

Proposal Number :  
WO/JO Number :  
Letter Number : PP-6978-PR-C

Scope Change Number : 1A

**TENNESSEE VALLEY AUTHORITY  
TASK ASSIGNMENT ORDER (TAO)**

CONTRACT NUMBER : 99998970  
CONTRACTOR : Parsons  
TASK NUMBER : Par\_ - 0637 - 439  
REVISION NUMBER : 01

LEAD : Lynn Petty  
TECHNICAL MGR. : Ron Purkey  
EFFECTIVE BEGIN DATE : 12/13/02  
CURRENT END DATE : 6/27/03  
PHASE : 1

PLANT : Kingston Fossil Plant  
PROJECT : KIF Scrubber addition gypsum stack  
TASK DESCRIPTION : Determine feasibility of locating gypsum stack on the KIF reservation.  
DESCRIPTION OF REVISION: Additional Scope

FEE TYPE APPLICABLE TO THIS TAO :

Performance Award Fee  
 Fixed Price Fee - Managed Fixed Percentage Type  
 Fixed-Percentage Fee  $\implies$   Staff Augmentation  Field Support  
 No fee applies to this task

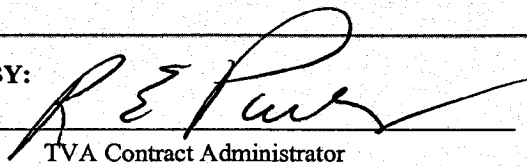
**TASK SUMMARY**

	Previous Revision		Net Change		Total task Authorization
Negotiated Estimated Cost	\$49,247	+	\$27,646	=	\$76,893
Fixed Fee	\$2,659	+	\$1,498	=	\$4,157
Earned Award Fee To Date	\$0	+	\$0	=	\$0
Available Award Fee	\$0	+	\$0	=	\$0
<b>Total Estimated Price</b>	<b>\$51,906</b>	<b>+</b>	<b>\$29,144</b>	<b>=</b>	<b>\$81,050</b>

TVA SHORT CODE 001BRG4 PCN \_\_\_\_\_

LOCATION CODE \_\_\_\_\_ PERFORMING UNIT \_\_\_\_\_

APPROVED BY:

  
TVA Contract Administrator

3/21/03  
Date

DISTRIBUTION:

Partner (cc)

Lead Eng.

3/20/2003

*T  
out  
5/1  
e*

*1/P*

Letter Number : PP-6978-PR-C

Scope Change Number : 1A

**PROPOSAL INTERNAL REVIEW SHEET**

CONTRACT NUMBER : 99998970  
 CONTRACTOR : Parsons  
 TASK NUMBER : Par\_ - 0637 - 439

PROJ ENG/TECH REP : Lynn Petty  
 TECHNICAL MGR. : Ron Purkey  
 EFFECTIVE BEGIN DATE : 12/13/02  
 CURRENT END DATE : 6/27/03

PHASE : 1

PLANT : Kingston Fossil Plant

PROJECT : KIF Scrubber addition gypsum stack

TASK DESCRIPTION : Determine feasibility of locating gypsum stack on the KIF reservation.

Is this in the Spend Plan ? yes

Subcontractor Name :

Budget Amt. \$ 81,000

FEE TYPE APPLICABLE TO THIS TAO :

- Performance Award Fee
- Fixed Price Fee - Managed
- Fixed-Percentage Fee  $\longrightarrow$   Staff Augmentation  Field Support
- No fee applies to this task

DESCRIPTION OF REVISION : Additional Scope

Net Change	
Negotiated Estimated Cost	\$27,646
Fixed Fee	\$1,498
Available Award Fee	\$0
<b>Total Estimated Price</b>	<b>\$29,144</b>

**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.

R E Purkey

Date 3/21/03

**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

3/20/2003

**TENNESSEE VALLEY AUTHORITY  
CONTRACT 99998970  
KINGSTON FOSSIL PLANT  
SCRUBBER ADDITION  
GYPSUM STACK  
PHASE 1A STUDY  
PR- 0637 – PCN FOS052**

March 17, 2003  
PP-6978-PR-C  
Scope Change: 1A  
Required Start Date: December 13, 2002  
Close Date: June 27, 2003  
Lead Eng: L. Petty  
Tech Mgr: R. Purkey

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 additional work related to preparation of a Phase 1A engineering study for a proposed gypsum stack for the proposed scrubber addition at Kingston Fossil Plant.

**SCOPE**

The additional scope covered in this proposal includes a study to determine the volume of a gypsum stack located at the current ash dredge pond area as outlined in the attached Task Work Statement, and development of quantities for facility development for comparison with another option developed in the previous scope of work.

**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.

Mr. James G. Adair  
PP-6978-PR-C  
March 17, 2003  
Page 2

## SCHEDULE

Based on a December 13, 2002 authorization date, the TAO end date will be June 27, 2003. Parsons will provide quantities for construction-related activities to TVA by April 4th. The remainder of deliverables specified in the attached Task Work Statement is due to TVA by April 18, 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 \$29,144.

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  
*W.D.G.*

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 FOS052**

**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. Scope change 1A includes performing a conceptual capacity study to determine the volume of gypsum for a wet-stacking operation at the existing ash pond location. 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 task is being revised to develop a concept for disposal at the existing ash pond. 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 volume of gypsum that can be disposed at the ash pond location. The scenario for gypsum stacking at the existing ash pond assumes that the Plant would convert to a dry ash stacking system, thus allowing the pond to be utilized for gypsum stacking. Two different stack concepts are to be studied for this location. The first concept involves a separate free-standing stack in the existing ash pond area, separate from the ash stack (located at the west end of the facility). This concept would not utilize available airspace between the two stacks. The second concept will utilize the airspace between the two stacks. A perimeter dike would be tied into the ash stack to create a pond. Gypsum would be dredged into this pond, and the available airspace would be maximized. The scope of work will be as follows:

- Develop preliminary Autocad drawings for both scenarios for stacking gypsum, and calculate preliminary storage volumes for the two scenarios, based on standard engineering practices.
- Develop quantities for construction and closure, based on the two concepts developed. Also develop quantities for the two disposal scenarios located on the peninsula that were developed under scope change 0A. Quantities will be provided to TVA for development of cost estimates.

- Participate in internal scoping meetings with TVA as required.
- Concepts for conversion from wet ash stacking to dry ash stacking will be by others, and is not included in this scope.
- Parsons will obtain data for locating 161 kV towers at the peninsula that were not located on the topographic map provided to Parsons E&C, to identify any potential interferences. This information will be added to the drawings previously developed for the peninsula stack location.

#### 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.
- The study will not determine configurations of a stack located at the existing ash pond for combinations of dry and wet stacking scenarios.
- The existing stilling basin will be assumed as the point of discharge for this facility. Parsons E&C will not examine any discharge criteria for NPDES discharges.
- No geotechnical investigation shall be performed during Phase IA for this type of facility at this location. Based on discussions with TVA, the toe of the stack will be assumed to be 200 feet away from the inside edge of the existing ash pond dikes. This assumption is based on TVA site specific knowledge and analysis for the existing ash disposal facility.
- Seismic analysis of the proposed stack geometry will not be conducted for this study. The configuration of the stack will assume 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.
- The concept of stacking gypsum in the ash pond will also be based on a similar concept developed by TVA for stacking gypsum at the Cumberland Fossil Plant (CUF). TVA will provide Parsons E&C with drawings for use in developing the concept at KIF.
- Digital copy of Kelsh topography to be provided by TVA.
- Parsons E&C will utilize the existing current topographic features of the ash disposal area using topography provided by TVA. Parsons will utilize the existing geometry of the ash stack based on current topographic information, and will adjust the design contours for future ash placement slightly in order to establish a baseline for purposes of this study.
- No allowance is included for DCN preparation.

#### 5.0 DELIVERABLES

Parsons anticipates the following deliverables as part of this task:

- Preliminary volume estimates for the two gypsum stack configurations at the existing ash pond.
- Construction quantities for the peninsula gypsum stack concepts (two each) and the quantities for two concepts at the existing ash pond.
- Autocad drawings:
  - Interior grading Scenarios 1 and 2 (4 sheets @ 1 inch = 100 ft)
  - Final grading Scenarios 1 and 2 (4 sheets @ 1 inch = 100 ft)
  - Cross-sections (1 sheet)

**PARSONS ENERGY & CHEMICALS GROUP INC.**  
**TVA TASK PROPOSAL FORM - CONTRACT 99998970**  
**KIF, Scrubber Addition Gypsum Stack Phase 1 Study**  
**PR - 0637 SC No.: 1A**  
**17-Mar-03**

"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	\$103.78	19	\$2,021	\$84.85	0	\$0	\$2,021
Technical Management	\$83.88	14	\$1,195	\$68.58	0	\$0	\$1,195
Project Services	\$60.49	33	\$2,012	\$49.46	0	\$0	\$2,012
Clerical	\$23.79	19	\$452	\$35.68	0	\$0	\$452
<b>SUBTOTAL SERVICES</b>		<b>86</b>	<b>\$5,681</b>		<b>0</b>	<b>\$0</b>	<b>\$5,681</b>

Senior Supervising Engineer (E11)	\$89.08	0	\$0	\$72.83	0	\$0	\$0
Supervising Engineer (E10)	\$80.90	151	\$12,217	\$66.15	0	\$0	\$12,217
Principal Engr/Spv Designer (E09)	\$75.51	20	\$1,510	\$61.74	0	\$0	\$1,510
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	0	\$0	\$43.24	0	\$0	\$0
Drafter (N08)	\$27.84	200	\$5,568	\$34.14	0	\$0	\$5,568
Associate Drafter (N06)	\$27.84	0	\$0	\$34.14	0	\$0	\$0
Technician (N04)	\$18.93	0	\$0	\$23.21	0	\$0	\$0
<b>SUBTOTAL ENG'G &amp; DESIGN</b>		<b>371</b>	<b>\$ 19,295</b>		<b>0</b>	<b>\$ -</b>	<b>\$ 19,295</b>

SUBTOTAL LABOR \$24,975

TRANSPORTATION & SUBSISTANCE \$0  
TEMPORARY ASSIGNMENT LIVING EXPENSES \$0  
COMPUTERS, CAD, TELEPHONE, REPRODUCTION \$2,171  
REPROGRAPHICS (OUTSIDE SERVICES) \$0  
MISCELLANEOUS EXPENSES \$500  
SUBCONTRACTED SERVICES \$0  
SUBTOTAL EXPENSES \$2,671

SUBTOTAL (Labor & Expenses) \$27,646

FIXED FEE @ 6% (APPLIED TO LABOR ONLY) \$1,499

TOTAL TASK ESTIMATED COST \$29,144

Man-hours by Discipline - Provided for reference only

Project Management	19	Mechanical	20
Technical Management	14	Electrical	0
Project Scheduling/Controls	33	Cntrl Sytms	0
Specialist	30	Civil/Struct	321
Clerical/Admin Support	19	TOTAL	457

**PARSONS ENERGY & CHEMICALS GROUP INC.**  
**TVA FHP TASK PROPOSAL FORM - CONTRACT 99998970**  
**KIF, Scrubber Addition Gypsum Stack Phase 1 Study**  
**PR - 0637      SC No.: 1A**  
**17-Mar-03**

Project Spend Plan

13-Dec-02 - Project Start  
 27-Jun-03 - Project Complete  
 7 - Project Duration - Months

	Hours	Cost
Month 1	26	\$1,601
Month 2	60	\$3,655
Month 3	108	\$6,549
Month 4	93	\$5,602
Month 5	89	\$5,401
Month 6	57	\$3,448
Month 7	23	\$1,391
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		\$1,499
<b>TOTAL</b>	<b>457</b>	<b>\$29,144</b>

Resource Loading Reference (Parsons' use)

XE	10	ME	20	NE	0
XT	10	MD/MC	0	CE	121
XC	14	EE	0	CD/CC	200
XP	33	ED/EC	0	<b>TOTAL</b>	<b>457</b>
XS	30				
XA	19				