Draft Work Plan

Ellsworth Air Force Base

Feasibility Study for Multi-Jurisdictional Wastewater Treatment Plant

TO: Ellsworth Air Force Base Feasibility Study for Multi-Jurisdictional Wastewater Treatment Plant Team: Mike Alberi, Kyle Coolidge, Zareh Maserejian, Ken Volock, Lauren Swett, Lisa Ross, Bill Luksha, and Paul Rodriguez as well as the Air Force Team and the Town of Box Elder

FROM: Jim Fitch

DATE: July 31, 2007

RE: Work Plan for Effective Project Completion

This memorandum serves as the Work Plan for this project. The intent of this plan is to provide the Project Team and Ellsworth Air Force Base the information necessary to meet the outcome desired (a great project that is on time, on budget, with tremendous communications, involvement in the project, and coordination among all members of the team) while also meeting our objectives of a profitable project that is on schedule: a Feasibility Study that meets everyone's expectations and a client that will recommend Woodard & Curran to other facilities.

This work plan includes the following sections:

Introduction

Plan of Study (Scope of Work)

Project Team Contact List

Schedule

Budget

Project Charge Memo

Filing Guidelines

INTRODUCTION

1) What Needs to be Done?

Vision

Work closely with Ellsworth Air Force Base and the City of Box Elder to complete a Feasibility Study described in our proposal submitted to the Air Force (attached to this Work Plan)

Scope

See the attachments to this Work Plan (Plan of Study) for a presentation of the Tasks required to effectively complete this project. Additional details are available in the project files in the filing area of the Portland Office or by contacting Jim Fitch. This project will be billed on a Percent Complete Basis and will be tracked internally on actual hours expended on each task.

Risks/Assumptions

The Plan of Study and the Project Budget and Schedule have been developed with a number of assumptions. If these prove to be inappropriate, the tasks necessary to complete this project may need to be modified and the budget and schedule adjusted. Therefore, these assumptions are also areas of risk that need to be watched closely in order to recognize a problem and resolve it early on before it adversely impacts the project. The identified assumptions are:

- We can expect timely input and response from the Air Force, the City of Box Elder, and the Regulatory Agencies.
- Woodard & Curran staff will visit the site to meet with the Air Force Five times during this project.
- We have assumed that the DENR will have no involvement in this project and will be supportive of the Feasibility Study.

Team Strengths

The EAFB Team and Woodard & Curran's Team bring many strengths to this project. The EAFB Team has been very involved in projects we have worked on at the WWTF and are familiar with the Town of Box Elder and their needs. Woodard & Curran's Team brings knowledge gained from many previous projects, many years of similar experience, and a broad base of talent that we can draw on for the successful completion of this project.

There are several things that we will need to be aware of and watch as we proceed with this project. As always we will need to keep close track on our performance compared to the Air Forces' expectations and be prepared to make appropriate adjustments if necessary. This is our first project with the Town of Box Elder and we will have to work hard to understand their expectations and needs and to develop a strong working relationship built on trust and respect.

2) How Will We Organize Ourselves to Complete the Work?

We will assign an overall Project Engineer to the project with responsibility for the technical aspects of the entire project. This Project Engineer will work closely with the Project Manager and with Woodard & Curran's staff to fully understand the project needs and complete these requirements.

3) Who is Going to Do the Work?

The Multi-Jurisdictional Wastewater Treatment Plant Project Team includes the following people with the identified roles and responsibilities:

Mike Alberi, P.E., Sr. Vice President – Mike will be the Principal in Charge for this project. He will ensure that all engineering resources and skills are provided to this project and will support the project team in technical reviews.

Jim Fitch, P.E., Sr. Vice President – Jim will be the Project Manager and will be responsible to the Air Force for developing a complete Feasibility Study that meets their expectations and to the Business Center for a successful project that meets our financial objectives and maintains our excellent client relationship. Jim will also be responsible for managing the project meetings, project communications, completing and distributing the project reports, tracking performance, and billing. The Project Manager will be responsible for the project budget and schedule.

Kyle Coolidge (BS/MS), Project Engineer –Kyle will be the project engineer for this project and will conduct the project tasks and prepare task memorandums and reports under the direction of the Project Manager and Zareh Maserejian. He will attend the initial site meeting and will gather the required site data and background reports. He will also assist the Project Manager to keep the project on budget and on schedule.

Zareh Maserejian (BS/MS), P.E., Sr. Technical Consultant –For this project Zareh will support the project team as a Senior Consultant and as GSA Program Manager, in conducting the studies and evaluations for the various tasks, in cost estimating and design development for WWTP and conveyance options.

Ken Volock, (BS/MS) P.E.: Ken will support the project team in civil engineering pertaining to site plan development and sewer conveyance routing and cost estimating.

Lauren Swett, Civil Engineer – Lauren will assist the Project Team in the evaluation of any alternatives that include significant civil engineering components such as transporting the collected wastewater to another local facility for treatment and disposal.

Lisa Ross, Project Assistant – Lisa will assist the Project Team in the organization and performance of the project work, development of all deliverables, assisting the Project Manager in tracking project performance, and in developing the monthly status reports and invoices.

Bill Luksha and Paul Rodriguez, Technical Advisory Team – Bill and Paul will assist the Project Manager and Project Engineer with thoughts and challenge the concepts and comparison of alternatives as members of the Technical Advisory Team. This team will also be responsible for reviewing the draft Facilities Plan and offering comments to the Team that will improve the quality of the final report and the value that it brings to the Air Force.

4) When is the Project Going to be Done?

This project will start in August 2007 and will be completed in January 2008 (this means completion and acceptance of the project report). The project schedule is attached.

5) How much is it going to cost?

The engineering fees for this project are estimated at $98,772. This budget included an allowance of $7,975 for travel and subsistence. See the attachments for function codes to be used in completing time sheets and a breakdown of this budget.

6) How will this be accomplished?

The assignments made in Item 3 identify the roles and responsibilities of each of the Team members. We will bring the Team together periodically, to discuss the action plan, the assignments, the order of project development, the schedule and performance to the milestones established, financial performance, issues of concern, unanswered questions, and expectations. These meetings will be supplemented by one-on-one discussions that focus directly on each individual's expectations, issues with the process, needs, performance in the Team and to milestones established, and to coordinate with each of you to identify and head off problems before they manifest themselves. These one-on-one sessions are the responsibility of the Project Manager and the Project Engineer. A close out meeting will be held at the end of the project to wrap up loose ends and to critique our performance. This will be an opportunity to give candid feedback on how the organizational structure worked, how the communications flow worked, and other office input (if you have a thought that would improve the project don't wait till the end, talk to the Project Manger at any time). If you wish to discuss personal issues at any time, please contact the Project Manager for a one-on-one session to discuss these issues.

We need to keep the communications links open and the information flowing to assure that we all have the information we need to do our portion of the work effectively, we need to have your input to make this process work, and as always we need your thoughts on how to make this a better product for our client. Remember the impact you have on other team members with the things you do (particularly when your work in an area overlaps or interfaces with another area) and include them in correspondence or route an email to make sure we all have the tools and information to do our jobs.

Lisa will take the lead, with assistance from the Project Engineer, in developing the filing system for this phase of the project in order to have a single location where critical project information can be obtained or reviewed. This will create a resource for us all and prepare us for project archiving at completion. All of us need to recognize this role and be sure to supply the information to Lisa. She can't do this job effectively unless we do our part.

As we move forward with this work we may add to this plan to clarify roles and responsibilities and to cover other items and issues that are not included in this summary. To make this work the Project Manager will need to understand the needs. So in the one-on-ones, let's be open and communicate all the needs so we can avoid false starts or uncertainty that can eat up time and budget.

7) How Will Quality be Assured?

The whole Team is responsible for the quality of their individual work and to work with others on the Team to create a product that is homogeneous, accurate, and concise. The Project Manager and Project Engineer are responsible to our Client and to the Company for the quality of the work and will be focused on this throughout the project. The Technical Advisory Team will be involved at key points in the project to assure that the findings and recommendations are appropriate for this situation.

8) How Will We Communicate with the Air Force?

The Project Manager will develop a Monthly progress report for our client that will outline the progress made that month, the expectations for the next month, status with respect to schedule and budget, issues and concerns which require client input for resolution, changes in project scope, upcoming critical decision points, and other items that are appropriate. Periodic telephone conversations will occur throughout the project. All team members are to coordinate with the Project Engineer or Project Manager before calling the client or visiting the site.

9) Closing

Feedback on this work plan is encouraged. What works well with this, what could use improvement, what additional items would be of use to you in completing the tasks expected on this project? If you have any input, get in touch with the Project Manager.

Plan of Study

1. ENGINEERING SERVICES SCOPE OF WORK

The A/E shall provide the following engineering services. The cost for these services shall be presented in the proposal, and they shall include travel and subsistence expenses.

Project Overview

Phase 1 – Facility planning for the City of Box Elder and Ellsworth AFB:

Phase 1 compares the relative merits of two competing scenarios:

Scenario 1: The City of Box Elder constructs a new WWTP to replace their existing lagoon system. This new plant would be sized to accommodate a 20 year growth projection and be easily expandable to accomplish biological nutrient removal to meet future permit limits. Independent of the Box Elder treatment plant, EAFB upgrades their existing WWTP to comply with future permit limits.

a) Contractor shall provide three design options for the new Box Elder WWTP.
b) Assume the new Box Elder treatment plant will be sited at the current lagoon location.
c) The EAFB WWTP upgrade basis of design is completed and provided to the contractor as government furnished information (GFI) for cost comparison purposes. No changes to this design are required or expected.

Scenario 2: The City of Box Elder and EAFB abandon their existing WWTP's. A new multi-jurisdictional treatment plant is constructed to serve both the City and EAFB.

a) Contractor shall provide three design options for the new multi-jurisdictional WWTP. These three options may be the same three options as in 1.a. above sized appropriately for the combined Box Elder/EAFB flow.

b) Assume the treatment plant will be located in the vicinity of the existing Box Elder lagoons.

c) Contractor shall provide recommendations on conveyance of wastewater from EAFB and Box Elder to the new combined plant.

d) Contractor shall evaluate what (if any) existing pretreatment processes will be required to remain at EAFB and where they should be located (i.e. oil/water separators, etc).
e) Project flows based upon a 20 year population growth for the City. Project flows for EAFB based upon 1.5 mgd average daily flow.
f) Contractor shall provide information on best practices for capitalizing and operating a multi-jurisdictional WWTP.

It is anticipated that the new multi-jurisdictional facility will have independent non-profit based ownership. EAFB and Box Elder will be bulk user customers of the new facility and independent ownership. Contractor should assume this new ownership will purchase from Box Elder and / or

EAFB any core trunk lines that would deliver wastewater to facility. Box Elder will continue to own and maintain collection systems that dump into the core trunk line.

Cost comparisons for the two scenarios shall include plant construction and O&M costs, land purchase costs, new conveyance costs, and any trunk lines that would need to purchase from the City.

Detailed Project Tasks

Task 1 - Project Work Plan

The Contractor shall prepare and submit a project work plan for approval. The plan will contain the strategy and milestones for completing all tasks and the scope as outlined in the Statement of Work.

Task 2 – Phase 1 Site Visit /Meetings and Data Collection

After receipt of written notice to proceed (NTP) the contractor will be contacted by the Project Coordinator to establish coordination procedures, obtain copies of plans, records and other data necessary to accomplish the contract. The contractor shall meet with all appropriate personnel to discuss project objectives prior to the start of the data collection.

Task 3 – Phase 1 Draft Technical Memorandum

The contractor shall prepare and submit a draft Phase 1 Technical memorandum to include:

a) Executive Summary

b) Flow and Load Analysis for the wastewater flows for Box Elder, and the combined flow from Box Elder and EAFB.

c) Future design basis and anticipated permit limits for Box Elder, and the combined facility.

d) Alternative Screening Criteria and the weighted screening criteria.

e) Development of three Treatment Alternatives, for the combined facility.

f) Alternative Screening Results—note that all practical alternative to accomplish the treatment goals will be identified in task e and they will be screened using the weighted criteria resulting in the best three alternative for further analysis.

g) Conceptual site plan of the three selected Alternatives to include flow diagrams, layout of the major process equipment and cost estimates.

h) Cost analysis of selected options to include capital costs, operations and maintenance costs, and a cost comparison over a 20 year planning period.

i) Evaluation of and recommendations for the collection system options.

j) Options for how a jointly constructed and managed facility might be funded, owned, and operated. The work in tasks h-j will result in the identification of the best alternative for the two scenarios discussed in the project overview above. This selected alternative will be further developed in the draft report discussed below.

k) Develop project work plan for phase2.

Task 4 – Prepare Final Phase 1 Technical Memorandum

The contractor shall incorporate draft technical memorandum review comments into a final document and submit to the government.

TASK 5 – PREPARE DRAFT REPORT

a) Based on the outcome from task 3&4, the contractor shall develop a 10% conceptual design for the selected Phase 1 alternative for the combined Box Elder/EAFB facility to include the selected collection system alternative.

b) Based on the 10% conceptual design, the contractor shall perform a cost/benefit analysis between Scenario 1 (separate Box Elder and EAFB plants) and Scenario 2 (combined Box Elder/EAFB plant) of Phase 1 over a 20 year planning period.

c) Evaluation of purchases required from the City of Box Elder, or EAFB (easements, trunk lines, etc.) and how fair market value would be placed on all items.

d) Estimated Rate for Sewer service on a cost per 1000 gallon basis.

e) Provide a detailed schedule to show design/construction milestones/timelines for Phase 1. This will be submitted to DENR for the new permit compliance schedule.

Task 6 – Prepare Final Report

The contractor shall incorporate draft report review comments into a final document and submit to EAFB and the City of Box Elder.

Name & Address	Phone No.	E-mail
Mr. Jerald E Styles, Technical Point of Contact 28 CES/CEAN 2103 Scott Drive Ellsworth AFB, SD 57706	605-385-2677 605-385-6619 fax	jerald.styles@ellsworth.af.mil
Mr. Al Todd, Box Elder POC 520 N. Ellsworth Rd. Ste 9C Box Elder, SD 57719-2017	605-923-1404	BXEwater@boxelder.us
James H. Fitch, Jr., P.E., Project Manager Woodard & Curran Inc. 41 Hutchins Drive Portland, ME 04102	207-774-2112 800-426-4262 207-774-6635 fax 207-671-6855 cell	jfitch@woodardcurran.com
Kyle Coolidge, Project Engineer Woodard & Curran Inc. 41 Hutchins Drive Portland, ME 04102	207-774-2112 800-426-4262 207-774-6635 fax	kcoolidge@woodardcurran.com
Ken Volock, Civil Engineer Woodard & Curran Inc. 41 Hutchins Drive Portland, ME 04102	207-774-2112 800-426-4262 207-774-6635 fax	kvolock@woodardcurran.com
Paul Rodriguez, P.E., Project Engineer Woodard & Curran Inc. 41 Hutchins Drive Portland, ME 04102	207-774-2112 800-426-4262 207-774-6635 fax	prodriguez@woodardcurran.com
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Bill Luksha, Area Manager Woodard & Curran Inc. 41 Hutchins Drive Portland, ME 04102	207-774-2112 800-426-4262 207-774-6635 fax	bluksha@woodardcurran.com
Lisa Ross, Project Assistant Woodard & Curran, Inc. 41 Hutchins Drive Portland, ME 04102	207-774-2112 800-426-3342 207-774-6635 fax	lross@woodardcurran.com

Deliverable	SOW Paragraph	Due Date	Copies Required
Task 1 – Project Work Plan	3.1	7 calendar days after NTP	10
Task 2 – Phase 1 Site Visit/Data Collection	3.2	21 calendar days after acceptance of work plan	10
Task 3 – Draft Technical Memorandum	3.3	60 calendar days after site visit	10
Task 4 – Final Technical Memorandum	3.4	7 calendar days after receipt of review comments	10
Task 5 - Draft Report	3.5	30 calendar days after final Technical Memorandum	10
Task 6 - Final Report	3.6	7 calendar days after receipt of review comments	10
Status Reports	4.1	7 calendar days after site visit and then monthly	10

- ELLSWORTH AFB - SOUTH DAKOTA

ELLSWORTH AFB & CITY OF BOX ELDER & MULTI-JURISDICTIONAL WWTP FEASIBILITY EVALUATION - ENGINEERING COSTS

EAFB Contract / RFP No. F1V3M37164A001

GSA Contract No. GS-10F-0086M Sin No. 1 and 2

Task No.	Description		Program Manager / Sr. Project Manager	Sr. Technical Consultant	Project Engineer	Engineer - Civil, Electrical, Structural	Designer	Technician / Project Assistant	Totals
	Staff Name		*Jim Fitch*	*Mike Alberi, Zareh Maserejian*	*Kyle Coolidge*	*As Needed*	*As Needed*	*As Needed*	
			Labor Hours and Costs						
	GSA Hourly Labor Billing Rates		*$175.09*	*$175.09*	*$96.15*	*$96.15*	*$78.23*	*$70.62*	
TASK 1	**PROJECT WORK PLAN**								
	Prepare Draft and Final Work Plan		2		4			2	8
	Subtotal - Labor hours		*2*		*4*	*0*	*0*	*2*	*8*
	Subtotal - Labor Charges		$350	$0	$385	$0	$0	$141	$876
	Other Direct Charges (ODCs)								$0
	Travel, Hotel, Food								$0.00
	Communication and other direct charges (2% of Labor Charges)								$18

	Subtotal - ODCs							$18
	Subtotal - Labor and ODCs Charges							**$894**
TASK 2	**PHASE 1 SITE VISIT, MEETINGS AND DATA COLLECTION**							
	Travel and On-Site Meeting	24		24				48
	Data Collection, Visit City of Box Elder WWTP and EAFB WWTP & Trunk sewer Routing	16		16				32
	Trip Report			4				4
	Subtotal - Labor hours	*40*	*0*	*40*	*0*	*0*	*0*	*80*
	Subtotal - Labor Charges	*$7,004*	*$0*	*$3,846*	*$0*	*$0*	*$0*	$10,850
	Other Direct Charges (ODCs)							
	Travel, Hotel, Food							*$2,295*
	Communication and other direct charges (2% of Labor Charges)							$217
	Subtotal - ODCs							*$2,512*
	Subtotal - Labor and ODCs Charges							**$13,362**
TASK 3	**PHASE 1 DRAFT TECHNICAL MEMORANDUM**							
	Flow and Load Analysis for the wastewater flows for Box Elder, and the combined flow from Box Elder and EAFB		2	4				6
	Future design basis and anticipated permit limits for Box Elder, and the combined		1	1				2

	facility							
	Alternative Screening Criteria and the weighted screening criteria (modify criteria and weighting used in previous study EAFB WWTP Study and use it for this project.		2	2				4
	Identify Practical Treatment Alternatives for the Combined Facility/Box Elder Facility		8	8				16
	Site Meeting - Screen alternatives and select three (3) alternatives for further development	*24*		*24*				48
	Develop conceptual site plan for the 3 selected alternatives, block flow diagrams, layout of the major process equipment and cost estimates		4	30		16		50
	Cost analysis of selected options to include capital costs, operations and maintenance costs, and a cost comparison over a 20 year planning period. Select most practical alternative.		8	16				24
	Evaluation of and recommendations for the collection system options	2	4		12	2		20
	On site meeting to review alternatives and select most practical alternative for treatment and collection systems	*24*	*2*	*24*				50
	Define options for how a jointly constructed and managed facility might be funded, owned, and operated.	2	8	2				12
	Develop project work plan for Phase 2	*2*		*4*				6
	Prepare Draft Technical Memorandum		*8*	*32*			*4*	44
	Subtotal - Labor hours	*54*	*47*	*147*	*12*	*18*	*4*	*282*

	Subtotal - Labor Charges		*$9,455*	*$8,229*	*$14,134*	*$1,154*	*$1,408*	*$282*	$34,663
	Other Direct Charges (ODCs)								
	Travel, Hotel, Food								*$3,670*
	Communication and other direct charges (2% of Labor Charges)								$693
	Subtotal - ODCs								*$4,363*
	Subtotal - Labor and ODCs Charges								**$39,026**
TASK 4	**FINAL PHASE 1 TECHNICAL MEMORANDUM**								
	Telephone meeting and review		2		2				4
	Final Phase 1 Technical Memorandum		2	2	16		2		22
	Subtotal - Labor hours		*4*	*2*	*18*	*0*	*2*	*0*	*26*
	Subtotal - Labor Charges		*$700*	*$350*	*$1,731*	*$0*	*$156*	*$0*	$2,938
	Other Direct Charges (ODCs)								
	Travel, Hotel, Food								*$0*
	Communication and other direct charges (2% of Labor Charges)								$59
	Subtotal - ODCs								*$59*
	Task Subtotal - Labor and ODCs Charges								**$2,996**
TASK 5	**PREPARE DRAFT REPORT**								

	Based on Task 3 & 4 findings, develop a 10% conceptual design for the selected Phase 1 alternative for a combined Box Elder/EAFB facility to include the selected collection system alternative		16	40	10	10		76
	Based on the 10% conceptual design, perform a cost/benefit analysis between Scenario 1 (separate Box Elder and EAFB plants) and Scenario 2 (combined Box Elder/EAFB plant) of Phase 1 over a 20 year planning period		12	24				36
	Evaluation of purchases required from the city of Box Elder, or EAFB (easements, trunk lines, etc) and how a fair market value would be placed on all items		8	12				20
	Define estimated rate for Sewer Service Charges per 1000 gallon basis		4	4				8
	Provide a detailed schedule to show design/construction milestones/timelines for Phase 1		4	2				6
	EAFB/City of Box Elder submit to DENR Draft report for new permit compliance schedule	2						2
	Subtotal - Labor hours	*2*	*44*	*82*	*10*	*10*	*0*	*148*
	Subtotal - Labor Charges	*$350*	*$7,704*	*$7,884*	*$962*	*$782*	*$0*	$17,682
	Other Direct Charges (ODCs)							
	Travel, Hotel, Food							*$0*
	Communication and other direct charges (2% of Labor Charges)							$354
	Subtotal - ODCs							*$354*
	Task Subtotal - Labor and ODCs Charges							**$18,036**
TASK 6	**PREPARE FINAL REPORT**							

	Review Comments / Telecon		2		2				4
	Final report			2	20		4	4	30
	Subtotal - Labor hours		*2*	*2*	*22*	*0*	*4*	*4*	*34*
	Subtotal - Labor Charges		*$350*	*$350*	*$2,115*	*$0*	*$313*	*$282*	$3,411
	Other Direct Charges (ODCs)								
	Travel, Hotel, Food								*$0*
	Communication and other direct charges (2% of Labor Charges)								$68
	Subtotal - ODCs								*$68*
	Task Subtotal - Labor and ODCs Charges								**$3,479**
Project Management and Technical Reviews (TAT)									
	Status Report for initial site visit		3						3
	Monthly Status Reports - 6 Reports		8		24			4	36
	Coordination, Cost and Schedule Control, Project Close out		24					8	32
	QA/QC TAT - Technical Review		8	8	8			2	26
	Meetings identified by EAFB--2 meetings one person one day each		32						
	Subtotal - Labor hours		*75*	*8*	*32*	*0*	*0*	*14*	*129*
	Subtotal - Labor Charges		*$13,132*	*$1,401*	*$3,077*	*$0*	*$0*	*$989*	$18,598

	Other Direct Charges (ODCs)								
	Travel, Hotel, Food								*$2,010*
	Communication and other direct charges (2% of Labor Charges)								$372
	Subtotal - ODCs								*$2,382*
	Task Subtotal - Labor and ODCs Charges								**$20,980**
	TOTAL PROJECT CHARGES								***$98,772***

PROJECT CHARGE MEMORANDUM

TO: Ellsworth Air Force Base Feasibility Study for Multi-Jurisdictional Wastewater Treatment Plant Team: Mike Alberi, Kyle Coolidge, Zareh Maserejian, Ken Volock, Lauren Swett, Lisa Ross, Bill Luksha, and Paul Rodriguez.

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FROM: Jim Fitch

DATE: July 30, 2007

RE: Function Codes and Staff Types for the EAFB Feasibility Study

Project Number 203974.01 This project number is for the Ellsworth Air Force Base Feasibility Study for Multi-Jurisdictional Wastewater Treatment Plant project which will be a percent complete/not to exceed project contractually.

Function Code	Description
1001 – Project Administration	Coordination of Project Team, billing, tracking performance
1081 – Meetings	Meetings with our Client
1201 - Process Engineering	Developing Technical Information
1061 – Report Writing	Development of the Project Report

Please use the following staff types on your time sheet.

Person	Staff Type	Description
Jim Fitch	2	Project Manager
Kyle Coolidge	3	Project Engineer
Paul Rodriguez	3	Project Engineer
Ken Volock	3	Project Engineer
Mike Alberi	1	Principal
Bill Luksha	2	Project Manager
Laren Swett	3	Project Engineer
Martha Dillard	35	Project Assistant

Filing Guidelines
Ellsworth Air Force Base

Ellsworth Air Force Base Feasibility Study for Multi-Jurisdictional Wastewater Treatment Plant **203974.01**

File folders have been set up on the server and in the central file in Portland for appropriate filing of documents for this project. All information must be filed in one of these two locations. All hard copy information is to be filed in the appropriate folder. All digital information is to be filed in the appropriate folder on the server. Do not store information in your office unless you have filed the original information (Lisa is available to assist with all filing tasks for this project). Do not store digital information on your hard drive or other server location unless it is also on the O drive. The WIP folder should only be used for documents that are being created by a number of people. In my mind this should only be used for reports, drawings and specifications that are being completed by more than one person. These should be copied to the project folder when they are at a submittal stage to create a record of submission.

The file structure is listed below with my thoughts on the types of information in each.

1. Contract Files:
    - i. Proposal-Scope of Work-Budget
        1. Proposal files
    - ii. Agreement
        1. Contract files
    - iii. Work Plan
    - iv. Invoices
        1. Letters
        2. Payment memos
    - v. Project Schedule
        1. Original Schedule
        2. Modifications to Schedule
        3. Schedule Tracking
    - vi. Budget Tracking Information
        1. Burn Rate Spreadsheet and Plot

2. Communications Files:
    - i. Client
        1. All letters, memos, etc. to the Air Force
    - ii. Internal
        1. All internal communications during the project other than the Work Plan
    - iii. Project Team
        1. All letters, memos, etc. to the whole project team
    - iv. Meetings
        1. All meeting memos
    - v. Project Status Reports
        1. Status reports

3. Project Deliverables
    - i. Draft Design Basis Memorandum
    - ii. Final Design Basis Memorandum

4. Engineering
    i. Background Information
        1. Information from the client and other sources
    ii. Design Basis Memorandum
        1. Hydraulic Profile
        2. Process and Instrumentation Diagram
        3. Site Layout
        4. Equipment Sizing Criteria
        5. Equipment Selected as Basis of Design
        6. Specifications List

If you have any questions or suggestions for improvement of this system let me know (extension 3218).

July 17, 2007

David L. Mendelsohn, Contracting Officer
Department of the Air Force
28 CONS.LGCB
1000 Ellsworth Street, Suite 1200
Ellsworth AFB SD 57706-4904

Re: Feasibility Study for Multi-Jurisdictional Wastewater Treatment Plant, Purchase Request Number FIV3M37164A001 – Request for Proposal – RFP, Revision as Requested

Dear Contracting Officer Mr. Mendelsohn:

Woodard & Curran, Inc. is pleased to submit this proposal for engineering services to the Department of the Air Force, Ellsworth AFB South Dakota (EAFB) for evaluating the feasibility of constructing a multi-jurisdictional wastewater treatment facility to support the sewage treatment needs of EAFB, the City of Box Elder, and other potential regional users in both Meade and Pennington Counties. This proposal is in response to the subject inquiry.

It is our understanding that the feasibility study will be conducted in two phases. The first phase will address Ellsworth and Box Elder. The second phase will address the financial feasibility of a multi-jurisdictional facility being utilized by other regional users through trunk line extensions. This proposal is for Phase 1 services only. Phase 2 will be accomplished under a separate contract.

The following paragraphs summarize the overall scope of the project:

It is our understanding that under Phase 1 of the project, we will compare the relative merits of two competing scenarios. Under Scenario 1, the City of Box Elder constructs a new WWTP to replace their existing lagoon system. This new plant would be sized to accommodate a 20 year growth projection and be easily expandable to accomplish biological nutrient removal to meet future permit limits. Independent of the Box Elder treatment plant, EAFB upgrades their existing WWTP to comply with future permit limits. As described in the Statement of Work, the scope of the project for this scenario will be based on:

g) Woodard & Curran will provide three design options for the new Box Elder WWTP.

h) We will assume that the new Box Elder treatment plant will be sited at the current lagoon location.

i) The EAFB WWTP upgrade basis of design is completed and provided to Woodard & Curran as government furnished information (GFI) for cost comparison purposes. No changes to this design are required or expected.

Under Scenario 2, the City of Box Elder and EAFB abandon their individual existing WWTP's. A new multi-jurisdictional treatment plant is constructed to serve both the City and EAFB. For this case the scope of Phase 1 services will be based on the following:

a) Woodard & Curran will develop three process options for the new multi-jurisdictional WWTP. These three options may be the same three options as in Scenario 1 for the Box Elder, sized appropriately for the combined Box Elder/EAFB flow.

b) We will assume the treatment plant will be located in the vicinity of the existing Box Elder lagoons.

c) Woodard & Curran will provide recommendations on conveyance of wastewater from EAFB and Box Elder to the new combined plant.

d) We will evaluate what (if any) existing pretreatment processes will be required to remain at EAFB and where they should be located (i.e. oil/water separators, pH adjustment, etc).

e) Project flows will be based upon a 20-year population growth for the City. Project flows for EAFB based upon 1.5 mgd average daily flow.

f) Woodard & Curran will provide information on best practices for capitalizing and operating a multi-jurisdictional WWTP.

It is anticipated that the new multi-jurisdictional facility will have independent non-profit based ownership. EAFB and Box Elder will be bulk user customers of the new facility. As specified in the SOW, Woodard & Curran will assume this new ownership will purchase from Box Elder and/or EAFB any core trunk lines that would deliver effluent to the new wastewater treatment facility. Box Elder and EAFB will continue to own and maintain collection systems that dump into the core trunk lines. Cost comparisons for the two scenarios will include plant construction and O&M costs, land purchase costs, new conveyance costs and any trunk lines that would need to be purchased from the City.

SCOPE OF SERVICES

Woodard & Curran will provide the engineering services as specified in the RFP and Statement of Work (SOW). The attached Table No. 1 includes the various tasks and subtasks described in the SOW along with budgeted labor hours and cost for each. We will work in close coordination with representatives from the Base and Box Elder and will meet with the local project team at key decision points during the project. Based on these considerations, we have included in our proposal and budget a total of five meetings as follows: the first meeting will be as defined under paragraph 3.2 Task 2 of the SOW for Initial Site Visit, Meetings and Data Collection; the second site meeting will be to review with the project team all potentially applicable wastewater treatment technologies, and screen and select three (3) alternative systems for further development with active input from all team members; the third meeting will be for Woodard & Curran to present the results of the Task 3 studies and analyses, review the three candidate technologies and sewer conveyance options, and work with the project team in ranking and selecting the most practical alternative for Task 5 “Conceptual Design” development, and the final two meetings will be scheduled by the Air Force at appropriate points during the project.

In preparing our budget for this project we have made the following assumptions:

1. The required upgrades and repair to the EAFB’s Wastewater Treatment Plant (WWTP) will be as outlined in the November 2004 “EAFB Wastewater Treatment Plant Basis of Design Report” developed by Woodard & Curran. The capital cost dollar amount in Section 9 of the report shall be adjusted for inflation using the ENR index.

2. Preliminary engineering work for the Box Elder facility and other information identified in the Statement of Work will be provided by the Air Force,

3. Available flow and load for the Box Elder facility for at least two years of operation will be provided by EAFB,

4. City of Box Elder will provide growth projections for the City,

5. We estimate that for the initial site meetings and investigations we will spend 4 days with two staff members, and the four subsequent site meetings will be for two days each. Two of these meetings will be attended by two people and two of the meetings will be attended by one person. There will be a total of 5 site meetings.

SCHEDULE OF DELIVERABLES

As specified in the SOW, Woodard & Curran will complete the project and issue a final Task 6 Report within 180 calendar days from formal EAFB project authorization. The individual task deliverables will be in accordance with the Deliverables Schedule/Distribution described in the Attachment of the RFP and reproduced below for ease of reference:

ATTACHMENT 1 - DELIVERABLES SCHEDULE/DISTRIBUTION

Deliverable	SOW Paragraph	Due Date	Copies Required
Task 1 – Project Work Plan	3.1	7 calendar days after NTP	10
Task 2 – Phase 1 Site Visit/Data Collection	3.2	21 calendar days after acceptance of work plan	10
Task 3 – Draft Technical Memorandum	3.3	60 calendar days after site visit	10
Task 4 – Final Technical Memorandum	3.4	7 calendar days after receipt of review comments	10
Task 5 - Draft Report	3.5	30 calendar days after final Technical Memorandum	10
Task 6 - Final Report	3.6	7 calendar days after receipt of review comments	10
Status Reports	4.1	7 calendar days after site visit and then monthly	10

PROJECT STAFF

Woodard & Curran will assign qualified and skilled professionals to this project. The proposed staff will include the following:

Mike Alberi, P.E., Sr. Vice President – As a Senior Vice President and shareholder in the firm, Mr. Alberi will be the Principal in Charge for this project. He has over 30 years of experience in the study, planning, design, and operation of both small and large water and wastewater projects for municipal, regional, federal and industrial clients. He will ensure that all engineering resources and skills are provided to this project and will support the project team in technical reviews.

Jim Fitch, P.E., Sr. Vice President – Mr. Fitch will be the Project Manager and will be responsible to the Air Force for developing a complete Feasibility Study that meets their expectations and to the Business Center for a successful project that meets our financial objectives and maintains our excellent client relationship. Jim will also be responsible for managing the project meetings, project communications, completing and distributing the project reports, tracking performance, and billing. Jim has 30 years of Environmental Engineering experience completing projects similar to this assignment and has been involved in Woodard & Curran's work to date as the Project Manager and has gained detailed knowledge of the areas needs through this assignment. The Project Manager will be responsible for the project budget and schedule.

Kyle Coolidge (BS/MS), Project Engineer – Mr. Coolidge has more than four years of experience with wastewater engineering projects for municipal and industrial clients. Wastewater treatment design experience includes hydraulic analysis, chlorinated disinfection systems, instrumentation and controls, and cost analysis. His responsibilities include evaluation and design of wastewater treatment facilities, alternatives analysis, flows and loads analysis, report writing, hydraulic analysis, cost estimating, and construction administration. Kyle will be responsible project engineer for this project and will conduct the project tasks and prepare task memorandums and reports under the direction of the Project Manager and Zareh Maserejian. He will attend the initial site meeting and will gather the required site data and background reports. He will also assist the Project Manager to keep the project on budget and on schedule.

Zareh Maserejian (BS/MS), P.E., Sr. Technical Consultant – Mr. Maserejian is a senior Civil / Environmental Engineer with over 25 years experience in wastewater treatment, conveyance systems and sludge dewatering and management. He has conducted studies, design, construction support and start up of wastewater and water treatment systems for both industrial and municipal clients. He has designed many pretreatment facilities and worked with regional facilities in general cost allocation and industrial cost recovery. He has served as Certified Value Analyst for a number of industrial and municipal wastewater treatment projects bringing cost effectiveness to the project. His expertise includes fume and odor control systems for wastewater treatment and industrial processes. For this project he will support the project team as a Senior Consultant and as GSA Program Manager, in conducting the studies and evaluations for the various tasks, in cost estimating and design development for WWTP and conveyance options.

Ken Volock, (BS/MS) P.E.: Mr. Volock is a civil engineer with ten years of civil and environmental engineering experience. Areas of experience include civil/site development, sewer routing, water and wastewater conveyance and pump stations, storm drainage, water supply and storage projects, solid waste, and modeling of municipal water distribution systems. Ken will support the project team in civil engineering pertaining to site plan development and sewer conveyance routing and cost estimating.

Lauren Swett, Civil Engineer – Ms. Swett will assist the Project Team in the evaluation of any alternatives that include significant civil engineering components such as transporting the collected wastewater to another local facility for treatment and disposal.

Lisa Ross, Project Assistant – Ms. Ross will be responsible to assist the Project Team in the organization and performance of the project work, development of all deliverables, assisting the Project Manager in tracking project performance, and in developing the monthly status reports and invoices. Lisa has worked as the Project Assistant responsible for the work completed by Jim and his team for a number of years and is skilled at meeting their needs and exceeding their expectations.

Bill Luksha and Paul Rodriguez, Technical Advisory Team – Mr. Luksha and Mr. Rodriguez will assist the Project Manager and Project Engineer with thoughts and challenge the concepts and comparison of alternatives as members

of the Technical Advisory Team. This team will also be responsible for reviewing the draft Facilities Plan and offering comments to the Team that will improve the quality of the final report and the value that it brings to the Air Force. These senior staff have many years of experience in the evaluation, design, and operation of wastewater facilities serving government facilities, municipalities, and industries. They have also been deeply involved in our assignments at the Base and bring intimate knowledge of the region and their needs to the team.

ENGINEERING CHARGES & TERMS

Woodard and Curran proposes to provide the above defined scope of services for a fixed price of $98,772. The attached Table No. 1 presents the basis of this cost including labor hours and expenses by Task.

Our services will be provided in accordance with the terms and conditions of our GSA Contract No. GS-10F-0086, SIN No. 1 and 2.

PAYMENT

EAFB will pay Woodard & Curran for the services provided based on the Payment Monitoring Plan included in the Statement of Work and reproduced herein for reference purposes:

TASK DESCRIPTION	TASK PERCENTAGE	ACTUAL PERCENT COMPLETE
Task 1 - Project Work Plan	5%	
Task 2 - Site Visit/Data Collection	20%	
Task 3 – Draft Technical Memorandum	20%	
Task 4 – Final Technical Memorandum	20%	
Task 5 - Draft Report	20%	
Task 6 - Final Report	15%	

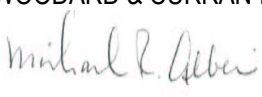
Woodard & Curran will submit monthly invoices to EAFB for payment. Each invoice will be accompanied by an earned value analysis based on the Task Percentage Values specified in the Payment Monitoring Plan.

We appreciate the opportunity to submit this proposal for your consideration and look forward to a continued working relationship with the Base.

If you have any questions relative to this proposal please contact Zareh Maserejian, Jim Fitch or me.

Sincerely,

WOODARD & CURRAN INC.



Mike Alberi, P.E.
Sr. Vice President

Zareh Maserejian, P.E.
Vice President