DRAFT

Not a revision?

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

March 14, 2003
PP-6XXX-PR-C
Scope Change: 1A
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 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.

SCHEDULE

Based on a December 13, 2002 authorization date, the TAO end date will be May 30, 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 April18, 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 $XXXXX.

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

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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 ash 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:

gypsum wet?

- 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.

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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 9 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 will utilize existing TVA design drawings for ash stack development to be used as a basis for the gypsum stack capacity determination.
- No allowance is included for DCN preparation.
- 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.

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)

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