	44
Z3160010	28MAY98	28MAY98	1
Z3160020	28MAY98	27JUL98	42
Z3160030	28JUL98	26AUG98	22
Z3160040		26AUG98	0



Project Start	01OCT97	▲	▼	Progress Bar
Project Finish	26AUG98	▲	▼	Progress Bar
Data Date	01OCT97	▲	▼	Critical Activity
Run Date	24SEP97			

R0YY:S122

Sheet 1 of 1

POA 855121 NAS JACKSONVILLE
OU1 RA TECHNICAL SUPPORT
PROPOSED BASELINE SCHEDULE

ATTACHMENT B

COST ESTIMATE

PRICING
PAGE 1

ABB Environmental Services, Inc
CLEAN I
Summary Basis of Estimate

09-16-1997
16:03:39

SELECTION CRITERIA: WBS ID: POAS122 WBS Level: 2

WBS ID: POAS122 DESCRIPTION: NAS KEY WEST
REMEDIAL ACTION PLAN

Summary Resource Estimate Data:

Res Dept	EOC	Res Code	Description	Hours/Units	Prime \$
	L	CD	CADD OPERATOR	184	3,608
	L	CL	CLERK/WORD PROC	134	1,536
	L	CR	COMM REL SPEC	192	3,167
	L	EX2F	TECHNICAL EXPERT OFF	98	4,544
	L	SC3	SENIOR CHEMIST	60	1,587
	L	SS3	SENIOR SCIENTIST	80	2,116
	L	SS4	SENIOR SCIENTIST	584	18,987
	L	ST3	SR TOXICOLOGIST	982	25,972
	L	TE	TECHNICAL EDITOR	48	790
	O	55011	ECOLOGICAL SAMPLING	0	18,000
	O	55021	LABORATORY ANALYSIS	0	80,000
	O	55052	FREIGHT POSTAL FEDEX	0	901
	O	55056	TELEPHONE	0	1,420
	O	55058	INTERNAL COPIES	0	480
	O	55059	EXTERNAL COPIES	0	750
	O	55060	COMPUTER USE	0	157
	O	55068	MICROFILM PRINTS	0	45
	O	55072	FIELD SUPPLY/INT.	0	150
	O	55077	LODGING	0	7,396
	O	55079	PER DIEM	0	1,932
	O	55086	AIRFARE	0	5,830
	O	55087	CAR RENTAL	0	2,300

TOTAL 2,362 181,668

THIS PROPOSAL WAS NEGOTIATED AT 9% FEE

Preparer: _____ Dept: _____ Initials: _____ Date: _____
Approval: _____ Dept: _____ Initials: _____ Date: _____
Approval: _____ Dept: _____ Initials: _____ Date: _____

PRICING
PAGE 1

ABB Environmental Services, Inc
CLEAN I
Proposal Summary by WBS

09-16-1997
16:02:10

SELECTION CRITERIA: WBS ID: POAS122

WBS Level: 2

WBS: POAS122

Desc: NAS KEY WEST
REMEDIAL ACTION PLAN

Level: 2

At
Complete

LABOR

Hrs: 2,362.0
Prime: 62,307

OTHER DIRECT COSTS

Prime: 119,361

PRICE SUMMARY

TPrime: 181,668
OH: 59,338
TBurd: 241,006
G&A: 3,223
TCost: 244,229
Fee: 17,451
TPrice: 261,680

PRICING
PAGE 1

ABB Environmental Services, Inc
CLEAN I
Summary Basis of Estimate

09-16-1997
16:04:07

SELECTION CRITERIA: WBS ID: POAS122 WBS Level: 3

WBS ID: 02 DESCRIPTION: COMMUNITY RELATIONS

Summary Resource Estimate Data:

Res Dept	EOC	Res Code	Description	Hours/Units	Prime \$
	L	CD	CADD OPERATOR	60	1,180
	L	CL	CLERK/WORD PROC	30	345
	L	CR	COMM REL SPEC	192	3,167
	L	TE	TECHNICAL EDITOR	20	330
	O	55052	FREIGHT POSTAL FEDEX	0	41
	O	55056	TELEPHONE	0	666
	O	55058	INTERNAL COPIES	0	40
	O	55059	EXTERNAL COPIES	0	750
	O	55060	COMPUTER USE	0	100
	O	55068	MICROFILM PRINTS	0	45
	O	55077	LODGING	0	516
	O	55079	PER DIEM	0	252
	O	55086	AIRFARE	0	1,590
	O	55087	CAR RENTAL	0	300
TOTAL				302	9,321

Preparer: _____ Dept: _____ Initials: _____ Date: ____-____-____
Approval: _____ Dept: _____ Initials: _____ Date: ____-____-____
Approval: _____ Dept: _____ Initials: _____ Date: ____-____-____

PRICING
PAGE 1

ABB Environmental Services, Inc
CLEAN I
Proposal Summary by WBS

09-16-1997
16:02:48

SELECTION CRITERIA: WBS ID: POAS122

WBS Level: 3

WBS: 02 Desc: COMMUNITY RELATIONS Level: 3

At
Complete

LABOR

Hrs: 302.0
Prime: 5,021

OTHER DIRECT COSTS

Prime: 4,300

PRICE SUMMARY

TPrime: 9,321

OH: 4,589

TBurd: 13,910

G&A: 116

TCost: 14,026

Fee: 1,262

TPrice: 15,288

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PRICING ABB Environmental Services, Inc 09-16-1997
PAGE 2 CLEAN I 16:04:10
Summary Basis of Estimate
=====

WBS ID: 06 DESCRIPTION: LABORATORY ANALYSIS

Summary Resource Estimate Data:

Table with 5 columns: Res Dept, EOC Res Code, Description, Hours/Units, Prime \$. Row 1: O 55021, LABORATORY ANALYSIS, 0, 80,000. Row 2: TOTAL, 0, 80,000.

=====
Preparer: _____ Dept: _____ Initials: _____ Date: ____-____-____
Approval: _____ Dept: _____ Initials: _____ Date: ____-____-____
Approval: _____ Dept: _____ Initials: _____ Date: ____-____-____
=====

PRICING
PAGE 2

ABB Environmental Services, Inc
CLEAN I
Proposal Summary by WBS

09-16-1997
16:02:54

WBS: 06 Desc: LABORATORY ANALYSIS Level: 3

 At
 Complete
OTHER DIRECT COSTS

Prime: 80,000

PRICE SUMMARY

TPrime: 80,000

TBurd: 80,000

G&A: 2,160

TCost: 82,160

Fee: 3,697

TPrice: 85,857

PRICING
PAGE 3

ABB Environmental Services, Inc
CLEAN I
Summary Basis of Estimate

09-16-1997
16:04:10

WBS ID: 08

DESCRIPTION: RISK ANALYSIS

Summary Resource Estimate Data:

Res Dept	EOC Res Code	Description	Hours/Units	Prime \$
L	CD	CADD OPERATOR	124	2,429
L	CL	CLERK/WORD PROC	104	1,191
L	EX2F	TECHNICAL EXPERT OFF	98	4,544
L	SC3	SENIOR CHEMIST	60	1,587
L	SS3	SENIOR SCIENTIST	80	2,116
L	SS4	SENIOR SCIENTIST	584	16,987
L	ST3	SR TOXICOLOGIST	982	25,972
L	TE	TECHNICAL EDITOR	28	460
O	55011	ECOLOGICAL SAMPLING	0	18,000
O	55052	FREIGHT POSTAL FEDEX	0	860
O	55056	TELEPHONE	0	754
O	55058	INTERNAL COPIES	0	440
O	55060	COMPUTER USE	0	57
O	55072	FIELD SUPPLY/INT.	0	150
O	55077	LODGING	0	6,880
O	55079	PER DIEM	0	1,680
O	55086	AIRFARE	0	4,240
O	55087	CAR RENTAL	0	2,000
TOTAL			2,060	92,347

Preparer: _____ Dept: _____ Initials: _____ Date: ____-____-____
Approval: _____ Dept: _____ Initials: _____ Date: ____-____-____
Approval: _____ Dept: _____ Initials: _____ Date: ____-____-____

PRICING
PAGE 3

ABB Environmental Services, Inc
CLEAN I
Proposal Summary by WBS

09-16-1997
16:02:58

WBS: 08 Desc: RISK ANALYSIS Level: 3

At
Complete

LABOR

Hrs: 2,060.0
Prime: 57,285

OTHER DIRECT COSTS

Prime: 35,062

PRICE SUMMARY

TPrime: 92,347
OH: 54,749
TBurd: 147,096
G&A: 947
TCost: 148,042
Fee: 12,492
TPrice: 160,534

ATTACHMENT C
TRAVEL SCHEDULE

ABB Environment Services, Inc.

Travel Estimate

Project: CTO# 95 Trumbo Point Fuel Farm Remedial Action Plan

Task/WBS: Community Relations Support															
Purpose	Traveller	Origin	Destination	Air Fare Costs			Lodging Costs			Per Diem Costs			Van Rental Costs		
				#Flights	Rate	Cost	#Nights	Rate	Cost	#Days	Rate	Cost	#Days	Rate	Cost
						\$ -			\$ -			\$ -			\$ -
Meetings	CR	Tallahasse	Key West	3	\$ 530.00	\$ 1,590.00	3	\$ 172.00	\$ 516.00	6	\$ 42.00	\$ 252.00	6	\$ 50.00	\$ 300.00
						\$ -			\$ -			\$ -			\$ -
						\$ -			\$ -			\$ -			\$ -
						\$ -			\$ -			\$ -			\$ -
						\$ -			\$ -			\$ -			\$ -
						\$ -			\$ -			\$ -			\$ -
						\$ -			\$ -			\$ -			\$ -
Subtotal Travel:				3		\$ 1,590.00	3		\$ 516.00	6		\$ 252.00	6		\$ 300.00

ABB Environment Services, Inc.

Travel Estimate

Project: CTO# 95 Trumbo Point Fuel Farm Remedial Action Plan

Task/WBS: Ecological Risk Evaluation

Purpose	Traveller	Origin	Destination	Air Fare Costs			Lodging Costs			Per Diem Costs			Van Rental Costs		
				#Flights	Rate	Cost	#Nights	Rate	Cost	#Days	Rate	Cost	#Days	Rate	Cost
						\$ -			\$ -			\$ -			\$ -
Meetings	ST3	Tallahassee	Key West	5	\$ 530.00	\$ 2,650.00	20	\$ 172.00	\$ 3,440.00	20	\$ 42.00	\$ 840.00	20	\$ 50.00	\$ 1,000.00
						\$ -			\$ -			\$ -			\$ -
						\$ -			\$ -			\$ -			\$ -
						\$ -			\$ -			\$ -			\$ -
						\$ -			\$ -			\$ -			\$ -
						\$ -			\$ -			\$ -			\$ -
						\$ -			\$ -			\$ -			\$ -
						\$ -			\$ -			\$ -			\$ -
Subtotal Travel:				5		\$ 2,650.00	20		\$ 3,440.00	20		\$ 840.00	20		\$ 1,000.00

ABB Environment Services, Inc.

Travel Estimate

Project: CTO# 95 Trumbo Point Fuel Farm Remedial Action Plan

Task/WBS: Human Health Assessment

Purpose	Traveller	Origin	Destination	Air Fare Costs			Lodging Costs			Per Diem Costs			Van Rental Costs		
				#Flights	Rate	Cost	#Nights	Rate	Cost	#Days	Rate	Cost	#Days	Rate	Cost
Meetings	ST3	Tallahasse	Key West	3	\$ 530.00	\$ 1,590.00	20	\$ 172.00	\$ 3,440.00	20	\$ 42.00	\$ 840.00	20	\$ 50.00	\$ 1,000.00
						\$ -			\$ -			\$ -			\$ -
						\$ -			\$ -			\$ -			\$ -
						\$ -			\$ -			\$ -			\$ -
						\$ -			\$ -			\$ -			\$ -
						\$ -			\$ -			\$ -			\$ -
						\$ -			\$ -			\$ -			\$ -
						\$ -			\$ -			\$ -			\$ -
						\$ -			\$ -			\$ -			\$ -
Subtotal Travel:				3		\$ 1,590.00	20		\$ 3,440.00	20		\$ 840.00	20		\$ 1,000.00

ATTACHMENT D

GLOSSARY

GLOSSARY

ABB-ES	ABB Environmental Services, Inc.
AST	aboveground storage tank
CLEAN	Comprehensive Long-Term Environmental Action, Navy
CRP	Community Relation Plan
CTO	Contract Task Order
FDEP	Florida Department of Environmental Protection
IR	installation restoration
LOE	level of effort
ODC	other direct cost
NAS	Naval Air Station
PCAR	Preliminary Contamination Assessment Report
POA	Plan of Action
RAB	Restoration Advisory Board
RAP	Remedial Action Plan
RPM	Remedial Project Manager
SOUTHNAV- FACENCOM	Southern Division, Naval Facilities Engineering Command
SOW	Statement of Work
TPFF	Trumbo Point Fuel Farm
USEPA	U.S. Environmental Protection Agency
WBS	Work Breakdown Structure