Proposal Number: WO/JO Number:

Letter Number: PP-7796-PR-C

Scope Change Number: 0A

TENNESSEE VALLEY AUTHORITY TASK ASSIGNMENT ORDER (TAO)

CONTRACT NUMBER: 99998970

CONTRACTOR: Parsons

TASK NUMBER : Par_ - 0905 - 0910905 OO

REVISION NUMBER: 00

LEAD : R. D. Powell

TECHNICAL MGR.: Ron Purkey EFFECTIVE BEGIN DATE: 03/01/2004 **CURRENT END DATE: 06/30/2004**

PHASE: 2

PLANT: Kingston Fossil Plant

PROJECT: Permit for lateral expansion of dredge cells U 1-9

TASK DESCRIPTION: Ph 2 design for a lateral expansion of the dredge cells.

DESCRIPTION OF REVISION: Initial Authorization.

FEE TYPE APPLICABLE TO THIS TAO:

Performance Award Fee

_ Fixed Price Fee - Managed

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	+	\$219,328	=	\$219,328
Fixed Fee	20	+	\$11,366	=	\$11,366
Earned Award Fee To Date	\$0	+	\$0	=	\$0
Available Award Fee	\$0	+	\$0	=	\$0
Total Estimated Price	\$0	+	\$230,694	=	\$230,694

SHORT CODE 001BRG4 PCN FOS 052

LOCATION CODE ______ PERFORMING UNIT_

APPROVED BY:

DISTRIBUTION:

Partner (cc)

Lead Eng.

2/25/2004

Letter Number: PP-7796-PR-C

Scope Change Number: 0A

PROPOSAL INTERNAL REVIEW SHEET

CONTRACT NUMBER: 99998970

PNTRACTOR: Parsons

TASK NUMBER : Par_ - 0905 - RPT0905

PROJ ENG/TECH REP: R. D. Powell

TECHNICAL MGR.: Ron Purkey

EFFECTIVE BEGIN DATE: 03/01/2004

CURRENT END DATE: 06/30/2004

PHASE: 2

PLANT: Kingston Fossil Plant

PROJECT: Permit for lateral expansion of dredge cells U 1-9

TASK DESCRIPTION: Ph 2 design for a lateral expansion of the dredge cells.

Amount budgeted in FPEP-approved spend plan for this task: \$

Subcontractor Name:

FEE TYPE APPLICABLE TO THIS TAO:

Performance Award Fee

Fixed Price Fee - Managed

Fixed Percentage Type

Fixed-Percentage Fee ______ Staff Augmentation ____ Field Support

No fee applies to this task

DESCRIPTION OF REVISION: Initial Authorization.

Net Change				
Negotiated Estimated Cost	\$219,328			
Fixed Fee	\$11,366			
Available Award Fee	\$0			
Total Estimated Price	\$230,694			

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 Rita Welch, LI 2P-C, so that the TAO form to be signed by the appropriate Department Manager can be generated.

Date 2/20/64

* 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 as return to Larry Harless.

Short Code

Short Code

Loc Code

Perf Unit

Commit \$ (Approp. Only)

Comments

991BRG4 FUSØ5Z

2/25/2004

PARSONS EsC

633 Chestnut Street #400 • Chattanooga, Tennessaa 374500400 • (423) 757-8020 • Fax (423) 2660922

TENNESSEE VALLEY AUTHORITY FOSSIL POWER ENGINEERING SERVICES CONTRACT 99998970 PERMIT FOR LATERAL EXPANSION OF DREDGE CELLS UNIT 1-9 PHASE 2 PR-0905, TVA PCN N/A

February 23, 2004
PP-7796-PR -C
Scope Change: <u>0A</u>
Start Date: March 1, 2004
End Date: October 29, 2004
Lead Engr.: R.D. Powell
Tech. Mgr.: Ron Purkey

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

Dear Mr. Adair:

Parsons E & C is pleased to submit this proposal for performing Phase 2 design for a lateral expansion of the dredge cells at the Kingston Fossil Plant.

SCOPE

The following scope of work has been identified for this project to provide Phase 2 engineering and design to support a solid waste permit modification to expand the dredge cells for disposal of ash and gypsum within the Ash Pond. A detailed scope of work is included 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. Dan Smith will serve as the Project Manager. Parsons E & C engineering and design personnel in both the Chattanooga TN and Reading PA offices will support these individuals as required tocomplete the work.

Mr. James G. Adair PP-7796 PR-C February23, 2003 Page 2

SCHEDULE

The phase 2 design for the permit modification can be completed by June 1, 2004 (Parsons E&C deliver to TVA FES) if authorization to proceed is received by March 1, 2004. TVA has requested that Parsons E&C be available after the completion of this task to meet with TDEC as needed to answer questions and or address comments that may arise during their review of the design. As shown on the pricing sheet we are requesting a TAO end date later than the completion date to accommodate this request.

PRICING

All work performed will be in accordance with the terms of Contract 99998970. The estimated engineering cost for the Phase 2 work described here is \$230,694.

This estimate was prepared assuming overtime will be required as noted on the proposal pricing sheets. However, should emergency conditions or schedule constraints occur, Parsons E & C 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 Dan Smith at (423) 757-8088 or me at (423) 757-8027.

Very truly yours,

Manager Chattanooga Operation

Attachment:

Task Work Scope Document Drawing List Proposal Pricing Forms TAO Request Form

1. Project Overview

1.1. Introduction of Total Project

The following scope of work has been identified for this project to provide Phase 2 engineering and design to support.

This Task Work Scope Document assumes the Phase 2 design will be based on the TAO request received from TVA (attached), as well as clarifications contained herein.

1.2. Total Project Objective

The objective of this project is to provide a Part 2 solid waste permit application for expansion of the existing dredge cell facility at KIF.

2. Civil/Structural

2.1. Scope

- 2.1.1. The Civil Engineering Scope of work includes the following:
 - a) Site walkdowns;
 - b) Development of drawings;
 - Preparation of documents required to obtain a solid waste permit for the expansion;
 - d) Calculations for stormwater drainage;
 - e) Stability Evaluation. Stability evaluation will consist of pseudostatic analysis conforming to applicable requirements of Tennessee Solid waste rule 1200-1-7-.04 [especially the earthquake condition]. The stability evaluation will be intended also to determine the maximum airspace available for the ash pond area, and determine the maximum height for ash/gypsum placement taking into account anticipated hydraulic head pressures. The stability evaluation will be performed after a review of the likely waste placement scenarios as described in the Phase 1 Study, and after concepts are developed. The stability evaluation will be performed for selected two of the following three waste disposal combinations now being considered:
 - All wet ash:
 - Combination of wet ash and wet gypsum;
 - Dry ash and wet gypsum;

Also, a stability evaluation especially of the currently undertaken intermediate cell area is anticipated to determine foundation subgrade suitability for the final stack configuration and develop measures to stabilize the subgrade if so required. However, only recommendations for such measure(s) are included in the current scope and not the final or detailed design of such measure(s).

f) An analysis will be performed to develop mitigation method(s) for the existing dredge cell (due to the subsurface seepage that occurred recently at Elevation approximately 780 at Dike B. This analysis will consider two

failure modes: One due to slope instability and the other due to seepage or piping. Based on this analysis, it will be determined whether the dredge cell can continue to be utilized as presently constructed, or whether modifications or measure(s) for its mitigation will be required in order to allow the dredge cell to continue to be operated beyond its existing height. A conceptual plan for such measures, if needed, will be included in the current scope of the work and not the final or detailed design of such measure(s).

- g) TVA has provided Parsons E&C all available subsurface data. An additional subsurface investigation planned and directed by Parsons E&C, to supplement the available subsurface data, is being undertaken. The field and laboratory work for this investigation is subcontracted to Mactech by TVA. All subsurface information generated from this investigation as well as the available data provided to Parsons E&C will be interpreted and used for performing the analyses described above. The information regarding material properties of ash-gypsum mixture and dry and wet gypsum to be used for the analyses will be provided by TVA from their data base and, if necessary, will be supplemented through research of pertinent published literature. No additional laboratory or field testing of these properties for this work is considered necessary at this time. Attend meetings and/or participate via telecom with TVA engineering and regulatory support staff in Chattanooga as needed.
- 2.1.2 There is no scope for Structural Engineering as related to this work.

2.2. Civil/Structural Deliverables

- 2.2.1 Civil/Structural deliverables will include the following:
 - a) Preparation of an Operation Plan, QA/QC Plan, and specifications for procurement and installation of geosynthetic materials if used, and revision(s) to the Closure/Post Closure Plan;
 - A brief report summarizing results of the geotechnical analyses performed for the work, including recommendations for the mitigation measures developed and veneer stability evaluation for the modified final cover;
 - c) Revision(s) to permit drawings.

2.3. Civil/Structural Clarifications

- 2.3.1 Clarifications include the following:
 - a) Civil design will utilize existing TVA digital topography used to complete the Phase 1 Study (survey dated October 2003 supplemented with other topographic mapping provided by TVA).
 - b) TVA provides electronic copies of existing permit documents for revision.
 - c) Site walkdown involving geotechnical engineers will be performed during Phase 2 design.

- d) A Stormwater Pollution Prevention Plan (SWPPP) for stormwater discharge is not required.
- e) Design of a liner beneath the lateral expansion is not included.
- f) Design of sub-grade modifications to underlying material within the pond is excluded.
- g) Design of a system to mitigate seepage within the existing dredge cells (i.e., slurry cutoff wall) or measure(s) that may be required for subgrade stabilization especially at the current intermediate cell area are not included as described above. The O&M Plan will address whatever measures are to be taken based on Parsons E&C findings from their geotechnical analyses. Modifications to the existing pH adjustment system (Lime Addition) is not included.
- h) Treatment (required if any) and discharge of seepage water collected from the stack is not included in the scope.
- i) Compliance with the existing NPDES permit requirements is not included; however, Parsons E&C will prepare calculations for surface water drainage in accordance with TDEC regulations.
- j) The stilling basin does not require modifications other that raising the weir elevations.
- k) Compatibility testing of effluent with geosynthetic drainage material and/or natural materials (i.e., rock) is not included in this scope of work.
- 1) TVA is responsible for changes to the existing Hydrogeological Report for the permit modification, if any.

3. Mechanical

3.1. Scope of Work

There is no mechanical scope for this task.

4. Electrical, I & C

4.1. Scope of Work

There is no electrical or I&C scope for this task.

5. General Assumptions/Clarifications

- 5.1. The detailed man-hour breakdown represents an approximation of the various items included in this proposal. It does not represent a stand-alone man-hour budget for each item.
- 5.2. 40 hours are included for Parsons E&C participation in meetings that TVA may schedule with TDEC after preparation of the permit modification.

6. Project Management, Scheduling, and Document Control

6.1. Project Management

No additional project management hours are included above that shown in the pricing sheet.

6.2. Project Scheduling

No additional project scheduling hours are included above that shown in the pricing sheet.

6.3. Document Control

6.3.1. Parsons E & C has provided an allowance of 4 hours to develop a file folder in Encompass and 2 hours per week (16 weeks total) for collection of e-mails, scanning, copying, and reproduction for the duration of the active design period (June 1 delivery date). During the period of regulatory review (June-September), these hours will drop to 1 hour per week for an approximate total of 50 hours.

Schedule Milestones	<u>Date</u>
7.1. Start Phase 2 Design	1Mar04
7.2. Walk downs	05Mar04
7.3. 10% Design Review	IO DEMARO4
7.4. 50% Design Review	15Apr04
7.5. 100% Design Review	20May04
7.6. Parsons Issue Drawings	1 Jun 04
7.7. ERU Issue	8Jun04

The schedule shown above has target milestones shown above and may require adjustment during design development.

g.	1 (870,000)	2	3	4	1 (900-930)	2	3	4	MODIFICATION	_	2	Т1	7.2	Т3	T 4	Т5		[2	3	4	TAILS	TAILS	
DREDGE CELL EXPANSION STAGE 4 SHEET &	DREDGE CELL EXPANSION STAGE 5 SHEET 1 (870,000)	DREDGE CELL EXPANSION STAGE 5 SHEET 2	OREDGE CELL EXPANSION STAGE 5 SHEET 3	DREDGE CELL EXPANSION STAGE 5 SHEET 4	DAEDGE CELL EXPANSION STAGE 6 SHEET 1 (900-930)	DREDGE CELL EXPANSION STAGE 6 SHEET 2	OPENCE CELL EXPANSION SIAGE 6 SHEET 3	EXPANSION STAGE 6 SHEET	EXISTING DEFOCE OF LATER POINT MODIFICATIONS	EXISTING DREDGE CELL SECTIONS SHEET 1	DEDCE CELL SECTIONS SHEET 2	DREDGE CELL EXPANSION SECTIONS SHEET	DREIGH CELL EXPANSION SECTIONS SHEET 2	DREDGE CELL EXPANSION SECTIONS SHEET 3	DREDGE CELL EXPANSION SECTIONS SHEET 4	DEDGE CELL EXPANSION SECTIONS SHEET 5	DEDGE CELL EXPANSION DE IAILS - SHEET	DREDGE CELL EXPANSION DE IAILS - SHEET 2	DREDGE CELL EXPANSION DELAILS - SHEEL 3	EXPANSION DE LAILS - SHEET	DEFICE CELL EXPANSION FINAL COVER DETAILS	DAEDGE CELL EAPANSION FINAL COVER DETAILS	
	C DREDGE CEL			T	C DREDGE CEL	T	Τ	T	T	T		T	T	T	T	T	T	Τ	T		7	T	-
	ſ			Y	-				Σ		Z		-			C				<u>a</u>		-	
	0	0	0			0	0	0	0	0	0	0)	, c	0	0	0	0	0	0	 	+
ACAD D 10W425-53 0	25-54	25-55	25-57	25-58	25-59	25-60	25-61	25-62	25-63	25-64	25-65	25-66	5-67	5-68	5-69	5-70	5-71	5-72	5-73	5-74	5-75		
10W425-53	10W425-54	10W425-55	10W425-57	10W425-58	10W425-59	10W425-60	10W425-61	10W425-62	10W425-63	10W425-64	10W425-65	10W425-66	10W425-67	10W425-68	10W425-69	10W425-70	10W425-71	10W425-72	10W425-73	10W425-74	10W425-75		 -
		ء د			Δ		ٔ ۵	۵	۵	۵	۵	۵	۵	۵	۵	D	۵	۵	٥	a	O		

PARSONS ENERGY & CHEMICALS GROUP INC. TVA TASK PROPOSAL FORM - CONTRACT 99998970 KIF U1-9 Dredge Cell Lateral Expansion Phase 2

PR - 0905

SC No.: 0A

23-Feb-04

"LABOR" & "OVERTIME LABOR"

"LABOR" & "OVERTIME LA	BOR"						
POSITION/	ST Billing Rate	ST	ST	OT Billing Rate	ОТ	ОТ	TOTAL
GRADE	(\$/HR)	HOURS	COST	(\$/HR)	HOURS	COST(\$)	COST(\$)
Project Management	\$105.56	89	\$9,395	\$86.31	0	\$0	\$9,395
Technical Management	\$88.42	65	\$5,747	\$72.29	0	\$0	\$5,747
Project Services	\$62.06	186	\$11,542	\$50.74	0	\$0	\$11,542
Clerical	\$23.79	81	\$1,927	\$35.68	7	\$250	\$2,177
SUBTOTAL SERVICES		421	\$28,611		7	\$250	\$28,861
Senior Supvervising Engineer (£11)	\$94.91	o i	\$0	\$77.60		l 60	
Supervising Engineer (£10)	\$90.84	40			0	\$0	\$0
Principal Engr/Spv Designer (E09)	\$81.38	762	\$3,634	\$74.27	0	\$0	\$3,634
Senior Engineer (E08)	\$71.92	680	\$62,010	\$66.53	0	\$0	\$62,010
Engineer II (E07)	\$61.01		\$48,902	\$58.80	0	\$0	\$48,902
Engineer I (E06)	\$53.37	0	\$0	\$49.88	0	\$0	\$0
Associate Engineer (E05)	\$52.25	0	\$0	\$43.63	0	02	\$0
Principal Designer (N16)	\$66.05	0	\$0	\$42.72	0	\$0	\$0
Senior Designer (N14)	\$57.91	0	\$0	\$81.00	0	\$0	\$0
Designer II (N12)	\$42.30	200	\$11,582	\$71.02	0	\$0	\$11,582
Senior Drafter (N10)	\$35.69	0	\$0	\$51.87	0	\$0	\$0
Druffer (NOS)		684	\$24,414	\$43.77	200	\$8,755	\$33,168
Associate Drafter (N06)	\$31.70	0	\$0	\$38.88	0	\$0	\$0
Technical Aide (N05)	\$27.84	0]	\$0	\$34.14	0 1	\$0	\$0
Fechnician (NB4)	\$25,55	50	\$1,277	\$31.33	0	\$0	\$1,277
` '	\$18.93	0]	\$0	\$23.21	0	\$0	\$0
Proj. Secty I (NO4)	\$23.79	0	\$0	\$29.17	0	\$0	\$0
Word Processing (NO3)	\$17.03	0	\$0	\$20.89	0	\$0	\$0
Clerical (NO2)	\$15.14	0	\$0	\$18.57	0 [\$0	\$0
SUBTOTAL ENG'G & DESIGN	f I	2416	\$ 151,819		200 [\$ 8,755	\$ 160.573

SUBTOTAL LABOR	\$189,435
TRANSPORTATION & SUBSISTANCE TEMPORARY ASSIGNMENT LIVING EXPENSES COMPUTERS, CAD, TELEPHONE, REPRODUCTION REPROGRAPHICS (OUTSIDE SERVICES) MISCELLANEOUS EXPENSES SUBCONTRACTED SERVICES SUBTOTAL EXPENSES	\$1,784 \$0 \$14,459 \$0 \$750 \$12,900 \$29,893
SUBTOTAL (Labor & Expenses)	\$219,328
FIXED FEE @ 6% (APPLIED TO LABOR ONLY)	\$11,366
TOTAL TASK ESTIMATED COST	\$230,694

Man-hours by Discipline - Provided for reference only

Project Management	89	Mechanical	0
Technical Management	65	Electrical	0
Project Scheduling/Controls	186	Catr'l Sytms	o
Specialist	50	Civil/Struct	2566
Clerical/Admin Support	88	TOTAL	3044

PriceRev 34a

Page !

7796-0905(SC0A).xls

PARSONS ENERGY & CHEMICALS GROUP INC. TVA FHP TASK PROPOSAL FORM - CONTRACT 99998970 KIF U1-9 Dredge Cell Lateral Expansion Phase 2

PR - 0905

SC No.: 0A

23-Feb-04

Project Spend Plan

01-Mar-04 - Project Start

30-Sep-04 - Estimated Project Complete

8 - Project Duration - Months

29-Oct-04 - TAO END DATE

	Hours	Cost
Month I	78	\$5,590
Month 2	418	\$30,109
Month 3	461	\$33,197
Month 4	769	\$55,399
Month 5	305	\$21,973
Month 6	629	\$45,322
Month 7	239	\$17,221
Month 8	146	\$10,515
Month 9	0	\$0
Month 10	0	\$0
Month 11	Ü	\$0
Month 12	0	\$0
Month 13	0	\$0
Month 14	0	02
Month 15	0	\$0
Month 16	0	02
Month 17	0	\$0
Month 18	0	\$0
Month 19	0	\$0
Month 20	0	\$0

Fee		\$11,366
TOTAL	3044	\$230,694

Resource Loading Reference (Parsons' use)

Resource Loadi	ng Reference	(Parsons' use)			
XE	44	ME	0	NE	0
XT	45	MD/MC	0	CE	1482
XC	65	EE	0	CD/CC	1084
XP	186	ED/EC	0	TOTAL	3044
XS	50			L . 	
XA	88				

TAO REQUEST

Company Name:	Parsons		Contract No.: 99998970
TAO Number	1905	Revision	0A Phase II
			OTT I SHOUL II
PCN:	N/A	Plant: KIF	Units(s): N/A
Project	KIF - Permit for Lat	eral Expansion of Dre	dge Cells
Description:			
TVA Lead			
Discipline Civil	F Electrical	Mechanical	Cother (specify)
111			
Work Budgeted Fo	r FY(s): FY04		Shortcode: 001BRG4
List \$ limit for first	FY:	(Only if w	ork is budgeted for multiple FYs)
Disciplina(s) reques	sting design support:		
Civil	Yes No	TVA Civil Eng. Con	tact: Ronnie Powell 423-751-8912
	15		
Civil Mgmt. Appro	val:		
Electrical	Yes V No	TVA Elect. Eng. Conf	act:
El-mi-124		-, 3-11	
Electrical Mgmt. A	pproval: 1050	Waldry =	
Mechanical	Yes V No	TVA Mech. Eng. Cont	act:
Mechanical Mgmt.	A STATE OF THE STA)ugel	
Mechanical Mignit.	approvai: / // //		
Other (Specify)		TVA (other) Cont	act:
Other Mgmt. Appro	val:		
			<u> </u>
Scope of Work to be			See Attachments
dredge cells at Kings	necessary to submit a ; iton Fossil Plant - This	Part II permit package s will include drawing	e for a lateral expansion to the s, drawing revisions and revisions to
the O&M plan (narr	ative) portion of the ex	isting permit. The per	mit is to be for all available air
space in the ash pond gypsum, (3) Dry Ash	I and dredge cell comp & Wet Gynsum.	lex for (1) All wet ash,	(2) Combination of wet ash & wet
Perform analysis req	uired to determine how C taking into account t	w high wet ash and/or	gypsum can be placed for ultimate es. Consider alternative mitigation
methods to achieve st	ability.	Maranic Mean bream	ts. Consider alternative nutigation
Scope and coordinate	any Geological testing	that was be seculard	
the second secon			
TVA will provide exis	sting data from previou	us work in the area, in	cluding copies of previous drilling
roports in the atea, th	e previous permit app	ncanon, etc.	

Expected P Deliverables: a	'rovide excel spreadshe vailable. For the Part	ets with construction Il permit package pro	quantities and storage volumes vide PE stamped drawings and a
s	tamped O&M plan acc	eptable for a first sub	mission by <u>6/01/04</u> .
A	nticipate answering T	DEC anestions and an	mments thru the end of the FY.
1	- p	questions and to	the thu of the F1.

Requested Start Date:	3/01/04	Requested Completion Date:	9/30/04

cc: James Adair Billy Crosslin Barry Kimsey Ron Purkey Roger Waldrep Ric Wiggall