Proposal Number :
WO/JO Number :
Letter Number : **PP-6764-PR-C**

Scope Change Number : 0A

TENNESSEE VALLEY AUTHORITY
TASK ASSIGNMENT ORDER (TAO)

CONTRACT NUMBER : **99998970**
CONTRACTOR : **Parsons**
TASK NUMBER : **PR - 0637 - RPT637**
REVISION NUMBER : 00

LEAD : **Lynn Petty**
TECHNICAL MGR. : **Ron Purkey**
EFFECTIVE BEGIN DATE : **12/13/02**
CURRENT END DATE : **5/16/03**
PHASE : **1A**

PLANT : **Kingston Fossil Plant**
PROJECT : **KIF Scrubber addition gypsum stack**
TASK DESCRIPTION : **Determine feasability of locating gypsum stack on the KIF reservation.**
DESCRIPTION OF REVISION: **Intial authorization.**

FEE TYPE APPLICABLE TO THIS TAO :
_ Performance Award Fee
X Fixed Price Fee - Managed (**6%**) Fixed Percentage Type
Fixed-Percentage Fee ==========> ___ Staff Augmentation ___ Field Support
_ No fee applies to this task

TASK SUMMARY

	Previous Revision		Net Change		Total task Authorization
Negotiated Estimated Cost	$0	+	$49,247	=	$49,247
Fixed Fee	$0	+	$2,659	=	$2,659
Earned Award Fee To Date	$0	+	$0	=	$0
Available Award Fee	$0	+	$0	=	$0
Total Estimated Price	$0	+	$51,906	=	$51,906

TVA SHORT CODE ϕϕ1BRG4 PCN _____ LOCATION CODE _____ PERFORMING UNIT _____

APPROVED BY:

TVA Contract Administrator — Date 1/13/03

DISTRIBUTION:
Partner (cc)
Lead Eng.
Eng. Support Svs.

1/8/2003

Letter Number : PP-6764-PR-C Scope Change Number : 0A

PROPOSAL INTERNAL REVIEW SHEET

CONTRACT NUMBER : **99998970**
CONTRACTOR : **Parsons**
TASK NUMBER : **PR - 0637 - RPT637**

PROJ ENG/TECH REP : **Lynn Petty**
TECHNICAL MGR. : **Ron Purkey**
EFFECTIVE BEGIN DATE : **12/13/02**
CURRENT END DATE : **5/16/03**

PHASE : **1**
PLANT : **Kingston Fossil Plant**
PROJECT : **KIF Scrubber addition gypsum stack**
TASK DESCRIPTION : **Determine feasability of locating gypsum stack on the KIF reservation.**

Is this in the Spend Plan ? YES

Subcontractor Name :

Budget Amt. $ 51,906.00

FEE TYPE APPLICABLE TO THIS TAO :

___ Performance Award Fee
X Fixed Price Fee - Managed **(6%)** Fixed Percentage Type
Fixed-Percentage Fee ==========> ___ Staff Augmentation ___ Field Support
___ No fee applies to this task

DESCRIPTION OF REVISION : **Intial authorization.**

Net Change	
Negotiated Estimated Cost	$49,247
Fixed Fee	$2,659
Available Award Fee	$0
Total Estimated Price	$51,906

APPROVAL :

*** Please provide or confirm the above TAO information and short code reference listed below.**

*** If the attached proposal is to be approved, please complete, sign and return this review sheet to Larry Harless, LP-2P-C, so that the TAO form to be signed by the appropriate Department Manager can be generated.**

[signature] Date 1-14-03

DISAPPROVAL :

*** If the attached proposal is not acceptable, please contact the contractor to prepare a revised proposal.**

*** If the attached proposal is to be cancelled and the work is not to be performed by the Contractor, sign below and return to Larry Harless.**

_____ Date _____

Short Code

Short Code	PCN	Loc Code	Perf Unit	Commit $ (Approp. Only)	Comments
0Q1BRG4					

PARSONS E&C

633 Chestnut Street #400 • Chattanooga, Tennessee 37450-0400 • (423) 757-8020 • Fax: (423) 266-0922

TENNESSEE VALLEY AUTHORITY
CONTRACT 99998970
KINGSTON FOSSIL PLANT
SCRUBBER ADDITION
GYPSUM STACK
PHASE 1A STUDY
PR- 0637 – PCN

December 20, 2002
PP-6764-PR-C
Scope Change: 0A
Required Start Date: December 13, 2002
Requester: L. Petty

Mr. James G. Adair
Tennessee Valley Authority
1101 Market Street
Chattanooga, TN 37402-2801

Dear Mr. Adair:

Parsons E&C is pleased to submit this proposal for preparing a Phase 1A engineering study for a proposed gypsum stack for the proposed scrubber addition at Kingston Fossil Plant.

SCOPE

The scope of this proposal includes determining the feasibility of locating a gypsum stack within the Kingston Fossil Plant Reservation at the location specified by TVA as outlined in the attached Task Work Statement.

ORGANIZATION

All work will be performed under the direction of Mr. Bill Griffith, Manager Chattanooga Operations, who is directly responsible to TVA for the overall quality of the work. Mr. Dan Smith will serve as the Engineering Manager and Lead Engineer, with support provided by the Parsons Chattanooga and Reading offices.

SCHEDULE

Based on a December 13, 2002 authorization date, the TAO end date will be May 16, 2003. Parsons will provide preliminary volume calculations to TVA's Environmental Affairs Group by January 14, 2003. The remainder of deliverables specified in the attached Task Work Statement is due to TVA by April 15, 2003.

PRICING

All work performed will be in accordance with the terms of Contract 99998970. The estimated engineering cost for the additional work included here is $51,906.

This estimate was prepared assuming that no overtime will be required. However, should emergency conditions or schedule constraints occur, Parsons requests the flexibility to use additional overtime under the original authorization provided the total price is not exceeded.

SUMMARY

Parsons is pleased with the opportunity to be of service to TVA and we look forward to the successful completion of this task. If you have any questions, please feel free to contact Mr. Dan Smith at (423) 757-8088 or me at (423) 757-8027.

Very truly yours,

William D. Griffith, P.E.
Manager Chattanooga Operations

Attachment: Task Work Statement
Proposal Pricing Forms

TENNESSEE VALLEY AUTHORITY
CONTRACT 99998970
KINGSTON FOSSIL PLANT
SCRUBBER ADDITION
GYPSUM STACK
PHASE 1A STUDY
PR- 0637 – PCN

TASK WORK STATEMENT

1.0 BACKGROUND

A new gypsum disposal area will be constructed due to the addition of scrubbers to Kingston Fossil Plant (KIF). Current disposal plans involve sluicing of gypsum from KIF (wet stacking). In addition, some by-product from Bull Run Fossil Plant (BRF) may also be transported and disposed at this facility (dry stack). The site is an approximate 90-acre area located on the peninsula area east of the powerhouse adjacent to the Clinch River. The scope includes a determination of the overall volume of gypsum that can be disposed at this location.

2.0 PURPOSE

This Task Work Statement describes engineering support activities associated with this project. The purpose of this task is to determine overall feasibility and suitability of this site for location of this facility. Based on current TVA projections, it is assumed for purposes of this study that 300,000 tons of gypsum produced annually at KIF, and 185,000 tons produced annually at BRF will require disposal over a 20 year period. TVA desires that the facility be capable of a disposal volume ranging from 6 million tons to 10 million tons.

3.0 SCOPE

Perform a Phase IA study to determine the feasibility of the peninsula area site selection for disposal of gypsum. The scope of work will be as follows:

- Participate in a KIF site walkdown and preliminary meeting with TVA and Tennessee DSWM. Determine the feasibility of attaining waivers on solid waste regulations, including buffer requirements, liner requirements, and design storm events for the sediment pond.
- Calculate preliminary storage volumes (two scenarios) based on standard engineering practices. The volumes should be based on one scenario utilizing the western slough for storage (Scenario 1) and another scenario assuming the western slough will require a buffer (Scenario 2). The eastern slough is assumed to require a buffer for both scenarios.
- Evaluate existing boring logs, geoprobe data, and groundwater levels previously obtained by TVA. Prepare boring location plan and scope of geotechnical field and laboratory work to be performed by MacTech. Coordinate with MacTech and TVA during geotechnical evaluation of the new disposal site area.
- Evaluate geotechnical data and suitability of foundation material for stack development.

- Develop preliminary Autocad drawings for gypsum stacking plan. Develop a phased development footprint and incremental phases of stacking plan to meet stormwater permit requirements. Preliminary design shall also be in accordance with Tennessee DSWM Class II permit requirements (sufficient for a Phase 1 Study) and waivers granted to TVA by TDEC for coal combustion by-products. The design shall also consider the necessity of obtaining additional waivers, based on the site visit with TVA and TDEC. TVA's Fossil Engineering Services Design Criteria contains additional information regarding these waivers.
- Participate in internal scoping meetings with TVA as required.

4.0 CLARIFICATIONS/ASSUMPTIONS

Parsons work scope for this project includes the following clarifications and assumptions:

- Preliminary annual gypsum production volumes are as stated in this Task Work Statement.
- In order to meet stormwater permit requirements, assume development of stack to occur in maximum 50-acre open footprints.
- The study will not determine configurations of this facility for combinations of dry and wet stacking scenarios.
- Detailed calculations using computer programs to determine sediment pond routing and sizing will not be performed during Phase IA. Parsons E&C will determine preliminary sediment/detention pond sizes based on TDEC guidelines, and potential for TDEC solid waste regulation waivers.
- Sufficient geotechnical investigation shall be performed during Phase IA to determine overall suitability for this type of facility at this location. The study will consider the geology to the extent that this site has sufficient bearing capacity for the stack, and will address any potential fatal flaws (i.e., location of Holocene faults within 200 ft, or any distinguishing karst geologic features) that would prevent this site from being permitted as a solid waste disposal facility in Tennessee. Adjacent areas located on the peninsula area outside the facility footprint provided by TVA will be explored as potential borrow areas. However, given the limited time available, the geotechnical investigation cannot address each and every criteria established in Tennessee Rule 1200-1-7.
- Seismic analysis of the proposed stack geometry will not be conducted for this study. The configuration of the stack will assume an earthen starter dike, and a 3:1 slope for the gypsum stack, with 15 foot horizontal terraces placed at 30 foot vertical intervals. The overall stack height for the preliminary volume determination will be determined by the stack geometry. Subsequent engineering design will be required to determine the validity of this assumption.
- Digital copy of Kelsh topography to be provided by TVA.
- Development of quantities for a cost estimate will not be included in Phase 1A scope.
- No allowance is included for DCN preparation.

5.0 DELIVERABLES

Parsons anticipates the following deliverables as part of this task:

- Preliminary volume estimates.
- Autocad drawings:

- Title Sheet with site location and site access (1 sheet)
- Interior grading Scenarios 1 and 2 (2 sheets @ 1 inch = 100 ft)
- Final grading Scenarios 1 and 2 (2 sheets @ 1 inch = 100 ft)
- Borrow area plan sheet (1 sheet @ 1 inch = 200 ft)
- Phased development (1 sheet @ 1 inch = 200 ft)
- Cross-sections (1 sheet)

- Report addressing overall feasibility and data collected.

PARSONS ENERGY & CHEMICALS GROUP INC.
TVA TASK PROPOSAL FORM - CONTRACT 99998970
KIF Scrubber Addition Gypsum Stack Phase 1 Study
PR - 0637 SC No.: 0A
19-Dec-02

"LABOR" & "OVERTIME LABOR"

POSITION/ GRADE	ST Billing Rate ($/HR)	ST HOURS	ST COST	OT Billing Rate ($/HR)	OT HOURS	OT COST($)	TOTAL COST($)
Project Management	$103.61	23	$2,397	$84.71	0	$0	$2,397
Technical Management	$83.88	17	$1,456	$68.58	0	$0	$1,456
Project Services	$62.23	35	$2,160	$50.88	0	$0	$2,160
SUBTOTAL SERVICES		75	$ 6,013		0	$ -	$ 6,013
Senior Supvervising Engineer (E11)	$89.08	0	$0	$72.83	0	$0	$0
Supervising Engineer (E10)	$80.90	366	$29,583	$66.15	0	$0	$29,583
Principal Engr/Spv Designer (E09)	$75.51	0	$0	$61.74	0	$0	$0
Senior Engineer (E08)	$66.28	0	$0	$54.19	0	$0	$0
Engineer II (E07)	$61.01	0	$0	$49.88	0	$0	$0
Engineer I (E06)	$53.37	0	$0	$43.63	0	$0	$0
Associate Engineer (E05)	$49.17	0	$0	$40.20	0	$0	$0
Principal Designer (N16)	$64.69	0	$0	$79.33	0	$0	$0
Senior Designer (N14)	$57.91	0	$0	$71.02	0	$0	$0
Designer II (N12)	$42.30	0	$0	$51.87	0	$0	$0
Senior Drafter (N10)	$35.26	247	$8,716	$43.24	0	$0	$8,716
Drafter (N08)	$27.84	0	$0	$34.14	0	$0	$0
Associate Drafter (N06)	$27.84	0	$0	$34.14	0	$0	$0
Technician (N04)	$18.93	0	$0	$23.21	0	$0	$0
SUBTOTAL ENG'G & DESIGN		613	$ 38,298		0	$ -	$ 38,298

SUBTOTAL LABOR	$44,311
TRANSPORTATION & SUBSISTANCE	$940
TEMPORARY ASSIGNMENT LIVING EXPENSES	$0
COMPUTERS, CAD, TELEPHONE, REPRODUCTION	$3,496
REPROGRAPHICS (OUTSIDE SERVICES)	$0
MISCELLANEOUS EXPENSES	$500
SUBCONTRACTED SERVICES	$0
SUBTOTAL EXPENSES	$4,936
SUBTOTAL (Labor & Expenses)	$49,247
FIXED FEE @ 6% (APPLIED TO LABOR ONLY)	$2,659
TOTAL TASK ESTIMATED COST	$51,906

Man-hours by Discipline - Provided for reference only

Project Management	23	Mechanical	5
Technical Management	17	Electrical	0
Project Scheduling/Controls	35	Cntr'l Sytms	0
Specialist	72	Civil/Struct	536
Clerical/Admin Support	24	TOTAL	712

PARSONS ENERGY & CHEMICALS GROUP INC.
TVA FHP TASK PROPOSAL FORM - CONTRACT 99998970
KIF Scrubber Addition Gypsum Stack Phase 1 Study
PR - 0637 SC No.: 0A
19-Dec-02

Project Spend Plan

13-Dec-02 - Project Start

16-May-03 - Project Complete

5 - Project Duration - Months

	Hours	Cost
Month 1	91	$6,331
Month 2	211	$14,598
Month 3	180	$12,471
Month 4	176	$12,215
Month 5	52	$3,632
Month 6	0	$0
Month 7	0	$0
Month 8	0	$0
Month 9	0	$0
Month 10	0	$0
Month 11	0	$0
Month 12	0	$0
Month 13	0	$0
Month 14	0	$0
Month 15	0	$0
Month 16	0	$0
Month 17	0	$0
Month 18	0	$0
Month 19	0	$0
Month 20	0	$0

Fee		$2,659

TOTAL	711	$51,906

Resource Loading Reference (Parsons' use)

XE	12	ME	5	NE	0
XT	12	MD/MC	0	CE	288
XC	17	EE	0	CD/CC	247
XP	35	ED/EC	0	**TOTAL**	**712**
XS	72				
XA	24				