ATTACHMENT E

ENGINEERING SERVICES AMENDMENT REQUEST FOR:

EAST and WEST BANK WTP GENERATORS & BUILDING STRUCTURES
MODIFIED SCOPE OF SERVICES
ST. CHARLES PARISH, LOUISIANA
December 20, 2023

I. INTRODUCTION

The original scope of the project was to replace the existing generators at the East and West bank WTP's with smaller generators. The scope of the project has evolved greatly since the scope was first established. Follow up meetings, site visits, plan reviews, and discussions have taken place since this first scope was developed. Below is an outline of the scope of work for each site explaining the original design intent versus the latest design intent.

II. SCOPE OF SERVICES

EAST BANK

The original scope for the East Bank Plant was to replace the existing generator with 1 or 2 generators with more appropriately sized units. The scope included the following:

1. Electrical service and all relative panels, MCCs, and motors will be reviewed for a load study.
2. Coordination will be required with plant operators to determine which motors are no longer being used and which motors operate in sequence or simultaneously.
3. Evaluation of existing automatic transfer switch.
4. Evaluation of existing main electrical service switchgear.
5. Replacement or Upgrade of existing ATS. The existing ATS appears to be in satisfactory condition. However, if paralleled generators are installed, the ATS lineup may have to be replaced with 2-ATS's.
6. Sizing of generators to properly operate the plant under "real" load conditions.
7. An alternative consideration will be to size two generators to operate individually or in parallel when needed. This will allow the greater variance in required generator capacity and allow for generator maintenance if required to be offline.

After meetings and discussions on site, the design scope has changed to the following:

1. Electrical review, evaluation, and coordination with plant operators has remained the same.
2. The single oversized generator will be replaced with 2-500KW units.
3. The existing ATS will be abandoned in place and used as a "main disconnect".
4. Installation of 4-ATS's vs. 2-ATS's.
5. Each MCC feeder will require a separate ATS.
6. Feeders of each MCC must be intercepted and rerouted over to new ATS locations near

the main switchgear house.

7. It has been requested to keep the plant on-line (as feasible as possible) with minimal down time for electrical cut over of each feeder and ATS.
8. Phasing and installations are extremely difficult without having sustained outages.
9. It has been determined the existing underground feeders to the existing MCC's are all encased in concrete below grade.

The original conceptual opinion of probable construction cost is:

(2) 500KW Generators & ATS's	$ 700,000
Wire/Misc. Materials	$ 100,000
Building Structure	$ 200,000
Labor	$ 25,000
+/-15% contingency	$ 153,750
Subtotal	$1,178,750
OH (15%)	$ 176,812.50
Subtotal	$1,355,562.50
Profit (10%)	$ 135,556.25
Total Estimate	**$1,491,118.75**

The revised, final design opinion of probable construction cost is now:

(2) 500KW Generators & ATS's	$1,300,000
Wire/Misc. Materials	$ 95,000
Building Structure	$ 200,000
Labor	$ 90,000
+/-15% contingency	$ 252,750
Subtotal	$1,937,750
OH (15%)	$ 290,662.50
Subtotal	$2,228,412.50
Profit (10%)	$ 222,841.25
Total Estimate	**$2,451,253.75**

WEST BANK

The original scope for the West Bank Plant was to replace the existing generator with 1 or 2 generators with more appropriately sized units. The scope included the following:

1. Electrical service and all relative panels, MCCs, and motors will be reviewed for a load study.

2. Coordination will be required with plant operators to determine which motors are no longer being used and which motors operate in sequence or simultaneously.
3. Evaluation of existing automatic transfer switches.
4. Evaluation of existing main electrical service switchgear.
5. Reuse of existing 2-ATS's. Existing ATS's appear to be in satisfactory condition.
6. Sizing of generator to properly operate the plant under "real" load conditions.

After meetings and discussions on site, the design scope has changed to the following:

1. Electrical review, evaluation, and coordination with plant operators has remained the same.
2. The single oversized generator will be replaced with 2-500 KW units.
3. The existing ATS's will be removed and replaced with new ATS's.
4. Each MCC feeder will be reconnected to the new ATS's.
5. It has been requested to keep the plant on-line (as feasible as possible) with minimal down time for electrical cutover of each feeder and ATS.
6. Phasing and installations are extremely difficult without having sustained outages.
7. The existing feeders are overhead, so it helps with installation and cut over, however, the generators feeders are approximately 180-200 linear feet which will result in additional costs.

The original conceptual opinion of probable construction cost is:

(2) 350KW Generators & ATS's	$ 600,000
Wire/Misc. Materials	$ 100,000
Building Structure	$ 150,000
Labor	$ 20,000
+/-15% contingency	$ 130,500
Subtotal	$1,000,500
OH (15%)	$ 150,075
Subtotal	$1,150,575
Profit (10%)	$ 115,057
Total Estimate	**$1,265,632**

The revised, final design opinion of probable construction cost is now:

(2) 500KW Generators & ATS's	$1,050,000
Wire/Misc. Materials	$ 100,000
Building Structure	$ 200,000
Labor	$ 75,000
+/-15% contingency	$ 213,750
Subtotal	$1,638,750
OH (15%)	$ 245,812.50

Subtotal	$1,884,562.50
Profit (10%)	$ 188,456.25
Total Estimate	**$2,073,018.75**

III. PROPOSED FEE

A. BASIC FEE

The new Opinion of Probable Construction Cost for both plants is $4,524,272.50. Using the LA FP&C fee curve (Exhibit A), the fee percentage is 7.8%. Therefore, the Basic Services Fee is 7.8% of $4,524,272.50 which is equal to $352,609.

B. SUPPLEMENTAL SERVICES

No additional supplemental services are requested in this proposal.

C. TOTAL ENGINEERING FEE

The anticipated total engineering basic services fee for this new scope of services is $352,609.

Proposed Basic Services Fee	$352,609.00
Less Present Fee	$217,500.00
Proposed Additional Basic Services Fee	$135,109.00

The Basic Services Fee is proportioned as follows:

Preliminary Design Phase (25%)	-	$ 88,152.25 (LS)
Design Phase (45%)	-	$158,674.05 (LS)
Bidding Phase (5%)	-	$ 17,630.45 (LS)
Construction Phase (20%)	-	$ 70,521.80 (LS)
Record Drawing Phase (5%)	-	$ 17,630.45 (LS)