CONFIDENTIAL

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In Re: Review of Tampa Electric Company's Waterborne Transportation Contract with TECO Transport and Associated Benchmark	)	DOCKET NO. 031033-EI
	)	FILED: MARCH 30, 2004

CONFIDENTIAL

DIRECT TESTIMONY AND EXHIBITS

OF

JOHN B. STAMBERG, P.E.

ON BEHALF OF

CSX TRANSPORTATION

CONFIDENTIAL

DECLASSIFIED

aff 1.26.05 (entire DN)

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

PREPARED DIRECT TESTIMONY OF JOHN B. STAMBERG, P.E.

Q. Please state your name, address, occupation and employer.

A. My name is John B. Stamberg. I am employed as Vice President of Energy Ventures Analysis, Inc. ("EVA"), 1901 North Moore Street, Suite 1200, Arlington, Virginia 22209.

BACKGROUND AND QUALIFICATIONS

Q. Please provide a brief outline of your educational background and work experience.

A. I received a Bachelor of Science Degree in Civil Engineering from the University of Maryland in 1966 and a Master of Science Degree in Sanitary Civil Engineering from Stanford University in 1967. I worked at the United States Environmental Protection Agency, primarily in the areas of water pollution control and solid waste management and handling, from 1967 to 1974. From 1974 to 1981, I worked as a Director for Energy and Environmental Analysis, Inc., in water pollution, boiler conversions, and coal unloading, storage, handling, and reclaiming. Since 1981, I have been with EVA, where I have had primary responsibility for directing EVA's engineering studies and where I have worked with electrical power plants, industrial boilers, mining engineering, and materials handling. I hold patents pending in wastewater treatment system and mineral processing applications. A copy of my resumé is attached as Exhibit ____(JBS-1).

Q. Are you a registered professional engineer?

A. Yes. I am a registered professional engineer in the State of Louisiana.

Q. Are you a member of any professional organizations?

A. Yes. I am a member of the Water Pollution Control Federation and the Federal Water Quality Association.

PURPOSE OF TESTIMONY

Q. Please state the purpose of your testimony.

A. I am testifying on behalf of CSX Transportation ("CSXT"), an intervenor party in this proceeding before the Florida Public Service Commission ("PSC" or "Commission"). The purpose of my testimony is to present my independent evaluation, analyses, and opinions regarding the following:

a. CSXT's conceptual design and capital cost estimates for the construction of rail infrastructure that would be needed to accommodate rail deliveries of coal to Tampa Electric Company's ("TECO") Big Bend Generating Station and Polk Power Station;

b. the estimates of the capital costs for rail infrastructure prepared by Sargent & Lundy ("S&L") at the request of TECO;

c. the estimates, prepared by Sargent & Lundy at TECO's request, of the operating and maintenance ("O&M") costs associated with the rail delivery system proposed by CSXT; and

d. the capability of the proposed coal handling facilities at Big Bend Station to provide blending for solid fuels (different types of coals and petroleum coke) used by TECO at its Big Bend and Polk Stations.

Q. What is the scope of your analysis and testimony?

A. The scope of my analysis is essentially coextensive with the purposes above. I have reviewed and analyzed, independently and using independent sources for input data and factors, the cost estimates prepared by CSXT for the rail delivery infrastructure needed to accommodate rail delivery of coal at TECO's Big Bend and Polk Generating Stations.

I have also analyzed S&L's September 18, 2003 report entitled CSX Transportation – Alternative Method of Coal Delivery, Report No. SL-008160. The purpose of the S&L report was allegedly to validate the capital cost for each option proposed and to provide assessments of assumptions that qualify the bid. S&L also provided operating cost estimates. This work was done on behalf of TECO and with TECO's inputs. I obtained access to this S&L report upon signing an "Endorsement to Non-Disclosure Agreement" signed and dated February 25, 2004. TECO has classified this document as confidential.

Finally, as a result of gathering certain information and having approximately 4 hours to visit the Big Bend site, I feel that there is another engineering design solution for rail delivery of coal to Big Bend that enjoys lower capital costs, lower operating costs, quicker construction time, and less implementation difficulties than either the initial CSXT design concept or S&L's concept. Accordingly, I believe that this solution is worth evaluating. This solution would have likely been envisioned if TECO had cooperated with CSXT in attempting to identify and design a workable coal-by-rail delivery system for the Big Bend site; therefore, I refer to this new alternative as a "cooperative" design concept.

Q. Are you sponsoring any exhibits to your testimony?

A. Yes. I am sponsoring the following exhibits:

Exhibit ____(JBS-1): Resumé of John B. Stamberg, P.E.;

Exhibit ____(JBS-2): Excerpts from RS Means Heavy Construction Cost Data, 13th Edition, 1999, RS Means Square Foot Costs, 24th Annual Edition, and Dodge Unit Cost Book, 1999;

Exhibit ____(JBS-3): Conveyor Estimate Based on Cubic Storage Systems Budget Quote;

Exhibit ____(JBS-4): Conveyor Estimate Based on FMC Budget Quote;

Exhibit ____(JBS-5): Conveyor Estimate Based on Continental Conveyors Budget Quote;

Exhibit ____(JBS-6): Rapid Discharge Pit and Conveyor – EVA Estimate;

Exhibit ____(JBS-7): Conceptual Diagram – Cooperative Rail Delivery System;

Exhibit ____(JBS-8): Overview of Rail Delivery Options to Big Bend;

Exhibit ____(JBS-9): Sargent & Lundy LLC, Tampa Electric Company Big Bend and Polk Generating Stations, CSX Transportation Alternate Method of Coal Delivery, SL-008160, September 18, 2003; and

Exhibit ____(JBS-10): Sargent & Lundy LLC, Tampa Electric Company Big Bend and Polk Generating Stations, CSX Transportation Alternate Method of Coal Delivery, SL-008160, **DRAFT** September 4, 2003.

SUMMARY OF TESTIMONY

Q. Please summarize your testimony.

A. CSXT prepared capital cost estimates for two rail delivery infrastructure systems at TECO's Big Bend Station and two systems at Polk Station. CSXT proposed to pay for what CSXT estimated, based on preliminary engineering analyses, to be the reasonable costs of all necessary infrastructure improvements to accommodate rail deliveries of coal to both Big Bend and Polk. Despite significant constraints, imposed by TECO, on CSXT's ability to adequately view the Big Bend site and existing facilities, CSXT's estimates were entirely reasonable. My estimates, presented in this testimony, indicate that the actual costs will probably be somewhat higher than estimated by CSXT but still below the total amount that CSXT offered to pay for the needed facilities.

TECO hired S&L on August 27, 2003 to prepare a study of the capital and operating and maintenance costs associated with a rail delivery system for coal at Big Bend and Polk. S&L's study is not based on standard engineering estimating techniques or information sources, is not based on normal data inputs, and produced severely overstated cost estimates for the capital costs associated with CSXT's proposed rail delivery facilities at Big Bend (and Polk). The total overstatement is approximately $20 million to $40 million, depending on which S&L value one takes as the reference point.

Not surprisingly, S&L's estimates of O&M costs are also severely overstated. My estimates, presented in this testimony, indicate that S&L's O&M estimates are overstated by a factor of about four times the correct cost.

In addition, the coal handling facilities at Big Bend Station will continue to have excellent blending capabilities following the installation of the proposed CSXT rail delivery systems.

EVALUATION OF CSXT'S CONCEPTUAL DESIGN AND COST ESTIMATES FOR RAIL DELIVERY INFRASTRUCTURE TO SUPPLY COAL TO BIG BEND AND POLK

Q. Have you reviewed CSXT's July 2003 bid?

A. Yes.

Q. Do you understand how the cost estimates were made by CSXT?

A. Yes.

Q. How did you come to understand CSXT's cost estimating procedure?

A. I met with Bob White and Mike Bullock of CSXT, and Richard Schumann of RAS Engineering Plus, Inc., on February 20, 2004 at CSXT's headquarters in Jacksonville, Florida for the purpose of learning how Mr. Schumann, Mr. White, and the other CSXT engineering personnel prepared their design and their cost estimates.

Q. Who developed CSXT's cost estimates?

A. Bob White of CSXT, with assistance from CSXT's internal engineering sections, and Richard (Dick) Schumann of RAS Engineering Plus, Inc. prepared CSXT's design concept and cost estimates for the rail delivery systems identified in CSXT's proposals (bids) presented to TECO in 2002 and 2003.

Q. What information did Mr. White and Mr. Schumann use to develop the cost estimates?

A. In August 2002, TECO provided CSXT an out-of-date macro-scale plot plan. In addition, TECO allowed Mr. White and Mr. Schumann to have a 30-minute "drive

through" visit to the Big Bend Station, escorted by Mr. Martin Duff of TECO, in which Mr. White and Mr. Schumann were not allowed to get out of their car, not allowed to take pictures, and not allowed to ask technical questions of Mr. Duff.

Q. Why was the out-of-date macro-scale plot plan a problem?

A. There were four major misleading problems with the out-of-date plot plan that made determining a possible rail delivery system difficult: (1) The Polk truck loading system was not shown on this plot plan. The current load out for Polk is in the northern most blend silo. It was not shown. Mr. Duff identified a unit that was about 1,000 feet south of the current Polk truck load out. (2) The area on the out of date plot plan had a single area marked G4, which is and was then divided into a slag pond and a dead coal storage area. (3) The two main radial stackers were not shown on the out-of-date macro-scale plot plan. (4) The out-of-date plot plan showed two parallel tracks on the south side of the station, one of which was in the process of being dug up to accommodate piping that was being installed in association with a new water desalinization plant being installed adjacent to the Big Bend plant site. Mr. Duff orally stated that this second track would be restored, when in fact it was not.

Q. How did the out-of-date plot plan handicap CSXT's efforts to propose and cost out rail delivery systems and Polk shuttle reloading systems?

A. First, the misinformation increased the length of the Polk reloading conveyor. Second, the incorrect area-G4 information did not allow Mr. White and Mr. Schumann to select the best location for the new proposed radial stacker to be placed such that the Big Bend's radial stacker could reach more of the rail delivered coal in the 1.0 to 2.0

MMTPY system. Finally, the fact that CSXT was told that certain missing or removed tracks would be restored, but which were not restored, directly impacted the needed trackage for rail coal unloading and reloading systems.

Q. Would a 30-minute, "no pictures," "stay in your car," drive through visit or "tour" of Big Bend Station, or any other power plant, be sufficient to select an optimum rail delivery system?

A. No.

Q. Why not?

A. The Big Bend coal yard has 69 transfer points identified in its air permit and is a large flexible blending facility with numerous pieces of equipment. Many items cannot be seen from the car. Any new conveyor, the most widely used piece of equipment in a coal yard, must be in a straight line. Checking lines of sight cannot be done from a car nor is 30 minutes a sufficient time to identify or examine various alternatives.

Q. Did Mr. White and Mr. Schumann talk to anyone from Big Bend that could describe how the equipment was used?

A. No. TECO did not give Mr. White and Mr. Schumann access to any Big Bend engineering or operating personnel.

Q. What type of information would be readily available to engineers or railroad personnel if they wanted to propose a possible coal-by-rail delivery system?

A. Under normal circumstances, there are several easily available sources of information: accurate, detailed site plans with all significant equipment and facilities identified; access to coal yard operators, plant engineers, or supervisors who know how the coal yard is operated; utility drawings for electric power, water, drainage, and other systems; air permits; and reasonable time to walk, view, and understand the coal yard.

Q. Given the handicaps that you just identified, how were Mr. White and Mr. Schumann able to propose and estimate the cost of a rail unloading system?

A. They have sufficient experience that they could -- and did -- propose a reasonable solution, which may not be the lowest cost or the only viable solution. With their knowledge and experience, a reasonable solution could be proposed and costs estimated for purposes of evaluating the viability of potential business opportunities. If more site information or access were provided or obtained, a lower cost solution would only make CSXT's bid more attractive.

Q. Can you describe the reasonable solution proposed by CSXT?

A. Yes. The design concept proposed by CSXT had the following key features.

1. The coal would be brought into the plant in 90-car unit trains via new trackage on and within the west side fence in 45 car-segments.
2. The coal would be dumped into a pit either newly built or using the existing rail unloading pit for limestone.
3. Then the coal would be transported by conveyor to the coal barge system transfer house either (a) via two straight line conveyors or (b) via a long west-moving conveyor connecting to a northwest-moving conveyor to the coal barge transfer

house. (The alternative for lower volumes of coal deliveries would only move westward then directly north).

4. The Polk shuttle coal would be picked up at the truck loading source and conveyed to a 250-ton silo which would load the coal into the Polk shuttle cars.

Q. Is this a workable concept?

A. Yes.

Q. Have you visited the Big Bend site?

A. Yes. I drove around the site and surrounding area during March 8-11, 2004. I obtained information from the Hillsborough County Property Appraiser. I also visited the Environmental Protection Commission of Hillsborough County to review air permit files and wetland locations. At this time, it was uncertain whether TECO would allow me to visit the site. On March 18, 2004, I was able to visit Big Bend. I was able to get out of the car and view equipment. I was there for about four hours and there was no time limit on my visit, and TECO personnel were generally able to answer my questions. I was allowed to make linear measurements, but TECO did not allow me to take pictures or measure noise levels.

Q. Were the options proposed by CSXT viable and adequate engineering concepts?

A. Yes.

Q. What, if any, adjustments in CSXT's concept do you feel are needed or appropriate?

A. Four specific adjustments are needed, as follows.

1. Because the right-of-way for the second track was not restored, and because desalinization pump motors on-site are vertical and a pump control house (about 16 feet high) is now in this right-of-way, the long conveyor proposed by CSXT has to be elevated to about 18 feet to clear the existing equipment.

2. The limestone conveyor goes slightly north by about 12 feet. The proposed elevated conveyor needed a 12-foot southern orientation. This means that if the limestone conveyor is used, a 24-foot conveyor and another transfer house is needed.

3. The limestone rail pit and conveyor do not have a magnetic separator.

4. The existing limestone pit has a baghouse to control dust. A surfactant dust suppression system might be a better approach. This type of dust suppression is used at the dock unloading system.

Q. Would those adjustments result in added costs, above those initially estimated by Mr. White and Mr. Schumann?

A. Yes.

Q. Can you estimate the resulting increase in cost of making these adjustments?

A. Yes.

1. The elevation of the long conveyor would add about $50,000 in foundation cost, $25,000 for ladders, $265,000 for step supports, and $330,000 for walkways for a total increase of $670,000.

2. The dust suppression equipment cost would be $85,000 to $95,000 delivered and about $10,000 to install, for a mid-range total of $100,000. This is identical equipment (Dust Buster) from the same supplier (Midwest Supply) as the dust suppression equipment used for the Big Bend barge unloading system.

3. A stationary electromagnetic metal separator would cost $18,600 for the magnet and 10 KW rectifier to convert AC current to DC current, plus an estimated cost of $7,400 to install. This totals to $26,000.

4. An additional 24-foot conveyor and transfer house would cost about $350,000. This 24-foot conveyor would only be needed in the 1.0 to 2.0 MMTPY system.

Q. What is the total cost that would be needed to add to CSXT's bids in your opinion?

A. For the large system (2.0-5.5 MMTPY) it would be $796,000 ($670,000 + $100,000 + $26,000). For the small system it would be about $896,000 ($420,000 pro rated elevated conveyor length + $100,000 + $26,000 + $350,000).

Q. Do you know how Mr. White and Mr. Schumann prepared their estimates?

A. Yes. The coal handling system cost estimates were provided by Mr. Schumann; CSXT personnel provided the cost estimates for rail and heavy equipment. No formal report was made by Mr. Schumann. Vendor information was obtained orally by Mr. Schumann, and Mr. Schumann's estimated costs for Big Bend were then verbally transferred to Bob White of CSXT. The systems at Polk to unload coal had some written estimates for the Polk scenarios.

Mr. Schumann used a variety of approaches to prepare his cost estimates, including specifically: obtaining verbal up-to-date costs from various vendors

(particularly for the conveyor systems) and estimating the pit costs based on similar equipment (adjusted to 2003 dollars). In some cases, Mr. Schumann proposed a surrogate design and used various factors to estimate the costs. The estimates were determined to be appropriate by Mr. Schumann when comparing the estimates to his previous work. The specifics were as follows.

A. **1.0 to 2.0 MMTPY** Bid at ± 1,500 tons per hour ("TPH").

1. **Modified Limestone Pit – $260,000 by Schumann.** The existing limestone pit or under-car loading system was designed for rail car bottom loading. It is covered with a bag house to control dust. Only truck-delivered limestone is being delivered or predicted to be delivered per TECO. Thus, the pit is ideal for conventional coal rail car unloading at a rate of about 1,500 TPH. The details of the belt (size and rate) that were provided may need to be upgraded to meet the 1,500 TPH rate capability. The cost to upgrade the belt rates and use the limestone rail unloading pit for coal was estimated to be **$260,000** based on Mr. Schumann's experience with similar projects. The coal would then be put on the long conveyor. Mr. Schumann felt that a new limestone truck unloading system was needed to prevent coal and limestone from being contaminated. (See No. 5 below.)

2. **Long Conveyor – $1,953,000 by Schumann.** The conveyor taking the coal from the limestone pit conveyor would be a 54" wide conveyor running 2,100 feet west to a short conveyor running north. Mr. Schumann provided a cost estimate of a complete system, i.e., a system that was covered, fire protected, and provided with access walks, lights, and other

necessary appurtenances, complete with engineering and installation. He contacted several conveyor vendors to verify his cost estimate using the most current cost for idlers, frames, and other components. The 54" wide conveyor could handle 2,500 TPH. The estimated cost conformed to the range of cost experienced on other projects.

3. **Short Conveyor -- $280,000 by Schumann**. The same approach as used for the long conveyor was used to estimate the cost of the short conveyor.

4. **200 Foot Radial Stacker -- $250,000 by Schumann**. The radial stacker cost was based on previous cost experience and escalated to 2003 dollars.

5. **New Track Dump and Conveyor -- $350,000 by Schumann**. If the rail coal delivery system is to use the limestone pit system located under the railroad track, another limestone pit and conveyor would be desirable for the truck delivery of limestone. The new limestone pit was estimated by using approximate cost estimates and factors for materials, installation and overhead and profit, as well as engineering for a surrogate design of a pit and conveyor system. The new limestone pit and pit conveyor would feed the existing limestone transfer house. The costs were in the expected range of similar equipment installations.

B. **2.0 to 5.5 MMTPY Bid @ ±2,500 TPH.**

1. **Rapid Discharge System -- $1,600,000 by Schumann**. The rapid discharge system cost estimate was made in the same manner as the new limestone truck dump and conveyor system, i.e., a surrogate design and updated conveyor cost were used.

2. **Long Conveyor at 3,300 ft. -- $3,100,000 by Schumann.** The long conveyor system was estimated in the same manner as the previous conveyors using updated conveyor component costs backed-up by Mr. Schumann's experience.

3. **Short Conveyor at 500 ft. -- $650,000.** Same method as above.

4. **Transfer Station -- $230,000 by Schumann.** The transfer station cost estimate was based on previous cost experience for equipment similar to that at Big Bend and roughly escalated to 2003 dollars.

5. **Three 45-Car Tracks -- $1,200,000 by CSXT.** The costs of upgrading and installing new trackage were identified by Mr. Schumann and Mr. White of CSXT and the cost estimated by CSXT engineers. The cost included restoring the track disturbed by the desalinization piping.

6. **Truck Dump and Conveyors -- $350,000 by Schumann.** Same as 1.0 to 2.0 MM Ton Bid.

C. Polk Shuttle Train Loading at Big Bend - 2.0 to 5.0 MMTPY

1. **Conveyor and Transfer Station -- $2,250,000 by Schumann.** This estimate was based on updated conveyor cost and surrogate design. The transfer station was similarly estimated.

2. **250 to Batch Silo -- $1,066,000 by Schumann.** The batch silo was considered to be useful and was estimated by escalating similar systems to 2003 dollars.

3. **New Trackage -- $400,000 by CSXT.** The needed trackage was determined by Schumann and White of CSXT and the cost was estimated by CSXT transportation engineers.

Q. If Mr. Schumann based his estimate on a national average cost, should his estimates be adjusted for Big Bend?

A. Since Mr. Schumann based his estimates on national average costs for this mechanical work, it may be necessary to adjust his estimates to reflect local differences between Tampa-area costs and national average costs. Currently the "RS Means" (RS Means Heavy Construction Cost Data 13th Edition, 1999, and RS Means Square Foot Costs, 24th Annual Edition) indexes show the cost of construction in Tampa to be 80% of the national average for overall work (1.039 index for Tampa divided by 1.302 for the national average). See Exhibit ____(JBS-2).

Q. Since this work is heavily mechanical, is there a way to take into account that this proposed system is mechanical?

A. Yes. The Dodge Unit Cost Book subdivides its index by type of work. In 1999, mechanical/electrical work was 0.89 versus 0.86 for overall work. Thus, mechanical/ electrical work in Tampa is 3.5% more costly than overall work in Tampa.

Q. From the above sources, can you determine whether and how to adjust Mr. Schumann's estimates to Big Bend?

A. Yes. The correct adjustment is made by multiplying the RS Means index value of 0.80 (80%) by the Dodge indicator of increased cost for mechanical/electrical work of 1.035. This indicates that mechanical/electrical work at Big Bend should be approximately 83% of the national average.

Q. Using this information, was there a cost overstatement or implied contingency built into Mr. Schumann's estimates?

A. Yes. Mr. Schumann added 5% contingency to his estimates based on national averages. This coupled with the above lower cost in Tampa of 17% results in 21% contingency in Mr. Schumann's estimates.

Q. Did CSXT include in its proposals (bids) an offer to pay up to 120% of Mr. Schumann's estimated costs for the rail delivery infrastructure?

A. Yes.

Q. Did CSXT have a contingency built into its estimate for rail trackage?

A. No.

Q. Can you estimate the contingency in the CSXT bid?

A. Yes. CSXT's estimated cost of **$1,200,000** for track has no internal contingency, and the remaining **$5,930,000** in rail infrastructure costs has a 21% estimated internal contingency for a total of **$1,245,300** implied contingency. With a **$7,130,000** estimate, the implied internal contingency is thus approximately 17.5%.

Q. Since CSXT was willing to pay 20% above their estimate, what is the approximate total contingency inherent in CSXT's proposal?

A. Since CSXT was willing to pay up to 120 percent of **$7,130,000** for the rail delivery improvements at Big Bend, the total "built in" contingency in CSXT's bid was, or is, approximately 45 percent. This is calculated by dividing the difference between (a) what

CSXT was willing to pay (**$7,130,000 x 1.2 = $8,556,000**) and (b) what the project cost was excluding any contingency (**$7,130,000 - $1,245,300** implied contingency = **$5,884,700**); this calculation indicates that CSXT was willing to pay 45.4 percent more than the no-contingency cost estimate for the rail delivery facilities at Big Bend.

Q. Have you made an independent estimate of the cost in CSXT's bids?

A. Yes.

Q. What was your estimated rail track cost?

A. I used 1999 RS Means factors for rail, grading to level with purchased fill material, spreading and compaction of the fill material. I also estimated the cost of bumpers, switches, switch timber, road crossings, signage and one signal. I then escalated the cost to 2003 by the RS Means escalation factor and adjusted this to reflect engineering and indirect cost. My estimate is $1,231,284 versus CSXT's **$1,200,000** estimate.

Q. What is your estimate for conveyors?

A. I obtained a budget quote for a covered 2,500 ton per hour ("TPH") @ 750 FPM 54" conveyor from Cubic Storage Systems, Inc., a local (Tampa area) conveyor supplier. Beginning with Cubic Storage Systems, Inc.'s budget quote, I added in my cost estimates for foundations, walkways, lights and fire protection to estimate the installed cost based on Cubic Storage Systems, Inc.'s quote. This yielded about $3,873,467 for 3,800 feet. This is about $1,020/LF, which equates to $3,366,000 for the long conveyor as compared to the **$3,100,000** estimate by CSXT. This also equates to $550,150 for the short conveyor as compared to **$650,000** estimated by CSXT. See Exhibit ____(JBS-3).

Q. Is there another independent basis for estimating the costs of the needed conveyors?

A. Yes. It is based on FMC, another well-known conveyor supplier, supplying a covered or hooded conveyor with cover lights and walkway. With 30 feet on center supports, FMC estimates the cost will be $1,083/LF. The long conveyor would thus cost about $3,573,900. CSXT estimated the cost at **$3,100,000.** Using this approach, I estimated the short conveyor to cost $541,500. CSXT estimated the short conveyor cost to be **$650,000.** See Exhibit ____(JBS-4).

Q. Did you estimate the cost using the same manufacturer of conveyors as used at Big Bend?

A. Yes. Big Bend coal yard uses Continental Conveyors, and Continental Conveyors quoted $2,733,060 for the long conveyor as compared to CSXT's **$3,100,000** estimate and $414,100 for the short conveyor as compared to CSXT's **$650,000.** See Exhibit ____(JBS-5).

Q. Do you have an independent calculation of the cost of the transfer house?

A. I made some rough calculations and concluded that the **$230,000 is** within the reasonable range of costs for such a structure with hoppers.

Q. Do you have an independent calculation of a new truck limestone pit and conveyor?

A. Yes. My estimate indicates that this may be about $400,000. CSXT estimated this new limestone pit and conveyor to cost **$350,000.**

Q. Do you have an independent estimate of the rapid discharge system?

A. Yes, using a surrogate design and RS Means factors, I estimated the cost including the pit conveyor at $1,590,391. See Exhibit ____(JBS-6).

Q. Do you have an independent summary of the CSXT system cost estimates?

A. Yes. The estimates using the three different methodologies (CSXT, Cubic Storage/EVA, Continental Conveyor, and FMC/EVA) are shown below based on three vendor quotes and EVA calculations. My estimates are between 3.3% and 5.9% higher than the CSXT estimate. However, after having access to the site that Mr. Schumann and Mr. White did not have, my best estimate after including adjustments for an elevated conveyor adjustment, dust suppression, and an electromagnetic separator, is 15.5% to 17.1% higher than CSXT's estimate. My estimates are still below CSXT's willingness to pay amount of **$8,556,000**. Thus, I conclude that CSXT's estimates are basically correct and accurate. The problem is that CSXT was denied the necessary access and information to include all the necessary items.

	CSXT's Estimate	EVA'S Estimate Cubic Storage	EVA's Estimate FMC
I. Original Conceptual Design			
Rapid Dump System	$ 1,600,000	$ 1,590,391	$ 1,590,391
Long Conveyor	3,100,000	3,366,000	3,527,700
Short Conveyor	650,000	550,150	574,560
Transfer Station	230,000	230,000	230,000
Rail	1,200,000	1,231,284	1,231,284
Limestone Truck Dump	350,000	400,000	400,000
Subtotal	$ 7,130,000	$ 7,367,825	$ 7,553.935
Percentage Difference		(3.3%)	(5.9%)
II. Post Site Visit			
Elevated Long Conveyor		$ 670,000	$ 670,000
Dust Suppression		100,000	100,000
Electromagnetic		26,000	26,000
Subtotal		$ 796,000	$ 796,000
Total		**$ 8,163,825**	**$ 8,349,935**
Percentage		(15.5%)	(17.1%)

Q. At this stage of development, what is the accuracy of the engineering estimates?

A. The cost estimates are ± 20% at this point. A project that has had the design completed and well-written specifications will be bid within 3-5% of competitive bidders.

EVA Alternate "Cooperative" Rail Delivery Concept

Q. From your observations and information gathered during your site visits and with the information you now have, are there any other potential conceptual approaches for delivering coal to Big Bend with lower cost?

A. Yes. Because this concept should have been readily identified by a cooperative effort between TECO and CSXT, rather than by TECO's limiting CSXT's information regarding and access to the Big Bend site, I call this a "cooperative" approach.

Q. Can you describe the system?

A. Yes. The east side of the Big Bend site is congested with limestone and gypsum system equipment as well as other maintenance and warehouse facilities. The south side where the current limestone pit is located and where a new rapid rail discharge system would be located is congested with FGD piping north of the remaining rail line. The corridor to the south where the second track was envisioned and was to be restored is now congested with the desalinization piping and pumps. This would require raising the proposed CSXT conveyor up 20 feet or so. An alternative concept is to put the new rapid discharge system, pit and conveyor, near the tracks and near the east end of the slag pond. This would allow the coal unloading equipment to be located on the western part of the Big Bend plant site, thus avoiding further congestion at the east end of the plant. It would, however, require the 90-car unit trains to be split into three 30-car segments rather than two 45-car segments. See Exhibit ____(JBS-7).

Q. Would this "cooperative" approach result in any capital cost savings?

A. Yes. Even if all-new equipment were used to implement and install this design concept, I estimate that the total cost would be slightly less than $5 million, as opposed to the **$7.13** million estimated by CSXT. If salvageable coal-handling equipment from TECO's Gannon Station were used, the total capital costs would be on the order of $3.6 million.

Q. Please provide the estimated capital costs for this system, both with and without the use of Gannon equipment.

A. See the table below.

	EVA Estimate Cooperative Concept New Equipment	EVA Estimate Cooperative Concept Used Gannon Equipment	Remarks
Rapid Discharge System	$ 1,590,391	$ 1,379,391	The new unit would be unchanged. Two Gannon rail car hoppers are usable ($115,000). A Gannon transfer station saves $96,000.
Long Conveyor	1,346,400	1,346,400	The long conveyor would only be 1,300 ft long and cost was proportional to the long conveyor
Short Conveyor	550,150	275,075	Use of two Gannon 1,600 tph conveyors would save new conveyor purchase (50% or $275,075).
Transfer Station	230,000	115,000	Use Gannon unit with stacker reclaimers would work out fine (50% or $115,000 savings)
Rail	1,231,284	1,231,284	Unchanged.
Limestone Truck Dump	400,000	400,000	
Elevation of Conveyor	N/A	N/A	
Dust Suppression	100,000	100,000	
Electromagnetic	26,000	26,000	
Total	**$ 4,979,225**	**$ 3,641,866**	$1,337,359 savings using abandoned Gannon Equipment

Q. Can you summarize the capital cost, operating capacities, train unloading time and construction time for the various alternatives to unload coal at Big Bend such as CSXT's original bid, your adjustments of CSXT's original bid and the above system with three 30-car segments?

A. Yes. This information is presented in Exhibit ____(JBS-8).

Q. Have you also prepared an estimate of the O&M costs for your "cooperative" 3-30 car unit train segment approach?

A. The table below summarizes my O&M estimates for the cooperative system.

EVA Estimate of O&M Cost for a 3-30 Car Train Segment Approach

	Minimum Estimate	Maximum Estimate
Variable		
Power	($17,000)	($32,000)
Surfactant	0	0
Labor	0	157,440
Fixed		
Labor (less belt length)	$150,654	$150,654
Maintenance	149,100	149,100
Taxes	2,169	2,169
Insurance	2,237	2,237
Total	**$287,160**	**$429,600**

EVALUATION OF SARGENT & LUNDY'S CAPITAL COST ESTIMATES

Q. Did you review the estimated capital costs in the S&L report, and if so, what were your conclusions regarding S&L's capital cost estimates?

A. Yes, I reviewed the S&L study. A copy of this study is included as Exhibit ____(JBS-9) to my testimony. My major conclusions are as follows:

1. The S&L report was hastily put together between August 27, 2003 until the draft was presented September 4, 2003. (A copy of this draft report is included as Exhibit ____(JBS-10) to my testimony.) Labor Day weekend was in the middle of this period (August 30 to September 1). There is no reference to any S&L site visit or vendor quotes made or used in the S&L report. The final S&L report was

submitted on September 18, 2003 with no evidence of site visits or vendor information.

2. The two most expensive items in the CSXT proposed 2.0-5.0 MM ton project, the conveyor systems and the construction of the rapid discharge system, are overpriced in the September 4, 2003 draft report based on my contact with three conveyor vendors (one being Continental Conveyor that is the dominate supplier of Big Bend's conveyors) and based on using nationally recognized standard unit price factors for the construction for a pit similar but longer than the existing limestone pit. Other components were also overpriced.

3. Between the September 4, 2003 draft and the September 18, 2003 final report, the conveyor cost were unexplainably doubled, and the cost for the coffer dam and dewatering associated with the rapid discharge pit also doubled for a **$6,100,000** increase in construction cost, which with engineering and indirect cost factors resulted in a total **$9,170,216** increase. Also, S&L included a category "Other Cost and Adjustments" at **$2,194,000** without explanation. Thus, these unexplained increases or "other cost and adjustments" alone are **$11,364,216** and total more than CSXT's estimate of **$10,846,000** for the entire project for the **2.0 to 5.0 MM** ton bid.

4. There are numerous redundant items that are subcomponents of other equipment such as conveyor fireproofing or lighting, or unnecessary items such as HVAC (air conditioning at **$280,000**) for the track hopper and the transfer house. With an open structured transfer house with conveyors feeding hoppers, I do not know why air conditioning is needed. Also, I cannot figure out why a **$3,085,000** temporary coffer dam is needed.

5. In S&L's Exhibit 2A-2, there is **38 items** that compose the equipment to unload trains at 2500 TPH and to load shuttle trains. Fully **22** of the **38** items are exact multiples of the magic **$70,000** in S&L's proprietary model and **26** of the **38** items have construction and erection cost at **40%** of total equipment or material cost. This is a strong indication that little detailed engineering effort was put into the numbers that were plugged into the proprietary model.

6. If a proprietary model was used by S&L it is likely that model was used as a mere calculation tool for plug in numbers and not for making engineering equipment selections or calculating estimated costs.

7. There was no effort to make cost savings or cost-effective choices. S&L failed to consider the use of coal handling equipment at Gannon or to explore ways to minimize construction of trackage; these are the most obvious cost saving opportunities. The coal fired Gannon plant, which is about a dozen miles away, was being phased out in the same time frame as the CSXT bid was being developed. Also TECO owns land on both sides of Pembroke Road, north and east of the Big Bend plant, with three tracks long enough to hold at least 45 rail cars. Two of the tracks are used by IMC that cross TECO's land. IMC has a locomotive and handles 90 car trains that cross TECO land. Also, National Gypsum has track on this same TECO parcel. No effort was made to coordinate rail movements on TECO's own land or share the locomotive.

Q. What was the schedule for the S&L report development?

A. The work was initiated on Wednesday August 27, 2003 with scope of work and schedule in "Revision O" (p. 435-436 of docket).

Q. What was the proposed schedule?

A. Per "Revision O" the S&L and TE Schedule was:

- 8/27/03 Kickoff (Wednesday)
- 8/29/03 Conference Call (Friday)
- 8/30/03-9/01/03 Labor Day Weekend
- 9/02/03 Conference Call (Tuesday)
- 9/03/03 Conference Call (Wednesday)
- 9/04/03 Conference Call and Preliminary Report (Thursday)
- 9/05/03 Conference Call and Final Report (Friday)

Q. Did S&L meet this schedule?

A. S&L met the schedule to provide a preliminary draft dated September 4, 2003. However a final report was late and it was completed and submitted on September 18, 2003, as S&L Report Number SL-008160.

Q. Was the schedule adequate to evaluate CSXT's proposal?

A. No.

Q. Why do you believe the schedule was not adequate?

A. The proposed schedule did not permit time for S&L engineers to visit the Big Bend and Polk sites or obtain vendor quotes on key equipment, especially with the Labor Day weekend in the middle of the schedule.

Q. Why is a site visit necessary?

A. One of the key steps in initially evaluating the CSXT proposal was to visit the site in order to understand the location of the proposed equipment, access to electricity, access to fire protection water, horizontal or vertical interferences, the type of foundations used as a basis to estimate future foundation designs, the type and style of equipment actually used; to determine if any potential wetlands or other site or permit conditions that might impact the proposed CSXT proposed design.

Q. Is there any evidence that any of the S&L engineers visited the site during the scheduled work period?

A. No.

Q. How did S&L get information to do its study?

A. TECO provided some site information, operating cost estimates, and wetland quantities (but not location).

Q. What site information was provided to S&L by TECO?

A. TECO's Dennis Barrette, Senior Engineer-Civil Structure/Generation Engineering provided a series of drawings to S&L's Paula Guletsky on August 29, 2003.

Q. Were the Big Bend site drawings sufficient to evaluate the proposed rail locations for the CSXT proposals for Big Bend?

A. No. The site plans were of poor quality and were not clear as to the existence of the second southern track that is now blocked by the desalinization plant piping. This lack of

detail made it difficult for S&L to locate the new rail that would be needed. Also, vertical interfaces or the lack of vertical interfaces could not be determined.

Q. Was there adequate information to estimate foundation needs?

A. Some information was useful. The drawing entitled "Foundation-Plans and Sections-Limestone Unloading Facilities" was sufficient to use as a basis for a surrogate design for estimating the cost of a new rapid unloading pit using the current rail limestone pit, as an example. Also, the drawings on the limestone pit conveyors (Conveyor-LB, pages 254 and 255) and the new truck loadout facility (p. 251) show that "hooded" or "covered" conveyors were used and newly used at Big Bend. S&L added excessive cost for foundations and much more expensive conveyors than those used or required at Big Bend.

Q. Was there adequate information on the type and style of conveyors to be used as part of the CSXT proposed system?

A. The drawings supplied by Dennis Barrette showed hooded or covered conveyors in the limestone unloading system (Conveyor LB, docket page 25) and hooded or covered conveyors in the new truck load out conveyor (docket pages 254 and 255). However, TECO's Jimmy Konstas had told TECO's Ralph Painter (docket page 923) that more costly fully enclosed conveyors were necessary. The September 18, 2003 S&L states that the hooded conveyors were assumed and using enclosed conveyors would be **$2,000,000** more. Thus, the conveyor should have been correctly estimated. The excess cost for conveyors is not explained.

Q. Were vendor budget quotes obtained or used by S&L to develop their cost estimate?

A. The record shows no evidence of vendor contacts.

Q. How did S&L get its key cost information?

A. The assumptions or basis used to develop the cost in S&L cost items has been requested. It has not been provided.

Q. What are the approximate costs for the long and short conveyors in the S&L study?

A. The conveyor costs by category from the S&L study are shown in the following table.

1

	Equipment and Material	Construction And Erection	Total
Construction Cost			
Long Conveyor @ 3,200 feet (9/18/04)	$4,800,000	$3,840,000 80% of equipment	$8,650,000
Note 9/4/04 Draft was doubled	(2,400,000)	(1,920,000)	(4,320,000)
Short Conveyor @ 500 feet	750,000	600,000 80% of equipment	1,350,000
Subtotal	$5,550,000	$4,440,000	$9,990,000 ($2,700/LF)
Direct Add Ons			
Belt Feeders	$200,000	$80,000 80% of equipment	$280,000
Foundations	100,000	80,000 80% of equipment	180,000
Fire Protection	160,000	160,000 100% of equipment	320,000
Hoist and Trolley	50,000	20,000 40% of equipment	70,000
Conveyor Lighting	82,000	93,000 113% of equipment	175,000
Subtotal			$11,015,000 ($2,977/LF)
Prorated Add Ons			
Electrical Aux Power (less conveyor lights) $2,112,000 total @ Ratioed to Belt Length 3,700 / 4,995 or 75% (electric lines)	-	-	$1,584,000
Instrument and Controls $556,000 ratioed at 75%	-	-	417,000
BOB Items $773,640 ratioed at 75%			580,320
Other Cost and Adjustment $2,194,000 ratioed at 36%			78,000
Indirects at 36% of $3,368,881			1,212,077
Subtotal			$15,598,147 ($4,216/LF)
EPC Cost at 36% of $4,920,321			$1,771,316
			$17,326,463 (4,794/LF)
Contingency at 36% of $8,420,768			$3,031,476
Total			$20,400,939 $5,514/LF

2

Q. What did your vendor budget quotes show?

A. The vendor budget quotes show the following:

1. Continental Conveyor estimate was for $2,733,000 / 3,300 LF or $828/LF and would compare with S&L cost of **$2,977/LF** for equipment, construction and direct add ons. S&L estimate is **360%** of Continental Conveyor's estimated cost.
2. FMC bid was presented incorrectly with two belts tied together. FMC's bid did not include foundations, and electrical lines. S&L also added a transfer house. The quote was for **$5,851,000** (± 15% to ±20%). Adjusting this by subtracting S&L estimate for a transfer house at **$280,000**, the quote would be $5,571,000 for 5,400 LF or about $1,032/LF (±15% to ±20%) plus the cost of foundation and electrical lines and engineering. Subtracting S&L foundation cost **($180,000)**, electric line cost **($1,584,000)** and EPC cost **($1,771,316)** would indicate that a comparable cost would be about **$3,808/LF**. S&L's estimate is **370%** of FMC's estimate
3. Cubic Storage's estimate after adjustment by EVA was about $1,020/LF for an engineered system less foundation and electrical lines. Even after removing S&L's estimates for foundations **($180,000)** and electric lines **($1,584,000)**, S&L's cost for conveyors would still be **$4,317/LF** or **424%** of the estimate based on Cubic Storage System's budget quote.

Q. What was the rapid discharge cost by category from the S&L study?

A. The rapid discharge system costs by category from the S&L study are:

Construction Cost	
1. Excavation	$1,000,000
2. Concrete Work	1,120,000
3. Track Hopper Building	210,000
4. Hopper and Gizzler	280,000
5. Concrete for Conveyor Tunnel	280,000
6. HVAC (air conditioning) for track hopper and transfer house	280,000
7. Temporary Coffer Dam[1]	3,085,000
8. Dewatering	475,000
9. Conveyor	900,000
Subtotal	*$7,360,000*
Direct Add Ons	0
Pro-Rated Add Ons $2,112,000 @ 25%	528,000
Instruments and Controls $556,000	139,000
BOP Items at 25% 773,640	185,674
Other Cost and Adjustments $2,194,000 at 24%	526,560
EPC at 24% $4,920,321	1,180,887
Subtotal	*$2,560,000*
Total	**$10,190,111**

1. The only subsurface work is the rapid discharge system pit. It is not clear how S&L envisioned using a Coffer dam.

Q. What is your estimate for the rapid discharge system?

A. I estimate the cost would be $1,590,391 including engineering. S&L's estimate is **640%** of my estimate, including the coffer dam and dewatering costs. If the coffer dam and dewatering are unrelated to rapid discharge system, S&L's estimate would be **$6,630,111** or **417%** of my estimate.

Q. Do you have any idea why S&L's costs are substantially higher than your estimates or CSXT's estimate?

A. It is my opinion that S&L included unnecessary items such as the coffer dam and dewatering, and redundant items such as lighting, fire protection, foundations, belt

feeders, hoists, and trolleys that were possibly included in the already overpriced conveyor estimate. S&L may have estimated the cost for the wrong type of conveyors.

Q. What are the types of conveyors that might have been incorrectly estimated by S&L?

A. The types of conveyors incorrectly estimated by S&L are:

1. **Open Conveyors.** Open to the atmosphere, with no cover or enclosure. These are the lowest cost conveyors.
2. **Covered Conveyors.** Also known as hooded conveyors or enclosed conveyors, these conveyors are covered on the top but not on the bottom and are slightly more expensive than open conveyors.
3. **Enclosed Conveyors** to prevent spillage into traffic, people, passing underneath. Enclosed conveyors are more expensive than covered conveyors.

Q. What are the types of conveyors required?

A. The original and new conveyors are covered or hooded. TECO's old and current air permit calls the existing conveyor "enclosed."

Q. Could S&L have been confused?

A. It is unlikely because in the final report, S&L stated that they assumed the conveyors were hooded and that if enclosed the cost estimate would be increased another **$2,000,000** (page 4 of S&L's report).

Q. Would increasing the belt from 54 inches that was proposed by CSXT to the 60-inch wide conveyor that S&L used for estimating purpose account for the increased cost?

A. No. This would increase cost 8% over a 54" belt not 350% or more. Also, all three vendors selected a 54-inch belt for the 2,500 TPH systems. Further, Big Bend has a 54-inch belt in its coal yard rated at 4000 TPH (belt No. 1-Conveyor per Table C-4A WL50 Conveyor Physical Data in their coal yard manual). S&L's 60-inch belt size is unusual.

Q. Are you familiar with any proprietary model that S&L may have used?

A. Yes. S&L developed software (SOAPP)^{TM} standing for State of the Art Power Plant under sponsorship of EPRI (Electric Power Research Institute). This model is described in a paper entitled "Using the SOAPP Workstation^{TM} for Planning and Conceptual Design" presented at the International Symposium on Improved Technology for Fossil Power Plants (March 1-3, 1993).

Q. Was this model used?

A. I do not know. The categories are similar to the above paper but no evidence that any improved efficiency, enhanced availability, or cost-effectiveness efforts were made. S&L may have plugged in numbers and used their model format to print out the assumptions that were externally made. The fact that so many of the results were exact multipliers of $70,000 and used 40% installation factors is an unlikely result of the above model and more likely resulted from external inputs bypassing the modeling capability of the software.

Q. Did the above model round off cost?

A. No. The sample calculation presented in the EPRI paper carried calculations to 3 to 6 significant digits.

Q. Would you rely on the S&L cost estimates?

A. No, the S&L cost estimates are too high relative to vendor supplied and recognized cost estimating guidelines. The S&L estimates appear not to have been based on site visits or vendor quotes. The bases for the cost estimates are unexplained.

Q. Should TECO have questioned this document?

A. Yes. A major utility with over 2 miles of conveyors at Big Bend (some recently built) for coal, limestone and gypsum should have sufficient expertise to evaluate and question the S&L cost estimates. TECO's engineering department should have been able to do the estimate of CSXT's proposal and evaluate S&L's cost estimates.

Q. Did TECO review the S&L study?

A. It appears that Ralph Painter was the individual to oversee the report. There is no record that he critiqued the report.

EVALUATION OF SARGENT & LUNDY'S O&M COST ESTIMATES

Q. Did CSX Transportation prepare an estimate of operation and maintenance ("O&M") cost, property tax increases and insurance increases associated with its proposed rail unloading systems at Big Bend?

A. No.

Q. Did S&L prepare an estimate of O&M costs, property taxes, and insurance cost increases in its September 18, 2003 report number SL-008160 for Big Bend?

A. Yes.

Q. Have you reviewed S&L's O&M, tax, and insurance cost estimates for the rail delivery system at Big Bend?

A. Yes.

Q. Do you agree with S&L's findings in Exhibit 2A-3 titled "Operating Cost Estimate for 2-5.5 million Ton Rail Delivery of Coal Big Bend"?

A. No. For the reasons set forth below, I believe that S&L overstated O&M costs.

Q. Do you disagree with S&L's variable cost for power in Exhibit 2A-3?

A. Yes, I disagree.

Q. Why do you disagree?

A. The stated additional power cost estimated by S&L is between **$68,000** and **$128,000.** The details of how this was calculated were not provided. However, S&L failed to deduct the power savings resulting from not using the coal dock unloading system.

Q. Is the savings more or less than the power used by the proposed CSXT rail system?

A. The savings resulting from using the proposed CSXT rail system would be more than the power used to unload coal from barges. The CSXT system would reduce power usage for coal handling, not increase it.

Q. Explain why the CSXT rail coal delivery would save power during unloading.

A. There are two main reasons. First, the current dock unloading system is designed for 4,000 TPH to accommodate the barge bucket elevator. The clamshell normally operates at an average of between 2,000 TPH and 2,500 TPH, and electricity is less efficiently used when oversized equipment is used. Second, the power to lift coal on conveyors is more than level conveyor transport. The dock lifts the coal up about 40 feet above the dock with the clamshell and 60 feet with the bucket elevator. Added to this lift is the initial lift from the barge to the dock level, which is about another 15 feet. Thus, the lift for the dock equipment is 55 to 75 feet. The coal is then dropped down to the dock level and conveyed horizontally. Then the coal is lifted again about 35 feet to the coal yard transfer house. Therefore coal is lifted 90 to 110 feet in the dock operation. The CSXT system would drop coal from the rail car about 20 feet to a below ground hopper. Then the coal would be conveyed to the surface to the same coal yard transfer house up another 35 to 40 feet to the coal yard transfer house. Thus the rail systems would lift the coal 55 to 60 feet. Consequently, rail-delivered coal needs to be lifted to heights about 55 to 60% of the total lifting height required by the current barge-dock system.

Q. How much power would be saved by the rail system?

A. Around 25% less power would be required. At the same cost values used by S&L, there would be a net savings of about $17,000 to $32,000, instead of an increased cost of **$68,000 to $128,000**. This would reduce S&L's estimated O&M cost by **$85,000 to $160,000** per year.

Q. Do you agree with S&L's variable cost increase for surfactant in Exhibit 2A-3?

A. No.

Q. Why do you disagree?

A. The use of surfactant is a function of the volume of coal delivery. The total amount of coal used at Big Bend would be the same whether or not the coal is delivered by barge or rail. Thus, the amount of surfactant used and the cost of surfactant would not increase. There would be no variable cost increase for surfactant at Big Bend for a rail system. There is, however, a need to invest in another dust suppression system, which uses the surfactant; this cost is recognized in my capital cost estimates above.

Q. Do you agree with S&L's variable labor cost for CSXT's proposed system at Big Bend in S&L's Exhibit 2A-3?

A. No. First, the labor costs were not derived by S&L's analysis. The costs were given to S&L by TECO in Ralph Painter's **September 3, 2003 9:13 p.m. e-mail**. Painter's estimate is **five** additional people, **three** process specialists and **two** laborers. This is excessive.

Q. What do you think the variable labor cost should be?

A. Since both a barge and train cannot be unloaded simultaneously and since the current unloading staff must be available around the clock, it is possible that no additional staff will be needed. However, an individual manning the security gates for the train and process specialist manning the equipment could be needed.

Q. What do you believe the variable operating labor cost should be?

A. It should be between no increase and $157,440; that being based on TECO's cost for a process specialist and a laborer.

Q. Do you agree with the fixed labor cost estimate in S&L Exhibit 2A-3?

A. Yes. There is now about 11,000 to 12,000 feet of conveyor at Big Bend in the coal yard, limestone systems, and gypsum systems. If CSXT's proposal adds 3,800 feet of conveyor, this represents around a 33% increase and up to five people may be needed as proposed by TECO and S&L.

Q. Do you agree with S&L's fixed maintenance cost of $825,720 at 3% of installed cost?

A. No. The **3%** factor is in the correct range; however, the installed cost of the rail delivery system is more properly estimated at **$7,100,000** for the Big Bend system to unload coal. Thus, the fixed maintenance cost should be about $213,000 per year, not **$825,720**.

Q. How is the $573,900 in the S&L Exhibit 2A-3 split between taxes and insurance?

A. Based on TECO's Ralph Painter's September 3, 2003 memo to S&L, **$12,386** is projected insurance cost and **$561,514** is for taxes.

Q. Are the projected taxes on property correct?

A. No.

Q. Why?

A. The property upon which Big Bend was built is Folio Number 051461-000, PIN Number PU-09-31-19-ZZZ-000001-73650.0 per Hillsborough County records. It has an appraised "building value" of $31,328,418 and a "land value" of $16,433,413 with an "extra feature value" of $2,822,877. Thus total "taxable value" is $50,584,708. Subtracting the "land value", the "taxable value" is $34,151,295. Last year TECO paid $1,330,888.27 or 2.63% of appraised value. A rough estimate of actual value of the capital cost for Big Bend is ± $1,000/kw of capacity multiplied by 2,080,000 kW (2,080 MW) of capacity. Thus the capital cost of Big Bend is about $2,080,000,000 ($2.08 billion). The tax appraisal, less the land, is $34,151,295 or 1.64% of the above rough capital cost. Treated the same way by the tax assessor the taxable value of **$7,100,000** is **$116,574**. The estimated tax increase would be 2.63% of **$116,574** or **$3,066.**

Q. Have you spoken to a Hillsborough County Appraiser?

A. Yes.

Q. What was his response?

A. Jim Gibson, of the South County office of the Hillsborough County Property Appraiser's Office, felt that a **$10,000,000** conveyor system was a tangible asset and would not materially increase the property value and the tax impact would be negligible. He referred me to TECO's David Keene. Mr. Keene did not comment and referred me back to Mr. Gibson.

Q. Do you agree with TECO's insurance rate of 0.04500% of capital cost?

A. The rate seems reasonable. However, since CSXT's proposed rail unloading system is expected to cost **$7,100,000**, the actual cost is likely to be about **$3,195** per year, not **$12,386** as stated in the S&L Exhibit 2A-3.

Q. Based on the above answer, what would your estimate be of the operating cost of CSXT's rail coal delivery system as compared to the estimate made by S&L?

A. See my table below.

	EVA Estimate		S&L Estimate per Exhibit 2A-3	
Variable				
Power	($17,000)	($32,000)	$68,000	$128,000
Surfactant	0	0	97,000	266,000
Labor	0	157,440	0	0
Fixed				
Labor	$301,308	$301,308	$301,308	$301,308
Maintenance	213,000	213,000	825,720	825,720
Taxes	3,066	3,066	561,514	561,514
Insurance	3,195	3,195	12,386	12,386
Total	**$503,569**	**$646,009**	**$2,167,200**	**$2,697,500**

Q. Have you reviewed similar operating costs for the 1.0 to 2.0 MM ton per year CSXT case, the Polk shuttle train option, and the Polk unloading system?

A. Yes. They are similarly overstated, except for the power cost.

Q. Why are there no power cost savings at Polk?

A. The Polk shuttle loading at Big Bend and Polk unloading systems will have an increase in electrical use at each location, as these are new systems.

EVALUATION OF SOLID FUEL BLENDING CAPABILITY AT BIG BEND STATION

Q. Can different coals or pet coke be blended at Big Bend?

A. Yes. The Big Bend coal handling system was designed for blending and has a versatile system for blending coal.

Q. Can you briefly describe the coal handling system at Big Bend?

A. Yes. Currently the coal is unloaded by barge then lifted by a bucket elevator or a clamshell, or less frequently by barge self-unloaders. It then is lowered or discharged to a south moving dock conveyor and is lifted to a dock transfer house and lowered a second time. The coal is lifted and conveyed eastward, at right angles to the dock, to a second transfer house. At this second transfer house, the coal can be directed to one of two main conveyors. This second transfer house is where three CSXT, S&L and three-30-car train segment systems all would deliver coal. From this point, the coal pathway through the yard would be the same for barge source or rail source coal. From this second transfer house the southern main east-moving conveyor is fed. A shorter north-moving conveyor feeds the northern main east-moving belt.

Both main east-moving belts feed one of two stacker-reclaimers serving each main belt. Both of these stacker-reclaimers can move east or west along the two respective main belts, both can place the coal on either the northern coal storage area or the southern coal storage area, and both can out-stack coal into the center coal area. Additionally there is a dead storage yard south of the south storage area. These coal storage yards can hold about 1,078,000 tons (at 45° stacking, 54#/ft^3, 40 feet high). There is an overflow storage capacity in the south and west area of the coal yard. It requires a

bulldozer, loader, or scraper (pan) to move the coal to this area and a bulldozer, loader, or scraper (pan) to move the coal back into the area reachable by the south stacker-reclaimer.

Retrieving or reclaiming the coal is equally flexible as out-stacking. Both stacker-reclaimers can be positioned on these two main belts and reclaim coal by placing it back on either of the main belts. Both stacker reclaimers can simultaneously retrieve coal. Big Bend also has two mobile conveyors that can be placed anywhere in the yard and fed with a loader. Thus up to four coal or pet coke types can be blended at any one time. The selected coals are fed by both main conveyors to two shorter conveyors to a blending tower.

The blending tower feeds two belts to six 2,000-ton silos for a total of 12,000 tons of capacity and six possible different blends of coal. Under the six silos are two bottom hoppers each that can feed the two belts. Thus two different coal blends can be again blended or re-blended and sent to the crusher house. The coals leave the crusher house northward via two belts that feed northward to another transfer house that feeds the boiler day bins with two belts.

In summary, many types of coal can be placed in the coal yard and up to 4 coals can be blended at any one time and sent to 6 different blend silos. The 6 different blending silos can be re-blended because they have double bottom hoppers to feed two independent belts. The coal storage yard and blend silos have a total capacity of about 1,090,000 tons.

Q. Does TECO agree with this description?

A. Yes. TECO's document "Tampa Electric: Big Bend Station: Coalyard Operator Training Manual" which is 245 pages long goes into every detail of the above summary.

Q. Do any documents indicate how many types of coals are available for blending?

A. Yes, the diagram labeled "Coal Field General Arrangement 2004 – Current Yard" shows eight different fuel types, seven different coals and a pet coke area.

Q. You estimated that the coal yard could hold 1,028,000 tons. Has Big Bend ever had anywhere near that capacity?

A. Yes, TECO's document "Tampa Electric Company, Big Bend Station, Fuel Inventory, April 1999" shows that 1,041,730 tons with 10 different coals or pet coke fuels.

Q. Will the 2.0 to 5.0 MMTPY CSXT system impact Big Bend's blending capabilities?

A. No, the CSXT 2.0 to 5.0 MM ton per year system will feed the second transfer house that is presently fed by the dock area. From there, coal can be blended just as it is at present.

Q. Will the 1.0 to 2.0 MMTPY CSXT system impact Big Bend's blending capabilities?

A. Yes. The CSXT 1.0 to 2.0 MMTPY system would put the coal in reach of the southern main belt reclaimer and in the dead storage area in the south and west area of the coal yard. The result would be that the coal yard would then have less flexibility than at present. Even so, the coal handling facilities at Big Bend Station will continue to have excellent blending capabilities following the installation of either of the proposed CSXT rail delivery systems.

Q. Does this conclude your direct testimony?

A. Yes.

RESUME OF

JOHN B. STAMBERG, P.E.

EDUCATIONAL BACKGROUND

1967	M.S. (Sanitary Civil Engineering), Stanford University
1966	B.S. (Civil Engineering), University of Maryland

PROFESSIONAL EXPERIENCE

1981-Present **Energy Ventures Analysis, Inc.**
Vice President

Mr. Stamberg is responsible for directing Energy Ventures Analysis, Inc. (EVA) engineering studies. His areas of expertise include utility and industrial boilers; combustion turbine and combined cycle powerplants; electric, combustion turbine and reciprocating powered natural gas pipeline compressors, mining engineering, and pollution control systems for air and water.

Mr. Stamberg has developed capital and O&M cost for a variety of natural gas compression options for LDC's, utilities and EPRI, including fixed speed and variable speed electrical compression, combustion turbine compression, and reciprocating compression, as well as conversion of existing reciprocating units to electric drive. He has performed numerous studies on the pipeline delivery capacity and cost of looping or adding compression to existing interstate and intrastate pipelines. He has prepared feasibility studies of routes, compression needs, and cost of supplying electric utilities and industry switching to natural gas. He has performed on-site evaluations of booster compression needed to supply new combustion turbines with the higher pressure demands of these units. He has engineered energy recovery systems for greenhouse heating using natural gas compressor drive exhaust, and evaluated compressed air energy storage and recovery to generate electricity.

Mr. Stamberg has also conducted a variety of studies of utility and industrial boiler and combustor facilities for fuel choice, efficiency, and environmental control. He has assessed a broad range of combustion, cogeneration, and environmental control systems. He recently completed work for EPRI on utility derating caused by switching pulverized coal boilers from Illinois Basin coal to various types of low-sulfur coals. He has prepared the industrial coal demand analysis for COALCAST reporting service using his knowledge of boiler engineering, boiler capital cost, and boiler operating cost.

Mr. Stamberg has prepared feasibility studies, design cost evaluations, labor productivity studies and equipment inspection for the coal mining industry. His experience with underground mining covers conventional sections, continuous miners, mixed sections, and longwall having a variety of seam and roof conditions. His surface mining experience covers contour, open pit and mountaintop surface mining with large capacity draglines, shovels, or conventional truck/loader equipment. He has prepared feasibility studies, designed and inspected coal preparation facilities from those with simple coarse circuit technology to those with complex multi-circuited systems. He has conducted a variety of site investigations and sampling programs and prepared a variety of environmental assessments, reclamation studies and permit applications for the mining industry. He has used his knowledge to provide capital and operating costs for use in EVA's economic and financial analysis of mining and reclamation plans, coal price analyses, coal competition evaluation studies, and coal company acquisition studies.

1974-81 **Energy and Environmental Analysis, Inc.**
Director

In addition to his responsibilities for water pollution control, Mr. Stamberg managed both the reactivation and the conversion from natural gas or coal of industrial boilers. This work included design specifications and purchase of coal unloading, storage, ash handling, and reclaiming equipment. He was responsible for structural inspections and analysis of the boiler buildings, coal silos, and duct and stack supports. He has evaluated a second generation fluidized bed combustor (FBC) using petroleum coke as a fuel to support process steam and electricity to a petrochemical process.

Mr. Stamberg has designed a mineral processing system for Virginia Vermiculite, Ltd. which utilizes an integrated series of hydraulic sizers, classifiers, screenings, cyclones, rock floatation, vermiculite floatation, tables, vacuum filtration, and drying. He has also performed engineering and economic feasibility studies on five locations for a centralized coal cleaning and unit-train tipple in West Virginia. He has performed various coal cleaning studies for DOE, and reviewed technological developments at various DOE labs/facilities involving conventional cleaning to solvent refined coal (SRC).

Mr. Stamberg has directed and participated in a variety of environmental and permit studies for coal and mineral mining activities. He has conducted numerous site visits, prepared permit applications and prepared environmental impact statements or assessments on a variety of coal mines in most major coal producing states of Northern, Central and Southern Appalachia as well as in the western states of Colorado and Wyoming. He has done similar studies for phosphate rock, sand and gravel, limestone, and vermiculite mining industries.

1972-74 **U.S. Environmental Protection Agency**
Office of Air and Water Programs
Chief, Municipal Technology Branch

Formulated policies and regulations required to implement PL92-500. Responsible for area-wide planning, facilities planning, effluent guidelines for municipal pollution control, operation and maintenance of advanced waste treatment facilities, combined sewer control, urban run-off, and cost-effectiveness analysis.

1967-71 **U.S. Environmental Protection Agency**
Office of Research and Development
National Environmental Research Center
Chief, Biological Treatment

Developed research objectives; designed and operated pilot- to full-scale plants to achieve various effluent objectives using a variety of biological or biological/chemical treatment techniques. Did engineering development work which was the basis for design for the District of Columbia's 309 MGD advanced waste treatment at Blue Plains and numerous other advanced waste treatment plants.

HONORS

Chi Epsilon National Civil Engineering Honor Fraternity
Pi Mu Epsilon Honorary Mathematical Fraternity
Phi Kappa Phi Honor Society
Phi Theta Kappa National Honorary Scholastic Society
U.S. EPA Bronze Medal for Commendable Service

PROFESSIONAL REGISTRATION AND MEMBERSHIPS

Registered Professional Engineer, Delaware, Louisiana
Water Pollution Control Federation
Federal Water Quality Association

PATENTS AND PUBLICATIONS

Holder of Wastewater Treatment Systems and Mineral Processing Patents Pending and has 17 technical publications.

EXHIBIT NO. _____ (JBS-1)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 3 OF 3

RSMeans®

Also available on CD-ROM! (See inside for details)

Square Foot Costs

24th Annual Edition

- Residential
- Commercial
- Industrial
- Institutional

2003

2003 RS MEANS SQUARE FOOT COSTS

Historical Cost Indexes

Year	National 30 City Average	Connecticut			Delaware	D.C.		Florida					Georgia			
		Norwalk	Stamford	Waterbury	Wilmington	Washington	Fort Lauderdale	Jacksonville	Miami	Orlando	Tallahassee	Tampa	Albany	Atlanta	Columbus	Macon
Jan 2003	130.2E	137.8E	140.5E	137.1E	132.1E	123.9E	109.1E	105.7E	109.5E	108.0E	98.4E	103.9E	101.0E	116.0E	99.5E	103.0E
2002	126.7	133.5	136.2	133.9	129.4	120.3	107.1	104.6	107.4	106.7	97.3	102.8	99.7	113.0	98.3	101.9
2001	122.2	128.2	131.5	128.8	124.8	115.9	104.3	100.8	104.6	103.8	94.8	100.3	96.4	109.1	95.5	99.0
2000	118.9	121.5	126.4	123.2	117.4	113.8	102.4	99.0	101.8	101.2	93.6	98.9	94.9	106.1	94.1	97.0
1999	116.6	120.0	122.0	121.2	116.6	111.5	101.4	98.0	100.8	100.1	92.5	97.9	93.5	102.9	92.8	95.8
1998	113.6	118.8	120.8	120.1	112.3	109.6	99.4	96.2	99.0	98.4	90.9	96.3	91.4	100.8	90.4	93.3
1997	111.5	118.9	120.9	120.2	110.7	106.4	98.6	95.4	98.2	97.2	89.9	95.5	89.9	98.5	88.7	91.6
1996	108.9	117.0	119.0	118.4	108.6	105.4	95.9	92.6	95.9	95.1	88.0	93.6	86.6	94.3	83.9	88.3
1995	105.6	115.5	117.9	117.3	106.1	102.3	94.0	90.9	93.7	93.5	86.5	92.2	85.0	92.0	82.6	86.8
1994	103.0	113.9	116.4	115.8	105.0	99.6	92.2	88.9	91.8	91.5	84.5	90.2	82.3	89.6	80.6	83.7
1993	100.0	108.8	110.6	104.8	101.5	96.3	87.4	86.1	87.1	88.5	82.1	87.7	79.5	85.7	77.8	80.9
1992	97.9	107.7	109.0	103.1	100.3	94.7	85.7	84.0	85.3	87.1	80.8	86.2	78.2	84.3	76.5	79.6
1991	95.7	100.6	103.2	96.5	94.6	92.9	85.1	82.8	85.2	85.5	79.7	86.3	76.3	82.6	75.4	78.4
1990	93.2	96.3	98.9	95.1	92.5	90.4	83.9	81.1	84.0	82.9	78.4	85.0	75.0	80.4	74.0	76.9
1989	91.0	94.4	97.0	93.4	89.5	87.5	82.4	79.7	82.5	81.6	76.9	83.5	73.4	78.6	72.4	75.3
1988	88.5	92.3	94.9	91.8	87.7	85.0	80.9	78.0	81.0	80.1	75.4	81.9	71.8	76.9	70.8	73.6
1987	85.7	92.0	92.7	92.5	85.1	82.1	78.8	76.0	77.9	76.6	74.4	79.4	72.2	73.6	70.3	72.3
1986	83.7	88.2	89.7	87.8	83.8	80.8	78.9	75.0	79.9	76.2	72.3	79.1	68.5	72.0	67.5	69.8
1985	81.8	86.3	86.8	85.6	81.1	78.8	76.7	73.4	78.3	73.9	70.6	77.3	66.9	70.3	66.1	68.1
1984	80.6	82.6	83.7	82.5	79.7	79.1	73.8	72.6	75.6	73.0	69.6	76.5	65.9	68.6	65.2	67.5
1983	78.2	78.5	79.8	78.7	76.3	76.0	71.5	70.4	72.9	71.1	67.6	73.6	65.6	68.6	64.7	65.3
1982	72.1	71.7	72.0	71.8	69.1	69.4	65.4	65.2	66.7	66.0	62.8	67.7	60.1	61.9	59.3	60.0
1981	66.1	66.2	66.2	67.3	63.4	64.9	60.3	61.0	60.7	62.0	58.6	62.1	56.2	58.3	55.7	56.1
1980	60.7	60.7	60.9	62.3	58.5	59.6	55.3	55.8	56.5	56.7	53.5	57.2	51.7	54.0	51.1	51.3
1975	43.7	44.7	45.0	46.3	42.9	43.7	42.1	40.3	43.2	41.5	38.1	41.3	37.5	38.4	36.2	36.5
1970	27.8	28.1	28.2	28.9	27.0	26.3	25.7	22.8	27.0	26.2	24.5	24.2	23.8	25.2	22.8	23.4
1965	21.5	21.6	21.7	22.2	20.9	21.8	19.8	17.4	19.3	20.2	18.9	18.6	18.3	19.8	17.6	18.0
1960	19.5	19.7	19.7	20.2	18.9	19.4	18.0	15.8	17.6	18.3	17.2	16.9	16.7	17.1	16.0	16.4
1955	16.3	16.5	16.5	17.0	15.9	16.3	15.1	13.2	14.7	15.4	14.4	14.1	14.0	14.4	13.4	13.7
1950	13.5	13.6	13.7	14.0	13.1	13.4	12.5	11.0	12.2	12.7	11.9	11.7	11.5	11.9	11.0	11.3
1945	8.6	8.7	8.7	8.9	8.4	8.6	7.9	7.0	7.8	8.1	7.6	7.5	7.4	7.6	7.0	7.2
1940	6.6	6.7	6.7	6.9	6.4	6.6	6.1	5.4	6.0	6.2	5.8	5.7	5.7	5.8	5.5	5.6

Year	National 30 City Average	Georgia	Hawaii	Idaho		Illinois						Indiana				
		Savannah	Honolulu	Boise	Pocatello	Chicago	Decatur	Joliet	Peoria	Rockford	Springfield	Anderson	Evansville	Fort Wayne	Gary	Indianapolis
Jan 2003	130.2E	103.4E	159.9E	120.4E	119.1E	147.0E	127.1E	141.9E	132.8E	135.7E	128.8E	119.6E	121.0E	118.8E	131.7E	127.6E
2002	126.7	102.0	157.2	118.3	117.1	141.2	123.8	138.5	129.6	132.9	125.3	117.5	119.0	116.4	129.1	120.5
2001	122.2	99.0	150.0	114.3	113.4	135.8	120.1	133.7	124.3	127.8	119.8	113.4	115.6	112.1	123.4	116.4
2000	118.9	97.5	144.8	112.9	112.1	131.2	115.1	124.6	119.0	122.2	116.2	109.8	111.5	108.4	117.8	113.2
1999	116.6	96.0	143.0	110.2	109.6	129.6	113.0	122.6	116.4	120.7	113.8	107.1	109.3	106.8	112.8	110.6
1998	113.6	93.7	140.4	107.4	107.0	125.2	110.1	119.8	113.8	115.5	111.1	105.0	107.2	104.5	111.1	108.0
1997	111.5	92.0	139.8	104.6	104.7	121.3	107.8	117.5	111.5	113.1	108.9	101.9	104.4	101.8	110.3	105.2
1996	108.9	88.6	134.5	102.2	102.1	118.8	106.6	116.2	109.3	111.5	106.5	100.0	102.1	99.9	107.5	102.7
1995	105.6	87.4	130.3	99.5	98.2	114.2	98.5	110.5	102.3	103.6	98.1	96.4	97.2	95.0	100.7	100.1
1994	103.0	85.3	124.0	94.8	95.0	111.3	97.3	108.9	100.9	102.2	97.0	93.6	95.8	93.6	99.1	97.1
1993	100.0	82.0	122.0	92.2	92.1	107.6	95.6	106.8	98.9	99.6	95.2	91.2	94.3	91.5	96.7	93.9
1992	97.9	80.8	120.0	91.0	91.0	104.3	94.4	104.2	97.3	98.2	94.0	89.5	92.9	89.9	95.0	91.5
1991	95.7	79.5	106.1	89.5	89.4	100.9	92.3	100.0	95.9	95.8	91.5	87.8	91.4	88.3	93.3	89.1
1990	93.2	77.9	104.7	88.2	88.1	98.4	90.9	98.4	93.7	94.0	90.1	84.6	89.3	83.4	88.4	87.1
1989	91.0	76.0	102.8	86.6	86.5	93.7	89.4	92.8	91.6	92.1	88.6	82.3	87.8	81.7	86.5	85.1
1988	88.5	74.5	101.1	83.9	83.7	90.6	87.5	89.8	88.5	87.9	86.8	80.8	85.5	80.0	84.6	83.1
1987	85.7	72.0	99.1	81.4	81.5	86.6	84.4	86.7	86.3	85.2	85.0	78.8	82.4	78.1	81.7	80.4
1986	83.7	70.8	97.5	80.6	80.3	84.4	83.5	85.3	85.1	84.5	83.4	77.0	80.9	76.5	79.6	78.6
1985	81.8	68.9	94.7	78.0	78.0	82.4	81.9	83.4	83.7	83.0	81.5	75.2	79.8	75.0	77.8	77.1
1984	80.6	67.9	90.7	76.6	76.8	80.2	80.4	82.2	83.6	80.6	80.1	73.5	77.4	73.6	77.3	75.9
1983	78.2	66.3	87.2	76.0	75.8	79.0	78.8	80.6	81.5	78.9	78.8	70.9	75.0	71.2	75.2	74.0
1982	72.1	61.1	79.3	71.0	70.1	75.0	72.7	74.4	75.3	72.6	72.7	66.4	69.8	67.1	70.5	68.2
1981	66.1	57.1	73.4	65.4	64.8	68.6	67.2	68.8	70.3	67.3	67.0	61.5	64.3	61.5	65.3	62.4
1980	60.7	52.2	68.9	60.3	59.5	62.8	62.3	63.4	64.5	61.6	61.1	56.5	59.0	56.7	59.8	57.9
1975	43.7	36.9	44.6	40.8	40.5	45.7	43.1	44.5	44.7	42.7	42.4	39.5	41.7	39.9	41.9	40.6
1970	27.8	21.0	30.4	26.7	26.6	29.1	28.0	28.6	29.0	27.5	27.6	25.4	26.4	25.5	27.1	26.2
1965	21.5	16.4	21.8	20.6	20.5	22.7	21.5	22.1	22.4	21.2	21.3	19.5	20.4	19.7	20.8	20.7
1960	19.5	14.9	19.8	18.7	18.6	20.2	19.6	20.0	20.3	19.2	19.3	17.7	18.7	17.9	18.9	18.4
1955	16.3	12.5	16.6	15.7	15.6	16.9	16.4	16.8	17.0	16.1	16.2	14.9	15.7	15.0	15.9	15.5
1950	13.5	10.3	13.7	13.0	12.9	14.0	13.6	13.9	14.0	13.3	13.4	12.3	12.9	12.4	13.1	12.8
1945	8.6	6.6	8.8	8.3	8.2	8.9	8.6	8.9	9.0	8.5	8.6	7.8	8.3	7.9	8.4	8.1
1940	6.6	5.1	6.8	6.4	6.3	6.9	6.7	6.8	6.9	6.5	6.6	6.0	6.4	6.1	6.5	6.3

TIMBERLINE.

INCLUDES $150 COUPON TOWARDS PRECISION BASIC ESTIMATING SOFTWARE

DODGE COST GUIDES ++

Unit COST BOOK 1999

CD-ROM INCLUDES SEARCHABLE, DOWNLOADABLE DATA PLUS COST CALCULATOR AND TIMBERLINE™ PRECISION BASIC ESTIMATING PROGRAM

EXHIBIT NO. _____ (JBS-2)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 3 OF 6

MARSHALL & SWIFT
THE BUILDING COST PEOPLE

1999 DODGE UNIT COST BOOK

TAMPA ZIP CODE (3 DIGIT)

	01 - General Requirements	02 - Sitework	2a.) Demolition	03 - Concrete	3a.) Formwork	3b.) Reinforcement	3c.) Concrete only	04 - Masonry	05 - Metals	06 - Wood and Plastics	07 - Therm. And Moist. Prot.	7a.) Insulation	7b.) Roofing	08 - Doors and Windows	09 - Finishes	9a.) Lath and Plaster	9b.) Drywall	9c.) Flooring	9d.) Painting	Divisions 10 through 14	15 - Mechanical	16 - Electrical	Overall
Florida																							
324	0.71	0.87	0.89	0.83	0.79	0.80	0.87	0.78	0.71	0.92	0.86	0.90	0.80	0.84	0.77	0.75	0.88	0.79	0.70	0.86	0.91	0.90	0.84
325	0.72	0.91	0.89	0.84	0.81	0.78	0.90	0.82	0.71	0.94	0.87	0.90	0.83	0.85	0.85	0.86	0.91	0.83	0.82	0.87	0.93	0.90	0.87
326	0.78	0.90	0.78	0.85	0.85	0.78	0.91	0.75	0.86	0.92	0.89	0.92	0.86	0.87	0.87	0.82	0.94	0.82	0.83	0.89	0.90	0.89	0.86
327	0.71	0.85	0.89	0.80	0.79	0.83	0.97	0.80	0.84	0.90	0.87	0.86	0.86	0.88	0.86	0.89	0.87	0.83	0.81	0.86	0.86	0.90	0.84
328	0.71	0.85	0.89	0.86	0.79	0.83	0.97	0.80	0.84	0.90	0.87	0.86	0.86	0.88	0.86	0.89	0.87	0.83	0.81	0.86	0.86	0.90	0.84
329	0.80	0.90	0.81	0.83	0.79	0.81	0.87	0.79	0.84	0.83	0.85	0.85	0.85	0.87	0.82	0.84	0.89	0.79	0.84	0.91	0.87	0.90	0.83
330	0.72	0.83	0.87	0.80	0.77	0.88	0.73	0.83	0.95	0.86	0.91	0.92	0.89	0.91	0.88	0.81	0.84	0.87	0.79	0.89	0.90	0.93	0.83
331	0.72	0.83	0.87	0.80	0.77	0.88	0.73	0.83	0.95	0.86	0.91	0.92	0.89	0.91	0.88	0.81	0.84	0.87	0.79	0.89	0.90	0.93	0.83
332	0.72	0.83	0.87	0.80	0.77	0.88	0.73	0.83	0.95	0.86	0.91	0.92	0.89	0.91	0.88	0.81	0.84	0.87	0.79	0.89	0.90	0.93	0.83
333	0.73	0.86	0.89	0.80	0.77	0.85	0.75	0.84	0.95	0.86	0.91	0.91	0.89	0.90	0.89	0.83	0.85	0.87	0.78	0.92	0.92	0.95	0.84
334	0.71	0.87	0.84	0.79	0.75	0.86	0.72	0.80	0.95	0.86	0.91	0.90	0.88	0.90	0.85	0.80	0.84	0.85	0.78	0.92	0.93	0.95	0.84
335	0.73	0.88	0.87	0.93	0.83	0.90	1.01	0.83	0.87	0.93	0.87	0.86	0.84	0.91	0.87	0.84	0.91	0.85	0.81	0.89	0.88	0.92	0.86
336	0.75	0.90	0.89	0.95	0.86	0.90	1.03	0.83	0.91	0.93	0.87	0.87	0.84	0.91	0.88	0.86	0.93	0.84	0.84	0.90	0.90	0.90	0.87
337	0.74	0.88	0.89	0.94	0.83	0.90	1.01	0.84	0.87	0.93	0.87	0.86	0.84	0.91	0.87	0.84	0.91	0.85	0.82	0.89	0.88	0.92	0.86
338	0.74	0.88	0.89	0.93	0.82	0.90	1.01	0.84	0.87	0.92	0.87	0.87	0.84	0.91	0.87	0.84	0.91	0.85	0.82	0.89	0.88	0.92	0.86
339	0.70	0.87	0.85	0.88	0.75	0.87	0.97	0.79	0.87	0.88	0.86	0.83	0.85	0.88	0.83	0.84	0.84	0.82	0.75	0.86	0.87	0.91	0.83
340	0.72	0.83	0.87	0.80	0.77	0.88	0.73	0.83	0.95	0.86	0.91	0.92	0.89	0.91	0.88	0.81	0.84	0.87	0.79	0.89	0.90	0.93	0.83
341	0.70	0.87	0.85	0.88	0.75	0.87	0.97	0.79	0.87	0.88	0.86	0.83	0.85	0.88	0.83	0.84	0.84	0.82	0.75	0.86	0.87	0.91	0.83
342	0.73	0.88	0.87	0.93	0.83	0.90	1.01	0.83	0.87	0.93	0.87	0.86	0.84	0.91	0.87	0.84	0.91	0.85	0.81	0.89	0.88	0.92	0.86
344	0.73	0.88	0.87	0.93	0.83	0.90	1.01	0.83	0.87	0.93	0.87	0.86	0.84	0.91	0.87	0.84	0.91	0.85	0.81	0.89	0.88	0.92	0.86
346	0.73	0.88	0.87	0.93	0.83	0.90	1.01	0.83	0.87	0.93	0.87	0.86	0.84	0.91	0.87	0.84	0.91	0.85	0.81	0.89	0.88	0.92	0.86
347	0.71	0.85	0.89	0.86	0.79	0.83	0.97	0.80	0.84	0.90	0.87	0.86	0.86	0.88	0.80	0.89	0.87	0.83	0.81	0.86	0.86	0.90	0.84
348	0.71	0.87	0.84	0.79	0.75	0.86	0.72	0.80	0.95	0.86	0.91	0.90	0.88	0.90	0.85	0.80	0.84	0.85	0.78	0.92	0.93	0.95	0.84
Georgia																							
300	0.75	0.89	0.73	0.89	0.80	0.90	0.93	0.83	0.86	0.90	0.90	0.91	0.88	0.89	0.87	0.92	0.87	0.85	0.87	0.89	0.94	0.98	0.87
301	0.76	0.89	0.73	0.89	0.80	0.90	0.93	0.83	0.86	0.90	0.90	0.91	0.88	0.89	0.87	0.92	0.87	0.85	0.87	0.89	0.94	0.98	0.87
302	0.78	0.94	0.73	0.91	0.82	0.95	0.94	0.85	0.92	0.92	0.91	0.91	0.88	0.91	0.89	0.92	0.89	0.87	0.86	0.92	0.97	1.00	0.90
303	0.78	0.94	0.73	0.91	0.82	0.95	0.94	0.85	0.92	0.92	0.91	0.91	0.88	0.91	0.89	0.92	0.89	0.87	0.86	0.92	0.97	1.00	0.90
304	0.71	0.88	0.66	0.82	0.84	0.82	0.80	0.74	0.85	0.93	0.88	0.90	0.85	0.87	0.81	0.78	0.94	0.80	0.69	0.87	0.93	0.94	0.85
305	0.72	0.87	0.70	0.87	0.79	0.83	0.93	0.84	0.82	0.89	0.89	0.89	0.88	0.87	0.86	0.88	0.86	0.84	0.85	0.87	0.92	0.96	0.86
306	0.73	0.87	0.70	0.88	0.79	0.85	0.93	0.84	0.82	0.89	0.89	0.89	0.88	0.88	0.86	0.88	0.86	0.85	0.85	0.88	0.92	0.96	0.86
307	0.75	0.89	0.73	0.89	0.80	0.90	0.93	0.83	0.86	0.90	0.90	0.91	0.88	0.89	0.87	0.92	0.87	0.85	0.87	0.89	0.94	0.98	0.87
308	0.71	0.88	0.66	0.82	0.84	0.82	0.80	0.74	0.85	0.93	0.88	0.90	0.85	0.87	0.81	0.78	0.94	0.80	0.69	0.87	0.93	0.94	0.85
309	0.71	0.88	0.66	0.82	0.84	0.82	0.80	0.74	0.85	0.93	0.88	0.90	0.85	0.87	0.81	0.78	0.94	0.80	0.69	0.87	0.93	0.94	0.85
310	0.70	0.88	0.65	0.87	0.81	0.91	0.88	0.75	0.87	0.92	0.91	0.93	0.86	0.88	0.81	0.80	0.89	0.82	0.80	0.87	0.93	0.94	0.85
311	0.78	0.94	0.73	0.91	0.82	0.95	0.94	0.85	0.92	0.92	0.91	0.91	0.88	0.91	0.89	0.92	0.89	0.87	0.86	0.92	0.97	1.00	0.90
312	0.71	0.89	0.68	0.89	0.79	0.95	0.93	0.78	0.86	0.92	0.89	0.89	0.87	0.87	0.80	0.83	0.86	0.82	0.82	0.87	0.93	0.94	0.85
313	0.72	0.88	0.68	0.84	0.82	0.88	0.85	0.77	0.89	0.93	0.93	0.99	0.85	0.84	0.82	0.78	0.92	0.84	0.83	0.87	0.91	0.91	0.86
314	0.72	0.88	0.68	0.84	0.82	0.88	0.85	0.77	0.89	0.93	0.93	0.99	0.85	0.84	0.82	0.78	0.92	0.84	0.83	0.87	0.91	0.91	0.86
315	0.67	0.85	0.61	0.84	0.77	0.81	0.90	0.75	0.82	0.90	0.85	0.90	0.79	0.82	0.79	0.83	0.87	0.81	0.73	0.86	0.89	0.88	0.82
316	0.60	0.85	0.68	0.84	0.78	0.82	0.90	0.72	0.82	0.89	0.84	0.87	0.80	0.84	0.74	0.77	0.88	0.78	0.71	0.86	0.87	0.86	0.81

EXHIBIT NO. (JBS-2)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 4 OF 6

RSMeans

Heavy Construction Cost Data

13th Annual Edition

Now Available on CD-ROM!

(See inside for details)

1999

aace International

R.S. Means 1970 Industrial Appreciation Award Recipient

EXHIBIT NO. _____ (JBS-2)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 5 OF 6

Location Factors

Costs shown in *Means cost data publications* are based on National Averages for materials and installation. To adjust these costs to a specific location, simply multiply the base cost by the factor and divide by 100 for that city. The data is arranged alphabetically by state and postal zip code numbers. For a city not listed, use the factor for a nearby city with similar economic characteristics.

STATE/ZIP	CITY	MAT.	INST.	TOTAL
ALABAMA				
350-352	Birmingham	96.5	77.0	87.1
354	Tuscaloosa	96.2	62.2	79.8
355	Jasper	97.5	53.3	76.2
356	Decatur	96.3	68.4	82.8
357-358	Huntsville	96.1	68.4	82.7
359	Gadsden	97.0	66.2	82.2
360-361	Montgomery	97.1	60.8	79.6
362	Anniston	95.1	53.1	74.8
363	Dothan	96.6	59.5	78.7
364	Evergreen	98.9	61.3	79.2
365-366	Mobile	97.0	68.9	83.4
367	Selma	96.2	59.5	78.5
368	Phenix City	96.9	60.1	79.2
369	Butler	96.3	59.5	78.6
ALASKA				
995-996	Anchorage	133.1	117.7	125.7
997	Fairbanks	129.3	120.7	125.1
998	Juneau	131.2	118.0	124.8
999	Ketchikan	140.6	118.0	129.7
ARIZONA				
850,853	Phoenix	100.6	79.0	90.2
852	Mesa/Tempe	100.6	69.5	85.6
855	Globe	101.4	73.9	88.1
856-857	Tucson	99.4	77.6	88.9
859	Show Low	101.5	74.0	88.2
860	Flagstaff	102.8	78.2	91.0
863	Prescott	100.3	73.6	87.4
864	Kingman	99.1	74.4	87.2
865	Chambers	99.1	74.2	87.1
ARKANSAS				
716	Pine Bluff	96.4	62.0	79.3
717	Camden	93.8	47.5	71.5
718	Texarkana	94.7	53.4	74.8
719	Hot Springs	93.0	46.9	70.7
720-722	Little Rock	95.9	62.3	79.7
723	West Memphis	95.2	64.8	80.5
724	Jonesboro	95.2	64.8	80.5
725	Batesville	93.9	59.1	77.1
726	Harrison	95.3	59.1	77.8
727	Fayetteville	92.4	40.8	67.5
728	Russellville	94.1	56.9	76.1
729	Fort Smith	96.1	60.7	79.0
CALIFORNIA				
900-902	Los Angeles	105.0	116.5	110.6
903-905	Inglewood	101.2	114.3	107.5
906-908	Long Beach	103.0	114.3	108.5
910-912	Pasadena	100.6	114.4	107.2
913-916	Van Nuys	104.5	114.1	109.2
917-918	Alhambra	103.2	114.4	108.6
919-921	San Diego	104.9	109.5	107.1
922	Palm Springs	102.5	112.0	107.1
923-924	San Bernardino	100.1	111.8	105.7
925	Riverside	104.6	112.8	108.6
926-927	Santa Ana	102.3	112.3	107.2
928	Anaheim	104.9	115.1	109.8
930	Oxnard	105.4	113.8	109.4
931	Santa Barbara	104.6	112.9	108.6
932-933	Bakersfield	104.3	107.0	105.6
934	San Luis Obispo	106.2	111.5	108.8
935	Mojave	102.8	108.9	105.8
936-938	Fresno	105.3	112.3	108.7
939	Salinas	107.3	116.7	111.8
940-941	San Francisco	111.0	138.2	124.2
942,956-958	Sacramento	106.9	114.5	110.5
943	Palo Alto	105.0	127.8	116.0
944	San Mateo	108.0	127.1	117.2
945	Vallejo	105.5	127.0	115.9
946	Oakland	109.9	126.5	117.9
947	Berkeley	109.5	127.9	118.4
948	Richmond	109.3	125.3	117.0
949	San Rafael	111.2	125.7	118.2
950	Santa Cruz	110.8	118.4	114.5

STATE/ZIP	CITY	MAT.	INST.	TOTAL
CALIFORNIA (CONT'D)				
951	San Jose	110.1	129.7	119.6
952	Stockton	105.9	113.2	109.4
953	Modesto	106.0	113.3	109.5
954	Santa Rosa	107.2	129.0	117.7
955	Eureka	108.6	112.1	110.3
959	Marysville	107.3	113.7	110.4
960	Redding	108.4	108.9	108.6
961	Susanville	108.6	108.3	108.5
COLORADO				
800-802	Denver	101.9	84.8	93.6
803	Boulder	100.0	69.5	85.3
804	Golden	102.4	76.9	90.1
805	Fort Collins	103.2	77.9	91.0
806	Greeley	100.2	69.1	85.2
807	Fort Morgan	100.7	77.7	89.6
808-809	Colorado Springs	100.7	80.3	90.8
810	Pueblo	102.6	79.2	91.3
811	Alamosa	104.9	70.3	88.2
812	Salida	104.8	70.4	88.2
813	Durango	105.6	66.0	86.5
814	Montrose	103.9	63.3	84.3
815	Grand Junction	106.9	63.7	86.0
816	Glenwood Springs	105.0	75.6	90.8
CONNECTICUT				
060	New Britain	103.0	105.0	104.0
061	Hartford	103.3	105.3	104.3
062	Willimantic	103.8	104.0	103.9
063	New London	100.2	105.8	102.9
064	Meriden	102.9	104.5	103.7
065	New Haven	103.2	105.3	104.2
066	Bridgeport	104.4	102.5	103.5
067	Waterbury	103.7	105.0	104.4
068	Norwalk	103.7	102.7	103.2
069	Stamford	103.9	106.1	105.0
D.C.				
200-205	Washington	99.6	92.0	96.0
DELAWARE				
197	Newark	99.5	97.2	98.4
198	Wilmington	98.8	97.2	98.0
199	Dover	99.5	97.2	98.4
FLORIDA				
320,322	Jacksonville	98.6	68.6	84.1
321	Daytona Beach	98.7	75.9	87.7
323	Tallahassee	99.1	58.6	79.6
324	Panama City	99.6	45.6	73.5
325	Pensacola	99.2	68.5	84.4
326	Gainesville	100.0	64.6	82.9
327-328,347	Orlando	100.4	70.6	86.1
329	Melbourne	100.6	75.1	88.3
330-332,340	Miami	98.0	74.3	86.6
333	Fort Lauderdale	97.9	75.1	86.9
334,349	West Palm Beach	96.8	69.2	83.5
335-336,346	Tampa	99.8	67.6	84.2
337	St. Petersburg	101.5	67.5	85.1
338	Lakeland	98.5	67.3	83.5
339	Fort Myers	98.2	64.2	81.8
342	Sarasota	100.0	64.6	82.9
GEORGIA				
300-303,399	Atlanta	96.9	79.3	88.4
304	Statesboro	96.8	36.9	67.9
305	Gainesville	96.0	52.7	74.9
306	Athens	95.1	64.5	80.3
307	Dalton	96.8	34.8	66.9
308-309	Augusta	95.7	62.7	79.8
310-312	Macon	95.7	67.6	82.2
313-314	Savannah	97.8	65.6	82.3
315	Waycross	97.7	52.0	75.6
316	Valdosta	97.3	55.6	77.1
317	Albany	97.4	61.6	80.1
318-319	Columbus	97.5	59.7	79.2

EXHIBIT NO. _____ (JBS-2)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 6 OF 6

FAX

To: John Stamberg

Voice Phone Number:

From: Richard Sarat

Company: Cubic Storage Systems, INC.

Fax Number: 813 287 2807

Voice Number:

MESSAGE

John,

Here is the budget based on the information you provided.
I was trying to anticipate steel prices for the short term.
Lets keep in touch as the project parameters unfold.
We cannot figure any footings for the stands until location
and soil testing is completed.

Thank You,

Richard Sarat

Date: 3/24/04

Pages: 1 of 1

EXHIBIT NO. _____ (JBS-3)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 1 OF 10

Cubic Storage & Office Systems, Inc.

March 22, 2004

Energy Ventures

Project: Tampa – CSX coal distribution conveyor.

Attention: Mr. John Stamberg

We would like to submit BUDGET system pricing for the
Coal transport conveyor as discussed for your Project.

P-1- P-4 – 525' long Truss frame, trough belt conveyor.
2100 feet total length x 54" wide belt with Supports on 30' centers.
Throughput of 2500 tons @ 740 FPM
Horizontal design to be placed on concrete footings
Each section is powered by a 75HP- 3 phase motor.
Galvanized sheet metal covers over the belt open bottom
Other specifications and design criteria will follow once the full specification is provided.

Budget price delivered and installed less sales tax.... $ 1,300,000.00

Terms: To be specified
Warranty: On mechanical components is 1 year. The warranty does not include labor costs.
Delivery: 8-12 weeks A.R.O.
F.O.B: Delivered
Installation: Included
Sales tax: Not included

All materials, labor and delivery charges are subject sales tax, not included in the above price. This is a budget proposal is not valid as an order. Due to the volatility in the steel market prices are subject to change daily.

Thank You,

Richard Samit

4917 W. Nassau St. Tampa, FL. 33607 - PH: (813) 289-7795 FAX: (813) 287-2807

EXHIBIT NO. _____ (JBS-3)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 2 OF 10

Approach #1 @ 3800 LF

Adjust ~~C~~ ~~B~~

Cubic Storage and Office Supply, Inc

$\frac{\$1,300,000 \text{ modules}}{2100 \text{ LF}} \times 3800 = \$2,352,380$

However 30' on Cubic

10 foot deep /

$\frac{3800}{30' \text{ span}} \times 2 \quad \pm 130$ caissons

24" dia @ $29/VLF

@ 3.14 ft² caisson

130 caissons × 10 ft × $29/VLF — 37,700

~~2500~~ Pickup Truck

$\frac{4500\#}{4 \times 0.5}$ = Soil as about 2250#/ft²

12" | 6" @ 2.45 75R 16 — if OK with pickups

3.14 × 2250+ = Over 7000#

Caisson

Steel (Rebar)

$\frac{130 \times 200\#/\text{caisson}}{2000}$ × 530 + 51.50 — $7560

say $50,000

EXHIBIT NO. ______ (JBS-3)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 3 OF 10

	Walkways	380,000 100/LF
	Lights	
$780	130 low pressure sodium @ 135 watts 30' on supports	101,400
	Pipe for Fire Protection System	
	59.50 x 3800	226,100
	Check Valve 4 x 880	3520
	Valves Gate 20 x 1150 or Heads	23,000
	Sub Total	$784,020
	Conveyor	$2,352,380
		$3,136,400
	Escalation 1.061	
	Engr / Indirects 1.164	
		$3,873,467
		3800 = $1020

EXHIBIT NO. _____ (JBS-3)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 4 OF 10

Steel Supports for Short Conveyor

$\frac{\$265{,}000}{3300}$ for Elevated Convey $= \$80.30$ / LF

10

Short Conveyor $\left(\begin{matrix}\$1020 \\ \$1100.30\end{matrix} + 80.30\right) \times 500 = 550150$

EXHIBIT NO. _____ (JBS-3)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 5 OF 10

151 | Pipe & Fittings

151 550 | Plastic Pipe

			CREW	DAILY OUTPUT	LABOR-HOURS	UNIT	1999 BARE COSTS MAT.	LABOR	EQUIP.	TOTAL	TOTAL INCL O&P
7900		2"	Q-1	26	.615	Ea.	4.34	18.05		22.39	32.50
7400		2-1/2"		24	.667		6.70	19.55		26.25	37
7410		3"		18	.889		7.40	26		33.40	47.50
7420		4"		15	1.067		9.35	31.50		40.85	58
7430		6"		10	1.600		14.70	47		61.70	87
7440		8"	Q-2	11	2.182		24	66.50		98.50	128
7550		Union, schedule 40, socket joints, 1/2"	1 Plum	19	.421		1.71	13.75		15.46	23
7560		3/4"		18	.444		2.24	14.50		16.74	24.50
7570		1"		15	.533		2.56	17.40		19.96	29.50
7580		1-1/4"		14	.571		5.10	18.65		23.75	33.50
7590		1-1/2"		13	.615		5.75	20		25.75	37
7600		2"	Q-1	20	.800		7.80	23.50		31.30	44

151 700 | Steel Pipe

0010		PIPE, STEEL	R181-050								
0020		All pipe sizes are to Spec. A-53 unless noted otherwise									
0050		Schedule 40, threaded, with couplings, and clevis type									
0060		hangers sized for covering, 10' O.C.									
0540		Black, 1/4" diameter	1 Plum	66	.121	L.F.	1.20	3.95		5.15	7.30
0550		3/8" diameter		65	.123		1.35	4.01		5.36	7.60
0560		1/2" diameter		63	.127		1.15	4.14		5.29	7.50
0570		3/4" diameter		61	.131		1.29	4.28		5.57	7.90
0580		1" diameter		53	.151		1.64	4.92		6.56	9.25
0590		1-1/4" diameter	Q-1	89	.180		1.98	5.30		7.28	10.20
0600		1-1/2" diameter		80	.200		2.26	5.85		8.11	11.40
0610		2" diameter		64	.250		3.06	7.35		10.41	14.45
0620		2-1/2" diameter		50	.320		4.81	9.40		14.21	19.55
0630		3" diameter		43	.372		6.05	10.90		16.95	23
0640		3-1/2" diameter		40	.400		7.90	11.75		19.65	26.50
0650		4" diameter		36	.444		8.75	13.05		21.80	29.50
0660		5" diameter		26	.615		19.50	18.05		37.55	49
0670		6" diameter	Q-2	31	.774		22	23.50		45.50	59.50
0680		8" diameter		27	.889		31	27		58	75
0690		10" diameter		23	1.043		45	32		77	97.50
0700		12" diameter		18	1.333		62	40.50		102.50	130
0809		A-106, gr. A/B, seamless w/cplgs. & hangers									
0811		1/4" diameter	1 Plum	66	.121	L.F.	2.51	3.95		6.46	8.75
0812		3/8" diameter		65	.123		2.37	4.01		6.38	8.70
0813		1/2" diameter		63	.127		2.40	4.14		6.54	8.90
0814		3/4" diameter		61	.131		2.56	4.28		6.84	9.30
0815		1" diameter		53	.151		3.05	4.92		7.97	10.80
0816		1-1/4" diameter	Q-1	89	.180		3.35	5.30		8.65	11.70
0817		1-1/2" diameter		80	.200		3.52	5.85		9.37	12.80
0819		A-53, 2" diameter		64	.250		3.79	7.35		11.14	15.25
0821		2-1/2" diameter		50	.320		6.50	9.40		15.90	21.50
0822		3" diameter		43	.372		8.20	10.90		19.10	25.50
0823		4" diameter		36	.444		12.70	13.05		25.75	34
1220		To delete coupling & hanger, subtract									
1230		1/4" diam. to 3/4" diam.					31%	56%			
1240		1" diam. to 1-1/2" diam.					23%	51%			
1250		2" diam. to 4" diam.					23%	41%			
1260		5" diam. to 12" diam.					21%	45%			
1280		All pipe sizes are to Spec. A-53 unless noted otherwise									
1281		Schedule 40, threaded, with couplings and clevis type									
1282		hangers sized for covering, 10' O. C.									
1290		Galvanized, 1/4" diameter	1 Plum	66	.121	L.F.	1.46	3.95		5.41	7.60

EXHIBIT NO. _____ (JBS-3)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 6 OF 10

023 | Tunneling, Piles & Caissons

023 600 | Driven Piles

			CREW	DAILY OUTPUT	LABOR-HOURS	UNIT	1999 BARE COSTS MAT.	LABOR	EQUIP.	TOTAL	TOTAL INCL O&P
612	2800	25,000 L.F. pile job, add	B-19	8,500	.008	V.L.F.		.21	.17	.38	.53
	2900	Mobilization by water for barge driving rig, add (R023 -820)								100%	

023 700 | Bored/Augered Piles

704	0010	PRESSURE INJECTED FOOTINGS or Displacement Caissons (R023 -710)									
	0100	incl. mobilization and demobilization, up to 50 miles									
	0200	Uncased shafts, 30 to 80 tons cap., 17" diam., 10' depth	B-44	80	.727	V.L.F.	12.20	19.85	8.90	40.95	56
	0300	25' depth		165	.388		8.70	10.60	4.75	24.05	32.50
	0400	80-150 ton capacity, 22" diameter, 10' depth		80	.800		15.25	22	9.80	47.05	63.50
	0500	20' depth		130	.492		12.20	13.45	6.05	31.70	42.50
	0700	Cased shafts, 10 to 30 ton capacity, 10-5/8" diam., 20' depth		175	.366		8.70	9.95	4.48	23.13	31
	0800	30' depth		240	.267		8.15	7.25	3.26	18.66	24.50
	0850	30 to 60 ton capacity, 12" diameter, 20' depth		160	.400		12.20	10.90	4.90	28	37
	0900	40' depth		230	.278		9.40	7.60	3.41	20.41	26.50
	1000	80 to 100 ton capacity, 16" diameter, 20' depth		160	.400		17.45	10.90	4.90	33.25	42.50
	1100	40' depth		230	.278		16.25	7.60	3.41	27.26	34
	1200	110 to 140 ton capacity, 17-5/8" diameter, 20' depth		160	.400		18.75	10.90	4.90	34.55	44
	1300	40' depth		230	.278		17.45	7.60	3.41	28.46	35.50
	1400	140 to 175 ton capacity, 19" diameter, 20' depth		130	.492		20.50	13.45	6.05	40	51.50
	1500	40' depth		210	.305		18.75	8.30	3.73	30.78	38.50
	1700	Over 30' long, L.F. cost tends to be lower									
	1900	Maximum depth is about 90'									

023 800 | Caissons

804	0010	CAISSONS incl. excav., concrete, 50 lbs. reinf. per C.Y., not (R023 -820)									
	0020	incl. mobilization, boulder removal, disposal									
	0100	Open style, machine drilled, to 50' deep, in stable ground, no									
	0110	casings or ground water, 18" diam., 0.065 C.Y./L.F.	B-43	200	.240	V.L.F.	4.82	5.65	8.90	19.37	24
	0200	24" diameter, 0.116 C.Y./L.F.		190	.253		8.65	5.95	9.35	23.95	29
	0300	30" diameter, 0.182 C.Y./L.F.		150	.320		13.50	7.55	11.85	32.90	39.50
	0400	36" diameter, 0.262 C.Y./L.F.		125	.384		19.45	9.05	14.20	42.70	51
	0500	48" diameter, 0.465 C.Y./L.F.		100	.480		34.50	11.30	17.75	63.55	75
	0600	60" diameter, 0.727 C.Y./L.F.		90	.533		54	12.55	19.75	86.30	101
	0700	72" diameter, 1.05 C.Y./L.F.		80	.600		78	14.10	22	114.10	133
	0800	84" diameter, 1.43 C.Y./L.F.		75	.640		106	15.05	23.50	144.55	167
	1000	For bell excavation and concrete, add									
	1020	4' bell diameter, 24" shaft, 0.444 C.Y.	B-43	20	2.400	Ea.	27	56.50	89	172.50	216
	1040	6' bell diameter, 30" shaft, 1.57 C.Y.		5.70	8.421		96	198	310	604	760
	1060	8' bell diameter, 36" shaft, 3.72 C.Y.		2.40	20		227	470	740	1,437	1,800
	1080	9' bell diameter, 48" shaft, 4.48 C.Y.		2	24		273	565	890	1,728	2,150
	1100	10' bell diameter, 60" shaft, 5.24 C.Y.		1.70	28.235		320	665	1,050	2,035	2,525
	1120	12' bell diameter, 72" shaft, 8.74 C.Y.		1	48		535	1,125	1,775	3,435	4,275
	1140	14' bell diameter, 84" shaft, 13.6 C.Y.		.70	68.571		830	1,625	2,525	4,980	6,225
	1200	Open style, machine drilled, to 50' deep, in wet ground, pulled									
	1300	casing and pumping, 18" diameter, 0.065 C.Y./L.F.	B-48	160	.350	V.L.F.	4.82	8.40	12.35	25.57	32
	1400	24" diameter, 0.116 C.Y./L.F.		125	.448		8.65	10.80	15.80	35.25	43.50
	1500	30" diameter, 0.182 C.Y./L.F.		85	.659		13.50	15.85	23.50	52.85	65
	1600	36" diameter, 0.262 C.Y./L.F.		60	.933		19.45	22.50	33	74.95	92.50
	1700	48" diameter, 0.465 C.Y./L.F.	B-49	55	1.600		34.50	40	46	120.50	152
	1800	60" diameter, 0.727 C.Y./L.F.		35	2.514		54	63	72	189	239
	1900	72" diameter, 1.05 C.Y./L.F.		30	2.933		78	73.50	84	235.50	295
	2000	84" diameter, 1.43 C.Y./L.F.		25	3.520		105	88.50	101	295.50	370
	2100	For bell excavation and concrete, add									
	2120	4' bell diameter, 24" shaft, 0.444 C.Y.	B-48	19.80	2.828	Ea.	27	68	100	195	245
	2140	6' bell diameter, 30" shaft, 1.57 C.Y.		5.70	9.825		96	236	345	677	850
	2160	8' bell diameter, 36" shaft, 3.72 C.Y.		2.40	23.333		227	560	825	1,612	2,025

EXHIBIT NO. _____ (JBS-3)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 7 OF 10

032 | Concrete Reinforcement

032 100 | Reinforcing Steel

			CREW	DAILY OUTPUT	LABOR-HOURS	UNIT	1999 BARE COSTS MAT.	LABOR	EQUIP.	TOTAL	TOTAL INCL O&P	
102	2420	12" long	R032-080			C	230			230	253	102
	2500	3/4" diameter, for 1-1/2" I.D. pipe, 6" long					250			250	275	
	2520	12" long					410			410	455	
	2700	Screw anchor for bolts, plain, 1/2" diameter					90			90	99	
	2720	1" diameter					271			271	298	
	2740	1-1/2" diameter					450			450	495	
	2800	Screw eye bolts, 1/2" x 5" long					1,100			1,100	1,200	
	2820	1" x 9" long					4,000			4,000	4,425	
	2840	1-1/2" x 14" long					10,200			10,200	11,200	
	2900	Screw anchor bolts, 1/2" x up to 7" long					420			420	460	
	2920	1" x up to 12" long					1,375			1,375	1,500	
	3000	Slab lifting inserts, single, 3/4" dia., galv., 4" high					280			280	310	
	3010	6" high					340			340	375	
	3030	7" high					390			390	430	
	3100	1" diameter, 5" high					440			440	485	
	3120	7" high					465			465	510	
	3200	Double lifting inserts, 1" diameter, 5" high					875			875	965	
	3220	7" high					925			925	1,025	
	3330	1-1/4" diameter, 5" high					950			950	1,050	
	3500	Sleeper clips for wood sleepers, 20 ga., galv., 2" wide				M	330			330	365	
	3520	4" wide					410			410	450	
	3600	Spacers, plastic for 1" bar clearance, average					48			48	53	
	3620	For 2" bar clearance, average					58			58	64	
	3800	Subgrade chairs, 1/2" diameter, 3-1/2" high				C	270			270	297	
	3850	12" high					770			770	845	
	3900	3/4" diameter, 3-1/2" high					350			350	385	
	3950	12" high					840			840	925	
	4200	Subgrade stakes, 3/4" diameter, 12" long					277			277	305	
	4250	24" long					375			375	415	
	4300	1" diameter, 12" long					420			420	465	
	4350	24" long					630			630	690	
	4500	Tie wire, 16 ga. annealed steel, under 500 lbs.				Cwt.	80			80	88	
	4520	2,000 to 4,000 lbs.				"	75			75	82.50	
	4550	Tie wire holder, plastic case				Ea.	31			31	34	
	4600	Aluminum case				"	36			36	39.50	
104	0010	COATED REINFORCING Add to material										104
	0100	Epoxy coated, A775				Cwt.	23.50			23.50	26	
	0150	Galvanized, #3					31.50			31.50	34.50	
	0200	#4					31.50			31.50	34.50	
	0250	#5					31			31	34	
	0300	#6 or over					31			31	34	
	1000	For over 20 tons, #6 or larger, minimum					28.50			28.50	31.50	
	1500	Maximum					34.50			34.50	38	
105	0010	REINFORCING A615 Grade 40, incl. freight from mill	R032-060									105
	0200	Average price, cut, bent, and delivered				Ton	460			480	530	
	0500	Grade 60, incl. freight from mill										
	0700	Average price, cut, bent, and delivered				Ton	460			460	505	
	1000	Reinforcing extras, add to base										
	1020	Shop bending, light				Ton	82			82	90	
	1050	Heavy					36.50			36.50	40	
	1200	Detailing under 50 tons					46.50			46.50	51.50	
	1250	50 to 150 tons					36.50			36.50	40	
	1300	150 to 500 tons					31.50			31.50	34.50	
	1350	Over 500 tons					22.50			22.50	24.50	
	1700	Listing					4.15			4.15	4.57	

For expanded coverage of these items see *Means Concrete & Masonry Cost Data 1999*

166 | Lighting

166 100 | Lighting

			CREW	DAILY OUTPUT	LABOR-HOURS	UNIT	1999 BARE COSTS MAT.	LABOR	EQUIP.	TOTAL	TOTAL INCL O&P
115	2250	Low pressure sodium, 55 watt	1 Elec	2.70	2.963	Ea.	485	94.50		579.50	675
	2270	90 watt		12	4		535	128		663	780
	2290	180 watt		2	4		680	128		808	940
	2340	High pressure sodium, 70 watt		2.70	2.963		190	94.50		284.50	350
	2360	100 watt		2.70	2.963		215	94.50		309.50	380
	2380	150 watt		2.70	2.963		220	94.50		314.50	385
	2400	400 watt	2 Elec	4.40	3.636		335	116		451	545
	2600	1000 watt	"	4	4		500	128		628	740
	2610	Incandescent, 300 watt	1 Elec	4	2		85	64		149	189
	2620	500 watt	"	4	2		128	64		192	237
	2630	1000 watt	2 Elec	6	2.667		138	85		223	279
	2640	1500 watt	"	6	2.667		151	85		236	293
	2650	Roadway area luminaire, low pressure sodium, 135 watt	1 Elec	2	4		535	128		663	780
	2700	180 watt	"	2	4		565	128		693	810
	2720	Mercury vapor, 400 watt	2 Elec	4.40	3.636		340	116		456	550
	2730	1000 watt		4	4		425	128		553	660
	2750	Metal halide, 400 watt		4.40	3.636		410	116		526	625
	2760	1000 watt		4	4		490	128		618	730
	2780	High pressure sodium, 400 watt		4.40	3.636		465	116		581	685
	2790	1000 watt		4	4		515	128		643	755
	2800	Light poles, anchor base									
	2820	not including concrete bases									
	2840	Aluminum pole, 8' high	1 Elec	4	2	Ea.	435	64		499	575
	2850	10' high		4	2		455	64		519	595
	2860	12' high		3.80	2.105		475	67		542	625
	2870	14' high		3.40	2.353		495	75		570	655
	2880	16' high		3	2.667		545	85		630	725
	3000	20' high	R-3	2.90	6.897		595	218	47	860	1,025
	3200	30' high		2.60	7.692		1,100	243	52	1,395	1,650
	3400	35' high		2.30	8.696		1,200	275	59	1,534	1,800
	3600	40' high		2	10		1,375	315	68	1,758	2,050
	3800	Bracket arms, 1 arm	1 Elec	8	1		75	32		107	130
	4000	2 arms		8	1		150	32		182	213
	4200	3 arms		5.30	1.509		225	48		273	320
	4400	4 arms		5.30	1.509		300	48		348	400
	4500	Steel pole, galvanized, 8' high		3.80	2.105		410	67		477	550
	4510	10' high		3.70	2.162		430	69		499	580
	4520	12' high		3.40	2.353		465	75		540	620
	4530	14' high		3.10	2.581		495	82.50		577.50	670
	4540	16' high		2.90	2.759		525	88		613	710
	4550	18' high		2.70	2.963		555	94.50		649.50	750
	4600	20' high	R-3	2.60	7.692		730	243	52	1,025	1,225
	4800	30' high		2.30	8.696		860	275	59	1,194	1,425
	5000	35' high		2.20	9.091		940	287	61.50	1,288.50	1,525
	5200	40' high		1.70	11.765		1,150	370	80	1,600	1,925
	5400	Bracket arms, 1 arm	1 Elec	8	1		120	32		152	180
	5600	2 arms		8	1		185	32		217	252
	5800	3 arms		5.30	1.509		200	48		248	292
	6000	4 arms		5.30	1.509		280	48		328	380
	6100	Fiberglass pole, 1 or 2 fixtures, 20' high	R-3	4	5		345	158	34	537	655
	6200	30' high		3.60	5.556		540	176	37.50	753.50	900
	6300	35' high		3.20	6.250		675	197	42.50	914.50	1,100
	6400	40' high		2.80	7.143		825	226	48.50	1,099.50	1,300
	6420	Wood pole, 4-1/2" x 5-1/8", 8' high	1 Elec	6	1.333		220	42.50		262.50	305
	6430	10' high		6	1.333		250	42.50		292.50	340
	6440	12' high		5.70	1.404		300	45		345	395

151 | Pipe & Fittings

151 950 | Valves

			CREW	DAILY OUTPUT	LABOR-HOURS	UNIT	1999 BARE COSTS MAT.	LABOR	EQUIP.	TOTAL	TOTAL INCL O&P
955	8750	1-1/4" size R151-060	1 Plum	15	.533	Ea.	310	17.40		327.40	365
	8770	1-1/2" size		13	.615		335	20		355	400
	8780	2" size		11	.727		505	23.50		528.50	590
960	0010	VALVES, IRON BODY R151-050									
	1020	Butterfly, wafer type, gear actuator, 200 lb.									
	1030	2" size	1 Plum	14	.571	Ea.	109	18.65		127.65	147
	1040	2-1/2" size	Q-1	9	1.778		112	52		164	202
	1050	3" size		8	2		116	58.50		174.50	217
	1060	4" size		5	3.200		145	94		239	300
	1070	5" size	Q-2	5	4.800		175	146		321	415
	1080	6" size	"	5	4.800		198	146		344	440
	1650	Gate, 125 lb., N.R.S.									
	2150	Flanged									
	2200	2" size	1 Plum	5	1.600	Ea.	250	52		302	355
	2240	2-1/2" size	Q-1	5	3.200		256	94		350	425
	2260	3" size		4.50	3.556		287	104		391	475
	2280	4" size		3	5.333		410	157		567	690
	2300	6" size	Q-2	3	8		700	243		943	1,150
	3650	OS&Y, 125 lb., flanged									
	3600	2" size	1 Plum	5	1.600	Ea.	179	52		231	275
	3660	3" size	Q-1	4.50	3.556		209	104		313	390
	3680	4" size	"	3	5.333		222	157		379	480
	3700	6" size	Q-2	3	8		490	243		733	910
	3800	For 250 lb. flanged, add					200%	10%			
	4350	Globe, OS&Y									
	5450	Swing check, 125 lb., threaded									
	5500	2" size	1 Plum	11	.727	Ea.	270	23.50		293.50	335
	5540	2-1/2" size	Q-1	15	1.067		350	31.50		381.50	435
	5550	3" size		13	1.231		375	36		411	470
	5560	4" size		10	1.600		600	47		647	730
	5950	Flanged									
	6000	2" size	1 Plum	5	1.600	Ea.	126	52		178	218
	6040	2-1/2" size	Q-1	5	3.200		160	94		254	320
	6050	3" size		4.50	3.556		239	104		343	420
	6060	4" size		3	5.333		271	157		428	535
	6070	6" size	Q-2	3	8		460	243		703	880
975	0010	VALVES, PLASTIC									
	1150	Ball, PVC, socket or threaded, single union									
	1230	1/2" size	1 Plum	26	.308	Ea.	19.75	10.05		29.80	36.50
	1240	3/4" size		25	.320		23.50	10.45		33.95	42
	1250	1" size		23	.348		28.50	11.35		39.85	48
	1260	1-1/4" size		21	.381		37.50	12.40		49.90	60.50
	1270	1-1/2" size		20	.400		47	13.05		60.05	72
	1280	2" size		17	.471		67.50	15.35		82.85	98
	1290	2-1/2" size	Q-1	26	.615		183	18.05		201.05	230
	1300	3" size		24	.667		168	19.55		187.55	215
	1310	4" size		20	.800		320	23.50		343.50	385
	1360	For PVC, flanged, add					100%	15%			
	3150	Ball check, PVC, socket or threaded									
	3200	1/4" size	1 Plum	26	.308	Ea.	25	10.05		35.05	42.50
	3220	3/8" size		26	.308		25	10.05		35.05	42.50
	3240	1/2" size		26	.308		25	10.05		35.05	42.50
	3250	3/4" size		25	.320		28	10.45		38.45	46.50
	3260	1" size		23	.348		35	11.35		46.35	55.50

FMC Technologies
Material Handling Solutions
FMC Technologies Inc
Homer City PA 15748 1306
724 479 4500

Fax No. (724) 479-4681

Telecopy Message
Fax No: (703) 276-9541
Date: 3/26/04
Page 1 of Many

To: ENERGY VENTURES ANALYSIS
Attn: JOHN STAMBERG

From: RANDY BAIRD

DEAR MR. STAMBERG:

Please find attached as per our discussion. Thanks for the opportunity & I look forward to further discussions on this project.

Questions please call: (724) 479-4657

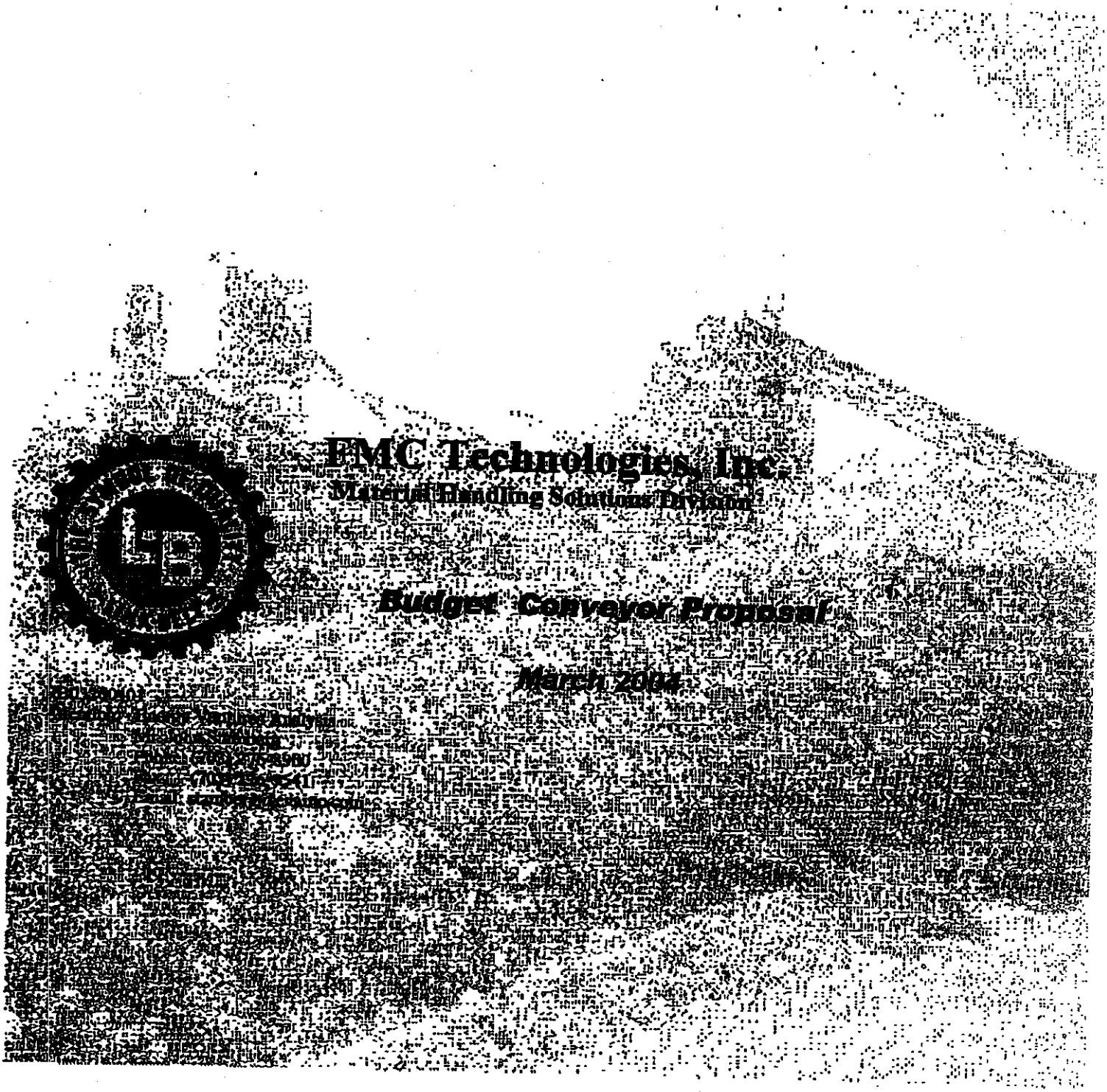
Sincerely:

RANDY BAIRD
MHS SYSTEMS MANAGER.

EXHIBIT NO. _____ (JBS-4)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 1 OF 13

FMC EnergySystems

FMC Material Handling Systems



FMC Technologies, Inc.

Material Handling Solutions Division

Budget Conveyor Proposal

March 2004

EXHIBIT NO. _____ (JBS-4)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 2 OF 13

FMC EnergySystems
FMC Material Handling Systems

BUDGETARY Quotation

Energy Ventures Analysis
March 16, 2004

Executive Summary

Special Conditions and Notes

- Customer responsible for all appropriate permitting and licensing as required
- System designed for maximum 2500TPH (Main) & 1500TPH (Secondary) handling Clean Coal consisting of 50 # per cu. Ft. density.
- Customer to provide all electrical unless noted otherwise in following bid
- Customer responsible for all taxes
- Customer to provide 460/60 line voltage to System.
- Modifications to the original quotation by Customer, including scope of supply, component brand decisions, etc may impact quotation price shown
- No allowance has been made for environmental mitigation, abatement, permitting, licensing or any associated cost required for the successful execution of this project.
- FMC Technologies, Inc reserves the right to suspend the project or supply based upon untimely customer payments, customer and or weather delays or other force majeure events.

General Scope of Work

Design, engineer, supply, deliver, install Clean Coal Handling conveyor system consisting of two (2) Conveyors: Main & Secondary. This includes: Conveyor Truss frames, Head frames, tail frames, gravity Take-up unit. A small Transfer Tower structure for product transfer from C1 to C2 has been included. All items as listed below with furnished documentation for same, including relevant Data Sheets, maintenance documents and applicable drawings.

EXHIBIT NO. _____ (JBS-4)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 3 OF 13

FMC EnergySystems

FMC Material Handling Systems

This budgetary quote is based solely on the limited information provided by Energy Venture Analysis, which is limited to:

- Clean Coal – 50#/cuft
- Horizontal Conveyor, 18' height through-out entire length
- Walkway one side
- Covers full length
- Bent Spans 30'
- Lighting full length
- (2) drive-ways
- Gravity Take-ups

Additions to specifications or beyond scope of supply may impact budgetary pricing.

Supply Included:

ITEM #1 MAIN 2500TPH One (1) 3300' 54"W 18' high Truss Conveyor equipped with:

- Tail section to include a small skirt-board hopper loading section.
- Horizontal Truss with 18' Bents spaced per design requirements (30' maximum span).
- Dual 200HP drives (Dodge), FTI LinkBelt Pulleys & bearings, Dodge reducers.
- FTI DirtWhacker belt scrappers (primary & secondary)
- Non-contact surfaces painted FP3 industrial single-coat enamel (Color TBD)
- Full 180 degree covers throughout entire length. Exception is one(1) 30' section of tubular to span road.
- 32" Walkway single side, entire length.
- Lighting posts full length per design/code requirements.
- Goodyear belting. 600 PIW 3 ply to perform task.
- Manual Belt take-up adjustment (Gravity Side Tower).
- FTI C-series Idlers. Rolls 5' on 10' flat return.
- ABB Drive Starter Package.
- Hardware package.

EXCLUSIONS: Foundation design & supply. OPTIONED BELOW
Any Head discharge boxes, etc.

ITEM #2 SECONDARY 1500TPH One(1) 2100' 42"W 18' high Truss Conveyor equipped with:

- Tail section to include a small skirt-board hopper loading section.

EXHIBIT NO. _____ (JBS-4)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 4 OF 13

FMC EnergySystems
FMC Material Handling Systems

- Horizontal Truss with 18' Bents spaced per design requirements (30' maximum span).
- Dual 125HP drives (Dodge), FTI LinkBelt Pulleys & bearings, Dodge reducers.
- FTI DirtWhacker belt scrappers (primary & secondary)
- Non-contact surfaces painted FP3 Industrial single-coat enamel (Color TBD)
- Full 180 degree covers throughout entire length. Exception is one(1) 30' section of tubular to span road.
- 32" Walkway single side, entire length.
- Lighting posts full length per design/code requirements.
- Goodyear belting. 375 PIW 3 ply to perform task.
- Manual Belt take-up adjustment (Gravity Side Tower).
- FTI C-series Idlers. Rolls 5' on 10' flat return.
- ABB Drive Starter Package
- Hardware package.

EXCLUSIONS: Foundation design & supply. OPTIONED BELOW
Any Head discharge boxes, etc.

ITEM #3 One (1) Lot of Engineering

- General Assembly design and Bill of Materials sufficient for Conveyor fabrication & installation.
- Includes Electrical design

Design Specifications and Criteria

Design & Material Data

Material	Clean Coal
Size of Material	Assume: 0-3"
Bulk density	50 lbs /cu. ft.

Operating Conditions
Continuous; 24/7; outside, typically dry environment, extreme service; Power supply by customer to be 460V/3 phase.

Supplier drawings
FMC Technologies, Inc. shall submit to Energy Venture Analysis AutoCAD drawings and other relevant design/specification information for approval within an acceptable timeframe from order entry date. Requested changes made prior to final approval will be

EXHIBIT NO. _____ (JBS-4)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 5 OF 13

FMC EnergySystems
FMC Material Handling Systems

discussed and if necessary the original quotation will be modified to reflect the change adders and/or deducts.

BUDGETARY Pricing Summary

NOTE: Pricing provided as Budgetary only. Exact pricing will require further scope development, specification review, and site analysis. Final pricing to occur prior to order acceptance.

Supply of Items # 1-3 (as defined in Scope of Supply) $ 5,851,000.00
BUDGETARY RANGE : +15% to -20% Customer to confirm supply.
($4,680,800 - $6,728,650)

Payment Terms:

Amt	Milestone	Timing
15%	Order Entry	(Immediate)
20%	General Arrangement drawings for approval	(Immediate)
25%	Major Component Procurement (Invoiced/ Itemized Monthly with Receipt documentation)	Net 30
30%	At Equipment Shipment (or ready for shipment, if Customer unable to receive) (Invoiced / Itemized Monthly)	Net 30
10%	At substantial completion (ready for production; (clean-up/punch-list items may still need to be addressed)	Net 30

FOB: Tupelo.MS
Delivery: Based upon Project Schedule developed at Order Receipt.

FMC EnergySystems
FMC Material Handling Systems

TERMS AND CONDITIONS

1. Prices And Payment

1.1. Payments are to be made in U.S funds. Unless otherwise specified all invoices are due net 30 days from date of Shipment. PRICES INVOICED WILL BE THOSE IN EFFECT AT TIME OF SHIPMENT. All prices are f.o.b. point of manufacture. Seller reserves the right to place a service charge on past due accounts at the highest rate permitted by law.

2. Warranty

Seller warrants that the goods delivered under this contract will be free from defect in material and workmanship for a period of 18 months from shipment or 12 months from installation, whichever is earlier. The sole remedy for breach of this warranty is the repair or replacement (at the option of Technologies) of the defective good, and Technologies will not be liable under this warranty for labor to remove or reinstall the good, for transportation or freight on the good or any replacement good, for heavy lift operations, for down time or for any other costs. Goods which Technologies determines to have been subjected to abuse or other improper use will not be entitled to the benefits of any warranty by Technologies. THERE ARE NO OTHER WARRANTIES, STATUTORY, AT LAW, EXPRESS OR IMPLIED, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, WHICH EXTEND BEYOND THE FACE OF THIS AGREEMENT.

2.1. Seller does not in any manner whatsoever warrant seals or packing materials in equipment handling special or corrosive fluids operating at unusual temperatures or pressures, improper lubrication, misapplication, lighting, improper voltage supply, deterioration by chemical action, detrimental well conditions, and wear caused by the presence of abrasive materials, which do not constitute defects.

2.2. This warranty shall not apply to any equipment which has been subjected to misuse, neglect or accident, or has been altered or tampered with, or on which corrective work has been done without Seller's specific written, consent. Seller does not recommend and will not assume any responsibility for rebuilding, repairing, special plating, coating, welding, or heat treating done outside Seller's plant by or at the request of Buyer. Products not of Seller's manufacture, and included in Seller's proposal, and special plating, coatings or heat treatment applied to Seller's products are not warranted in any way by Seller but carry only the manufacturer's warranty, if any.

3. Limitation Of Remedy And Liability

3.1. Seller's liability, including that for breach of contract, negligence, strict liability in tort, or otherwise, for its products and Buyer's exclusive remedy is limited to (a) the repair or replacement (but not installation) of parts found defective by Seller, f.o.b. Seller's factory if returned to the factory for inspection, transportation charges paid, or (b) if in Seller's opinion repair or replacement will not remedy a claimed product deficiency, or if a product of Seller's manufacture does not comply with the description or specification set forth on Seller's Order Acknowledgment to repayment of any amount paid on the purchase price, cancellation of the order and acceptance of the product f.o.b. point of manufacture. However, if the product has been in use for a period in excess of 30 days, Seller reserves the right to make a reasonable depreciation charge for such use.

4. CONSEQUENTIAL DAMAGES DISCLAIMER
Neither party shall be liable to the other in contract or in tort, directly or under any indemnity, for loss profits or

FMC EnergySystems

FMC Material Handling Systems

for any indirect, special, or consequential damages, arising out of or related to this contract, including but not limited to loss or delay of production, reservoir loss/damage, environmental pollution damage, however same may be caused.

4.1. FURTHERMORE, SELLER EXPRESSLY DISCLAIMS ANY OBLIGATION OR LIABILITY FOR LABOR PERFORMED IN CONNECTION WITH INSTALLATION OF REPAIRED OR REPLACED PARTS OR FOR ANY OTHER EXPENSE, INJURY, LOSS OR DAMAGE TO PERSONS (INCLUDING DEATH) OR TO PROPERTY OR THINGS OF WHATSOEVER KIND OR NATURE..

5. DELAYS, FORCE MAJEURE, DEFAULTS & REMEDIES Seller has the right to suspend its performance or terminate the contract for non-payment of invoices. Seller shall have a reasonable time period in which to cure or otherwise remedy problems or defects prior to the Buyers right to either take-over performance of the work or to terminate the contract.

5.1. Seller shall not be liable to Buyer for any loss or damage suffered by Buyer directly or indirectly, as a result of Seller's failure to deliver or delay in delivering the equipment or failure to perform, or delay in performing, any other term or condition hereof, where such failure or delay is caused by fire, flood, natural disaster, labor trouble (including without limitation strike, slowdown and lockout), war, riot, civil disorder, embargo, government regulations or restrictions of any and all kinds, expropriation of plant by federal or state authority, interruption of or delay in transportation, power failure, inability to obtain materials and supplies, accident, explosion, act of God or other causes of like or different character beyond Seller's control and the time for delivery specified herein shall be extended during the continuance of such conditions and for a reasonable time thereafter.

6. Risk Of Loss

6.1. The risk of loss or destruction of, or damages to, the product shall be on Buyer after delivery of the product to Buyer or carrier, whichever first occurs.

7. Taxes

7.1. Buyer shall pay the amount of any federal, state, county or municipalities, sales, use compensating, intangibles, gross income or like tax applicable to this transaction which is now in effect or may hereafter become effective, but not including taxes payable upon Seller's net income

8. Returns

8.1. No material will be accepted for credit when returned without written permission from Seller's home office. All material accepted for credit is subject to Seller's normal restocking charge. No material will be accepted for credit after one year from date of shipment.

9. Special Products

9.1. Products incorporating variations from catalog items are considered special and are not subject to return or cancellation without charge.

10. Patented Process

FMC EnergySystems

FMC Material Handling Systems

10.1. The purchase of the product does not entitle Buyer to employ the same with any patented process owned by Sellers or others except where Buyer is expressly authorized to use such process.

11. Patent Infringement

11.1. Except in the case of articles, materials and designs furnished or sponsored by Buyer, Seller at its own expense, shall defend any suit brought against Buyer on the ground that use of the product for the intended purpose or purposes, as furnished by Seller infringes any United States patent in effect on the purchase date and shall pay the amount of any judgment that may be awarded against Buyer in any such suit provided and upon condition that Buyer shall have made all payments due under this Agreement and shall (a) promptly deliver to Seller all infringement notices and other papers received by or served upon Buyer, (b) permit Seller to take complete charge of the defense of such suit and compromise the same, if deemed advisable by Seller, and (c) assist in every reasonable way in the conduct of such defense. In the event that Buyer shall be enjoined by a court of competent jurisdiction from which no appeal can be taken, from selling or using the product for the intended purpose or purposes on the ground that such sale or use of the product infringes any such United States patent, or it is established to Seller's satisfaction, upon due investigation, that sale or use of the product infringes any such United States patent, Seller at its option may either (a) procure for Buyer a license to sell and/or use the product, (b) modify the product so as to make it non-infringing without seriously impairing its performance, (c) replace the product with a product that is substantially equal but non-infringing, or (d) accept the return of the product from Buyer, in which event Seller shall refund to Buyer the purchase price less depreciation at the rate of 15 percent per year (measured from the date Seller shipped the product). The foregoing sets forth Seller's entire liability to Buyer for patent infringement based on the possession, use or sale of the product by Buyer, it being understood and agreed that the aforesaid obligations of Seller do not extend to, and are not applicable in the case of any patent infringement claims directed to a method or a process. Buyer agrees to defend and indemnify Seller against any claims or liabilities for, or by reason of, any alleged patent infringement arising from the manufacture or sale of all or any part of the product which is manufactured in accordance with the specifications furnished by Buyer.

12. Transfer of Title

12.1. Title to the products supplied hereunder, to any and all accessories hereto and substitutions therefor, shall remain in Seller as a purchase money security interest (including the right of repossession) until Buyer has completed payment of the purchase price, plus accrued interest, if any, and fully performed all of the terms and conditions hereof.

13. Indemnification

13.1. It is understood that Seller has relied upon data furnished by and on behalf of Buyer with respect to the safety aspects of the products supplied hereunder and/or representations by or on behalf of Buyer that such products will not be applied or used by Buyer or its customers in such a way as to detract materially from their safety in use, including, without limitation, in the manufacture of a product of which Seller's products will be a component and that it is Buyer's responsibility to assure that such products, when installed and put in use, will be in compliance with safety requirements fixed by applicable law and will be otherwise legally adequate to safeguard against injuries to persons or property. BUYER HEREBY AGREES TO INDEMNIFY, HOLD HARMLESS AND DEFEND SELLER, AND ITS DIRECTORS, OFFICERS, EMPLOYEES AND AGENTS AGAINST ANY AND ALL LOSSES, COST, DAMAGES, CLAIMS, LIABILITIES OR EXPENSES, INCLUDING, BUT NOT LIMITED TO, REASONABLE ATTORNEYS' FEES, ARISING OUT OF OR RESULTING FROM ANY INJURY TO ANY PERSON OR DAMAGE TO ANY PROPERTY CAUSED BY THE INADEQUACY FOR THE BUYER'S INTENDED USE OF THE SAFETY FEATURES, DEVICES OR CHARACTERISTICS OF THE PRODUCTS SPECIFIED HEREIN, OR IN THE INSTALLATION, USE OR OPERATION OF SUCH PRODUCTS, EXCEPT CLAIMS

FMC EnergySystems

FMC Material Handling Systems

SOLELY FOR REPAIR OR REPLACEMENT OF DEFECTIVE PARTS COVERED BY THE WARRANTY SET FORTH IN PARAGRAPH 2 HEREOF.

15.2. Customer shall release, defend, hold harmless and indemnify Technologies and its subcontractors against personal injury suits by employees of customer, its affiliates and its other contractors arising out of the Work. Likewise, Technologies shall release, defend, hold harmless and indemnify customer, its affiliates and its other contractors against personal injury suits by employees of Technologies and its subcontractors arising out of the Work.

13.3. "The parties hereby agree that the indemnities each party provides under this contract shall be supported by equal amounts of liability insurance."

14. Written Acceptance

14.1. Any purchase order received by Seller shall be construed to be a written acceptance of this quotation and offer to sell. Buyer may purchase equipment offered in this quotation only on the Seller's terms and conditions included in this quotation. Buyer may choose to issue a purchase order to identify equipment for purchase and for its own internal purposes. However, unless accepted in writing by an authorized employee of FMC, any terms and conditions contained in any purchase order, acceptance, acknowledgment, or other document Buyer submits to FMC which are inconsistent with, different from, or additional to the terms and conditions of this quotation will be null and void, and in lieu thereof the terms and conditions of this quotation shall control.

15. Additional Charges

15.1. If substitute or additional equipment, or repair parts, are purchased by Buyer from Seller, the terms and conditions of the contract created upon acceptance of this offer to sell shall be applicable thereto, the same as if such substitute or additional equipment or repair parts had been originally purchased hereunder.

16. Termination By Seller

16.1. Seller reserves the right to terminate the contract created upon acceptance of this offer if governmental controls do not permit the Seller to perform this Agreement.

17. Repudiation By Buyer

17.1. Buyer may not terminate the contract created upon acceptance of this offer to sell without Seller's prior written consent. If Buyer shall attempt to terminate without Seller's consent or shall otherwise repudiate this contract, Buyer shall be liable to Seller for all of Seller's costs and other commitments incurred to date of repudiation, plus Seller's incidental damages, and the profit Seller would have made from full performance of this contract.

18. General

18.1.1. No modification hereof shall be binding upon Seller unless such modification is in writing signed by a duly authorized representative of Seller.

FMC EnergySystems

FMC Material Handling Systems

18.1.2. If any part hereof is contrary to, prohibited by, or deemed invalid under applicable laws or regulations, such provision shall be deemed inapplicable and omitted to the extent contrary, prohibited or invalid, but the remainder shall not be less invalid and shall be given full force and effect., and

18.1.3. The entire understanding between the parties hereto is set forth herein and any promises, representations, warranties or guarantees not herein contained shall have no force and effect unless in writing signed by Seller and Buyer.

19. POLLUTION

Seller shall release, defend, indemnify and hold harmless Buyer, its affiliates and its other contractors for pollution or contamination arising above the surface of the land or water and which escapes or emanates directly from Technologies' equipment which equipment is wholly within Technologies' control. And Buyer shall release, defend, indemnify and hold harmless Seller for all other pollution not specifically assumed by Seller.

20. LIMITATION OF LIABILITY

The total aggregate liability under any contract for all Seller exposures (e.g., pollution, warranty, indemnification, or liquidating damages) may not exceed the total contract value or $25,000,000 dollars whichever is less.

21. DISPUTE RESOLUTION

In the event of any dispute, or difference arising out of, or relating to this contract, or the breach thereof, the parties shall use their best endeavors to settle such dispute, or difference by consulting and negotiating with each other, in good faith, and understanding of their mutual interests, to reach a just and equitable resolution which is satisfactory to the parties. In the event the parties cannot resolve such dispute up to the level of each party's Division Manager or President within ninety (90) days after a party's initial notice of the dispute, the parties shall be free to litigate their differences in accordance with Mississippi law and shall submit to this forum.

22. CHOICE OF LAW & FORUM

In the event of a contract dispute, Buyer and Seller agree to apply the Mississippi laws without regard to conflicts of laws rules, and litigate in the state or federal courts of the Seller.

23. SUCCESSORS AND ASSIGNS

This contract shall inure to the benefit of and bind any successor in interest to a party to this contract. This contract may not be assigned by either party without the prior written consent of the other party. Notwithstanding the foregoing, Seller may assign this contract to any successor in interest to that portion of FTI Technologies' business involved in the subject matter of this contract.

24. RAW MATERIAL SURCHARGE

The Seller may pass on a price increase due to an industry wide raw material surcharge. This increase will be limited to cover the actual cost increase, which is beyond the control of the Seller. Raw materials surcharges will be invoiced to the customer separately with adequate documentation to support the surcharge.

FMC EnergySystems
FMC Material Handling Systems

Phone. 662-869-7520

EXHIBIT NO. _____ (JBS-4)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 12 OF 13

Fax. 888-580-8597

Reply-To: <rbeach@continentalconveyor.com>
From: "Russell Beach" <rbeach@continentalconveyor.com>
To: <stamberg@evainc.com>
Cc: <jsmothers@continentalconveyor.com>,
<rstough@continentalconveyor.com>,
<mroberts@continentalconveyor.com>,
<runrad@hotmail.com>,
<bill@tiscotampa.com>,
<njmadison@continentalconveyor.com>
Subject: Budgets for Big Bend
Date: Fri, 26 Mar 2004 14:48:21 -0600
Organization: Continental Conveyor
X-Mailer: Microsoft Outlook, Build 10.0.2627
Importance: Normal
X-pstn-levels: (S:99.90000/99.90000 R:95.9108 P:95.9108 M:99.4056 C:79.6348)
X-pstn-settings: 5 (2.0000:8.0000) r p m C
X-pstn-addresses: from <rbeach@continentalconveyor.com> [3624/154]

John,

Attached for your use is budget pricing for the two conveyors we discussed at the Big Ben Power Plant.

Please call if you need more information .

Best Regards,

Russell Beach, CET
Estimator/Engineered Systems

Big Ben Budget Conv Options 0326.doc

EXHIBIT NO. _____ (JBS-4)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 13 OF 13

CONTINENTAL CONVEYOR
& EQUIPMENT COMPANY
The World Leader in Conveyors and Conveyor Technology

433 Industrial Drive
Post Office Box 400
Winfield, Alabama 35594-0400
Telephone: 205/487-8492
Fax: 205/487-4233
E-mail: info@continentalconveyor.com

SALES OFFICES: JASPER, AL – BOSTON, MA – CORBIN, KY – DELTA, BRITISH COLUMBIA – GASSAWAY, WV – HARRISONVILLE, MO – HOUSTON, TX – LAKEWOOD, CO – LOS ANGELES, CA – NEW YORK, NY – OAK HILL, WV
OHAWA, ON – PHILADELPHIA, PA – PITTSBURGH, PA – PORTLAND, OR – PUEBLA, MEXICO – SALT LAKE CITY, UT – SALYERSVILLE, KY – TAMPA, FL – WINFIELD, AL

March 26, 2004

Energy Ventures Analysis, Inc.
1901 N Moore St, Suite 1200
Arlington VA 22209-1706

Attention: Mr. John Stamberg

Subject: Budget Pricing for the Big Ben Plant

Dear John:

Continental Conveyor is pleased to provide the following budget pricing per your request for the Big Ben Plant.

1. One (1) 54" B.W. Conveyor with 3,300 foot horizontal pulley centers and with a lift of 15 ft. to handle 2500 STPH of 50 PCF coal (3" X 0 lump) operating at a speed of approximately 725 FPM.

Terminals include one (1) 450 HP head end drive, motor, belt scrapers, discharge hood, tail loading hopper, impact idlers, pulley outfits, bearings and gravity take-up.

Intermediate structure (3,290 LF) includes truss with belt covers, pull cord and switches, walkway one side, idlers, belt, average span length of 80 feet and 42 bents at 18'-0 height.

Your budget price, F.O.B. Factory, Winfield, Alabama, is: **$1,953,000.00.**
Estimated erection cost is .....: **$ 780,000.00.**

$2,733,000
3300 LF

EXHIBIT NO. _____ (JBS-5)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 1 OF 2

2. One (1) 42" B.W. Conveyor with 2,100 foot horizontal pulley centers and with a lift of 15 ft. to handle 2500 STPH of 50 PCF coal (3" X 0 lump) operating at a speed of approximately 725 FPM.

Terminals include one (1) 200 HP head end drive, motor, belt scrapers, discharge hood, tail loading hopper, impact idlers, pulley outfits, bearings and gravity take-up.

Intermediate structure (2,090 LF) includes truss with belt covers, pull cord and switches, walkway one side, idlers, belt, average span length of 80 feet and 26 bents at 18'-0 height.

Your budget price, F.O.B. Factory, Winfield, Alabama, is: **$1,150,000.00.**
Estimated erection cost is .....: **$ 460,000.00.**

The above prices do not include MCC's and controls, etc.

Please call with any questions or if you need more information.

Best regards,

CONTINENTAL CONVEYOR & EQUIPMENT COMPANY

Russell Beach, CET
Estimator/Engineered Systems

cc: Jim Smothers
Ron Stough
Mike Roberts
Bill Taylor

EXHIBIT NO. _____ (JBS-5)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 2 OF 2

Exhibit ____(JBS-6)

Rapid Discharge Pit and Conveyor – EVA Estimates

EXHIBIT NO. _____ (JBS-6)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 1 OF 12

Rapid Unloading Pit & Conveyor

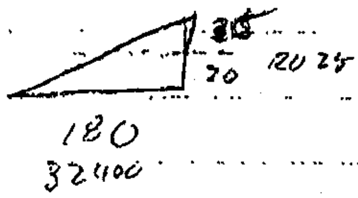
Non Concrete

Conveyor	190,052	
Hoppers	96000	4 each
Gates	96,00	4 each
Transfers House	230,000	
	802,104	
Dewatering	109,264	
Sheet Pilings	187,264	
Excavation	2000	
Concrete	187,130	
	1,287,762	
	X 1.061	
	X 1.164	
	$1,590,391	

EXHIBIT NO. ____ (JBS-6)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 2 OF 12

Rapid Unloading System

Rapid Discharge Conveyor



Conveyor @ 190'

Shuttle Conv $\frac{550,150}{550}$ x 190 = 190,052

190,052

Hoppers 96,000
2 @ 48,000

2 Feeders 96,000
2 @ 48000

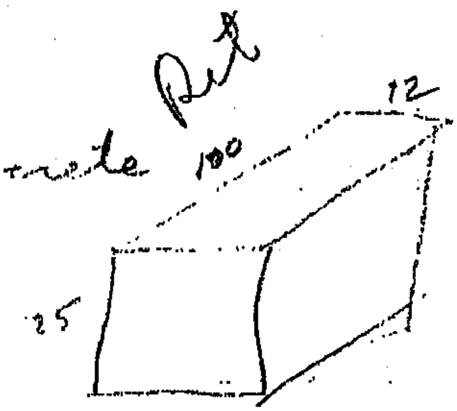
572,104

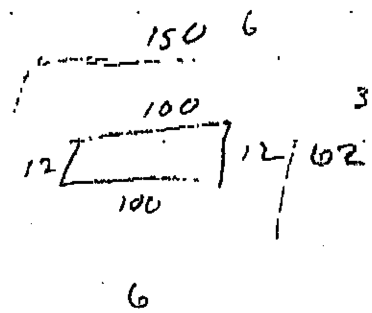
Transfer Items 230,000

Non Concrete 802,104

EXHIBIT NO. _____ (JBS-6)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 3 OF 12

Concrete Pit





156
150
62
62
424

Dewaterings

by Well Points

$\frac{163}{LF/Mo}$ × 424 × ~~100~~ — $70,000

33.50 × 30 ft deep × 18 weeks = $18,090

$120/day Pump × 30 day — 21,600

109,690

Sheet Piling Left in Place

40' @ 38#/ft²

100 + 100 + 12 + 12 = 224 × 40

= 8960 ft²

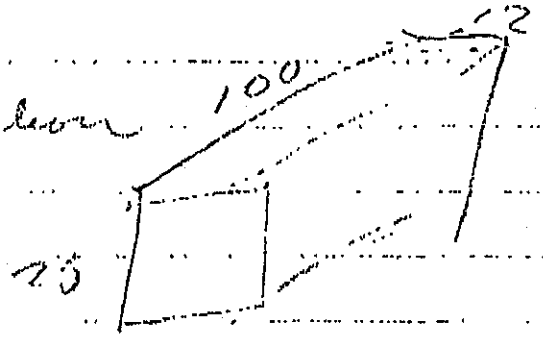
38#/ft² × 8960 = 340,480 # =

170.24 tons × 1,100 187,264

EXHIBIT NO. ______ (JBS-6)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 4 OF 12

Excavation

Excavation



$\frac{12 \times 100 \times 25}{27} = 1111 \text{ yd}^3 \times 1.2\% \quad \$2000$

2 yd Bucket

Backhoe

EXHIBIT NO. _____ (JBS-6)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 5 OF 12

Concrete 25 x 12 x 2 600 ft²

100 x 25 x 2 5000

5600

Form Work

10.55 x 5600 $59,080

ft² contact 1 time

Concrete

$197 /yd³

100

25 x 2 ~~400~~

length 2000 x 2 = 5000 ft²

~~[illegible]~~ end 12 x 25 x 2 = 600

sides

bottom 2500

8100 ft² x 1½ ft = 12,150 ft³

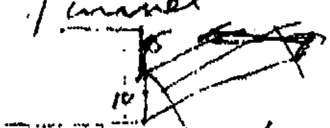
27 27

450

$88650

~~147,730~~

Tunnel



100 ft x 9' x 4 = 3600 x 1.5 = 5400 ft³

27

100

18 - 25' x 4 =

200

x 197

39,400

187,130

EXHIBIT NO. _____ (JBS-6)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 6 OF 12

033 | Cast-In-Place Concrete

033 100 | Structural Concrete

Ref	No.	Description	Crew	Daily Output	Labor-Hours	Unit	1999 Bare Costs Mat.	1999 Bare Costs Labor	1999 Bare Costs Equip.	1999 Bare Costs Total	Total Incl. O&P	Ref
130	3800	Footings, spread under 1 C.Y.	C-14C	38.07	2.942	C.Y.	89.50	77	.97	167.47	223	130
	3850	Over 5 C.Y.		81.04	1.382		82.50	36	.46	118.96	149	
	3900	Footings, strip, 18" x 9", plain		41.04	2.729		80.50	71.50	.90	152.90	204	
	3950	36" x 12", reinforced		61.55	1.820		83	47.50	.60	131.10	168	
	4000	Foundation mat, under 10 C.Y.		38.67	2.896		113	75.50	.96	189.46	247	
	4050	Over 20 C.Y.		56.40	1.986		101	52	.66	153.66	194	
	4200	Grade walls, 8" thick, 8' high	C-14D	45.83	4.364		97.50	119	14.90	231.40	310	
	4250	14' high		27.26	7.337		124	199	25	348	480	
	4260	12" thick, 8' high		64.32	3.109		89.50	84.50	10.65	184.65	244	
	4270	14' high		40.01	4.999		99.50	136	17.10	252.60	345	
	4300	15" thick, 8' high		80.02	2.499		85.50	68	8.55	162.05	210	
	4350	12' high		51.26	3.902		89	106	13.35	208.35	281	
	4500	18' high		48.85	4.094		99	111	14	224	300	
	4520	Handicap access ramp, railing both sides, 3' wide	C-14H	14.58	3.292	L.F.	94.50	89	2.57	186.07	248	
	4525	5' wide		12.22	3.928		108	106	3.06	217.06	290	
	4530	With cheek walls and rails both sides, 3' wide		8.55	5.614		96.50	151	4.38	251.88	350	
	4535	5' wide		7.31	6.566		97	177	5.10	279.10	395	
	4650	Slab on grade, not including finish, 4" thick	C-14E	60.75	1.449	C.Y.	73.50	39	.62	113.12	145	
	4700	6" thick	•	92	.957	•	70.50	25.50	.41	96.41	120	
	4751	Slab on grade, incl. troweled finish, not incl. forms										
	4760	or reinforcing, over 10,000 S.F., 4" thick slab	C-14F	3,425	.021	S.F.	.79	.52	.01	1.32	1.67	
	4820	6" thick slab		3,350	.021		1.16	.53	.01	1.70	2.09	
	4840	8" thick slab		3,184	.023		1.59	.56	.01	2.16	2.60	
	4900	12" thick slab		2,734	.026		2.38	.65	.01	3.04	3.63	
	4950	15" thick slab		2,505	.029		2.99	.71	.01	3.71	4.39	
	5000	Slab on grade, incl. textured finish, not incl. forms										
	5001	or reinforcing, 4" thick slab	C-14G	2,873	.019	S.F.	.79	.48	.01	1.28	1.61	
	5010	6" thick		2,590	.022		1.24	.53	.01	1.78	2.18	
	5020	8" thick		2,320	.024		1.62	.59	.02	2.23	2.70	
	5200	Lift slab in place above the foundation, incl. forms,										
	5210	reinforcing, concrete and columns, minimum	C-14B	2,113	.098	S.F.	4.74	2.69	.32	7.75	9.85	
	5250	Average		1,650	.126		5.20	3.45	.41	9.06	11.70	
	5300	Maximum		1,500	.139		5.80	3.79	.45	10.04	12.90	
	5500	Lightweight, ready mix, including screed finish only,										
	5510	not including forms or reinforcing										
	5550	1:4 for structural roof decks	C-14B	260	.800	C.Y.	91.50	22	2.62	116.12	139	
	5600	1:6 for ground slab with radiant heat	C-14F	92	.783		86.50	19.40	.41	106.31	125	
	5650	1:3.2 with sand aggregate, roof deck	C-14B	260	.800		91.50	22	2.62	116.12	139	
	5700	Ground slab	C-14F	107	.673		91.50	16.70	.35	108.55	127	
	5900	Pile caps, incl. forms and reinf., sq. or rect., under 5 C.Y.	C-14C	54.14	2.069		86	54	.68	140.68	182	
	5950	Over 10 C.Y.		75	1.493		83.50	39	.49	122.99	155	
	6000	Triangular or hexagonal, under 5 C.Y.		53	2.113		79	55	.70	134.70	176	
	6050	Over 10 C.Y.		85	1.318		83.50	34.50	.43	118.43	147	
	6200	Retaining walls, gravity, 4' high see division 022-708	C-14D	66.20	3.021		81	82	10.35	173.35	230	
	6250	10' high		125	1.600		72	43.50	5.45	120.95	154	
	6300	Cantilever, level backfill loading, 8' high		70	2.857		88	77.50	9.75	175.25	241	
	6350	16' high		91	2.198		85.50	59.50	7.50	152.50	197	
	6800	Stairs, not including safety treads, free standing, 3'-6" wide	C-14H	83	.578	LF Nose	5.75	15.60	.45	21.80	32	
	6850	Cast on ground		125	.384	•	4.05	10.35	.30	14.70	21	
	7000	Stair landings, free standing		200	.240	S.F.	2.25	6.50	.19	8.94	13	
	7050	Cast on ground		475	.101	•	1.30	2.73	.08	4.11	5.85	
4	0010	**CURING** Burlap, 4 uses assumed, 7.5 oz.	2 Clab	55	.291	C.S.F.	2.55	6.25		8.80	12.00	134
	0100	12 oz.		55	.291		3.74	6.25		9.99	13.90	
	0200	Waterproof curing paper, 2 ply, reinforced		70	.229		4.71	4.90		9.61	12.90	
	0300	Sprayed membrane curing compound		95	.168		2.42	3.61		6.03	8.35	

EXHIBIT NO. ______ (JBS-6)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 7 OF 12

031 | Concrete Formwork

031 100 | Struct C.I.P. Formwork

			CREW	DAILY OUTPUT	LABOR-HOURS	UNIT	1999 BARE COSTS MAT.	LABOR	EQUIP.	TOTAL	TOTAL INCL O&P
182	2150	4 use, below grade	C-2	435	110	SFCA	.62	2.94		3.56	5.30
	2400	Over 8' to 16' high, 1 use		280	.171		3.60	4.57		8.17	11.15
	2450	2 use		345	.139		1.16	3.71		4.87	7.15
	2500	3 use		375	.128		.83	3.41		4.24	6.25
	2550	4 use		395	.122		.68	3.24		3.92	5.85
	2700	Over 16' high, 1 use		235	.204		2.34	5.45		7.79	11.10
	2750	2 use		290	.166		1.29	4.41		5.70	8.35
	2800	3 use		315	.152		.93	4.06		4.99	7.45
	2850	4 use		330	.145		.76	3.88		4.64	6.95
	3000	For architectural finish, add		1,820	.026		.58	.70		1.28	1.75
	4000	Radial wall forms, smooth curved, 1 use		245	.196		2.30	5.20		7.50	10.75
	4050	2 use		300	.160		1.26	4.27		5.53	8.10
	4100	3 use		325	.148		.92	3.94		4.86	7.20
	4150	4 use		335	.143		.75	3.82		4.57	6.80
	4200	Wall forms, smooth curved, below grade, job built plyform, 1 use		225	.213		2.78	5.70		8.48	12
	4210	2 use		225	.213		1.54	5.70		7.24	10.65
	4220	3 use		225	.213		1.25	5.70		6.95	10.30
	4230	4 use		225	.213		.90	5.70		6.60	9.95
	4300	Curved, with 2' chords, 1 use		290	.166		1.89	4.41		6.30	9
	4350	2 use		355	.135		1.04	3.60		4.64	6.80
	4400	3 use		385	.125		.75	3.32		4.07	6.10
	4450	4 use		400	.120		.61	3.20		3.81	5.70
	4500	Over 8' high, 1 use		290	.166		.86	4.41		5.27	7.90
	4525	2 use		355	.135		.48	3.60		4.08	6.15
	4550	3 use		385	.125		.35	3.32		3.67	5.65
	4575	4 use		400	.120		.29	3.20		3.49	5.35
	4600	Retaining wall forms, battered, to 8' high, 1 use		300	.160		1.78	4.27		6.05	8.65
	4650	2 use		355	.135		.98	3.60		4.58	6.75
	4700	3 use		375	.128		.71	3.41		4.12	6.15
	4750	4 use		390	.123		.54	3.28		3.82	5.70
	4900	Over 8' to 16' high, 1 use		240	.200		1.94	5.35		7.29	10.55
	4950	2 use		295	.163		1.07	4.34		5.41	7.95
	5000	3 use		305	.157		.78	4.20		4.98	7.45
	5050	4 use		320	.150		.63	4		4.63	7
	5100	Retaining wall form, smooth curve, 1 use		200	.240		2.89	6.40		9.29	13.25
	5120	2 use		235	.204		1.59	5.45		7.04	10.30
	5130	3 use		250	.192		1.16	5.10		6.26	9.30
	5140	4 use		260	.185		.95	4.92		5.87	8.80
	5500	For gang wall forms; 192 S.F. sections, deduct					10%	10%			
	5550	384 S.F. sections, deduct					20%	20%			
	5750	Liners for forms (add to wall forms), A.B.S. plastic									
	5800	Aged wood, 4" wide, 1 use	1 Carp	250	.032	SFCA	4.75	.87		5.62	6.55
	5820	2 use		400	.020		2.63	.55		3.18	3.75
	5840	4 use		750	.011		1.60	.29		1.89	2.22
	5900	Fractured rope rib, 1 use		250	.032		7.40	.87		8.27	9.50
	6000	4 use		750	.011		2.45	.29		2.74	3.16
	6100	Ribbed look, 1/2" & 3/4" deep, 1 use		300	.027		5.15	.73		5.88	6.80
	6200	4 use		800	.010		1.65	.27		1.92	2.25
	6300	Rustic, brick pattern, 1 use		250	.032		4.80	.87		5.67	6.65
	6400	4 use		750	.011		1.60	.29		1.89	2.22
	6500	Striated, random, 3/8" x 3/8" deep, 1 use		300	.027		5.10	.73		5.83	6.75
	6600	4 use		800	.010		1.65	.27		1.92	2.25
	6800	Radiation strips, A.B.S. plastic, 2 piece snap-on									
	6850	1" deep x 1-3/8" wide, 1 use	C-2	400	.120	L.F.	3.75	3.20		6.95	9.20
	6900	2 use		600	.080		2.10	2.13		4.23	5.65
	6950	4 use		800	.060		1.25	1.60		2.85	3.90

022 | Earthwork

022 200 | Excav./Backfill/Compact.

		CREW	DAILY OUTPUT	LABOR-HOURS	UNIT	1999 BARE COSTS MAT.	LABOR	EQUIP.	TOTAL	TOTAL INCL. O&P	
2800	Boulders under 1/2 C.Y., loaded on truck, no hauling	B-100	80	.150	C.Y.		3.91	6.40	10.31	13	234
2900	Boulders, drilled, blasted	B-47	100	.240	"	1.60	5.75	6.20	13.55	17.50	
3100	Jackhammer operators with foreman compressor, air tools	B-9	1	40	Day		875	180	1,055	1,575	
3300	Track drill, compressor, operator and foreman	B-47	1	24	"		575	620	1,195	1,575	
3500	Blasting caps				Ea.	3			3	3.30	
3900	Blasting mats, rent, for first day					90			90	99	
4000	For added day					30			30	33	
4200	Preblast survey for 6 room house, individual lot, minimum	A-6	2.40	6.667			171		171	260	
4300	Maximum	"	1.35	11.852			305		305	460	
4500	City block within zone of influence, minimum	A-8	26,200	.001	S.F.		.03		.03	.05	
4600	Maximum	"	15,100	.002	"		.05		.05	.08	
5000	Excavate and load boulders, less than 0.5 C.Y.	B-10T	80	.150	C.Y.		3.91	5.65	9.56	12.20	
5020	0.5 C.Y. to 1 C.Y.	B-10U	100	.120			3.13	9.25	12.38	15	
5200	Excavate and load blasted rock, 3 C.Y. power shovel	B-12T	1,530	.010			.28	.80	1.08	1.30	
5400	Haul boulders, 25 ton off highway dump, 1 mile round trip	B-34E	330	.024			.51	2.13	2.66	3.15	
5420	2 mile round trip		275	.029			.64	2.54	3.18	3.78	
5440	3 mile round trip		225	.036			.79	3.11	3.90	4.62	
5460	4 mile round trip		200	.040			.88	3.50	4.38	5.20	
5600	Bury boulders on site, less than 0.5 C.Y., 300 H.P. dozer										
5620	150' haul	B-10M	310	.039	C.Y.		1.01	3.65	4.66	5.55	
5640	300' haul		210	.057			1.49	5.40	6.89	8.20	
5800	0.5 to 1 C.Y., 300 H.P. dozer, 150' haul		300	.040			1.04	3.77	4.81	5.75	
5820	300' haul		200	.060			1.56	5.65	7.21	8.60	
010	EXCAVATING, BULK, BANK MEASURE Common earth piled (n022-240)										238
020	For loading onto trucks, add								15%	15%	
050	For mobilization and demobilization, see division 022-274 (n022-250)										
100	For hauling, see division 022-266										
200	Backhoe, hydraulic, crawler mtd., 1 C.Y. cap. = 75 C.Y./hr.	B-12A	600	.027	C.Y.		.71	.91	1.62	2.08	
250	1-1/2 C.Y. cap. = 100 C.Y./hr.	B-12B	800	.020			.53	.89	1.42	1.79	
260	2 C.Y. cap. = 130 C.Y./hr.	B-12C	1,040	.015			.41	.98	1.39	1.71	
270	3 C.Y. cap. = 160 C.Y./hr.	B-12D	1,280	.013			.33	1.68	2.01	2.36	
310	Wheel mounted, 1/2 C.Y. cap. = 30 C.Y./hr.	B-12E	240	.067			1.78	1.40	3.18	4.25	
360	3/4 C.Y. cap. = 45 C.Y./hr.	B-12F	360	.044			1.19	1.25	2.44	3.18	
400	Clamshell, 1/2 C.Y. cap. = 20 C.Y./hr.	B-12G	160	.100			2.67	3.26	5.93	7.65	
450	1 C.Y. cap. = 35 C.Y./hr.	B-12H	280	.057			1.53	2.05	3.58	4.57	
500	Dragline, 1/2 C.Y. cap. = 30 C.Y./hr.	B-12I	240	.067			1.78	2.19	3.97	5.10	
510	3/4 C.Y. cap. = 35 C.Y./hr.	"	280	.057			1.53	1.88	3.41	4.38	
540	1 1/2 C.Y. cap. = 65 C.Y./hr.	B-12P	520	.031			.82	1.45	2.27	2.84	
600	3 C.Y. cap. = 112 C.Y./hr.	B-12V	900	.018			.47	1.12	1.59	1.96	
700	Front end loader, track mtd., 1 1/2 C.Y. cap. = 70 C.Y./hr.	B-10N	560	.021			.56	.63	1.19	1.55	
720	2-1/2 C.Y. cap. = 95 C.Y./hr.	B-10O	760	.016			.41	.67	1.08	1.37	
740	3 C.Y. cap. = 130 C.Y./hr.	B-10P	1,040	.012			.30	.83	1.13	1.38	
760	5 C.Y. cap. = 160 C.Y./hr.	B-10Q	1,280	.009			.24	.89	1.13	1.36	
800	Wheel mounted, 3/4 C.Y. cap. = 45 C.Y./hr.	B-10R	360	.033			.87	.68	1.55	2.05	
820	1-1/2 C.Y. cap. = 80 C.Y./hr.	B-10S	640	.019			.49	.50	.99	1.30	
840	2-1/4 C.Y. cap. = 100 C.Y./hr.	B-10T	800	.015			.39	.56	.95	1.22	
860	3 C.Y. cap. = 140 C.Y./hr.	"	1,120	.011			.28	.40	.68	.87	
880	5 C.Y. cap. = 185 C.Y./hr.	B-10U	1,480	.008			.21	.63	.84	1.01	
900	Hydraulic excavator, truck mtd., 1/2 C.Y. = 30 C.Y./hr.	B-12J	240	.067			1.78	2.65	4.43	5.65	
	48 inch bucket, 1 C.Y. = 45 C.Y./hr.	B-12K	360	.044			1.19	2.24	3.43	4.27	
	Shovel, 1/2 C.Y. capacity = 55 C.Y./hr.	B-12L	440	.036			.97	1.20	2.17	2.80	
	3/4 C.Y. capacity = 85 C.Y./hr.	B-12M	680	.024			.63	.87	1.50	1.92	
	1 C.Y. capacity = 120 C.Y./hr.	B-12N	960	.017			.45	.66	1.11	1.41	
	1-1/2 C.Y. capacity = 160 C.Y./hr.	B-12O	1,280	.013			.33	.68	1.01	1.26	
	3 C.Y. cap. = 250 C.Y./hr.	B-12T	2,000	.008			.21	.61	.82	1.01	

EXHIBIT NO. (JBS-6)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 9 OF 12

021 | Site Preparation & Excavation Support

021 610 | Sheet Piling

			CREW	DAILY OUTPUT	LABOR-HOURS	UNIT	1999 BARE COSTS MAT.	LABOR	EQUIP.	TOTAL	TOTAL INCL O&P	
614	0010	SHEET PILING Steel, not incl. wales, 22 psf, 15' excav., left in place	B-40	10.81	5.920	Ton	795	163	178	1,136	1,350	614
	0100	Drive, extract & salvage		6	10.667		211	294	320	825	1,075	
	0300	20' deep excavation, 27 psf, left in place R021-610		12.95	4.942		795	136	149	1,080	1,275	
	0400	Drive, extract & salvage		6.55	9.771		211	270	294	775	1,000	
	0600	25' deep excavation, 38 psf, left in place R021-620		19	3.368		795	93	101	989	1,150	
	0700	Drive, extract & salvage		10.50	6.095		211	168	183	562	710	
	0900	40' deep excavation, 38 psf, left in place		21.20	3.019		795	83.50	90.50	969	1,100	
	1000	Drive, extract & salvage		12.25	5.224		211	144	157	512	645	
	1200	15' deep excavation, 22 psf, left in place		983	.065	S.F.	9.25	1.80	1.96	13.01	15.30	
	1300	Drive, extract & salvage		656	.098		2.37	2.09	2.93	7.09	10.30	
	1500	20' deep excavation, 27 psf, left in place		960	.067		11.60	1.84	2	15.44	18.05	
	1600	Drive, extract & salvage		640	.100		3.08	2.76	3.01	8.85	11.25	
	1800	25' deep excavation, 38 psf, left in place		1,000	.064		17.10	1.77	1.92	20.79	24	
	1900	Drive, extract & salvage		670	.096		4.22	2.64	2.87	9.73	12.15	
	2100	Rent steel sheet piling and wales, first month				Ton	230			230	253	
	2200	Per added month					23			23	25.50	
	2400	Rental piling left in place, add to rental					450			450	495	
	2500	Wales, connections & studs, 2/3 salvage					173			173	190	
	2700	High strength piling, 50,000 psi, add					60			60	66	
	2800	55,000 psi, add					65			65	71.50	
	3000	Tie rod, not upset, 1-1/2" to 4" diameter with turnbuckle					1,200			1,200	1,325	
	3100	No turnbuckle					1,000			1,000	1,100	
	3300	Upset, 1 3/4" to 4" diameter with turnbuckle					1,500			1,500	1,650	
	3400	No turnbuckle					1,300			1,300	1,425	
	3600	Lightweight, 18" to 28" wide, 7 ga., 9.22 psf, and										
	3610	9 ga., 8.6 psf, minimum				Lb.	.50			.50	.55	
	3700	Average					.55			.55	.61	
	3750	Maximum					.62			.62	.68	
	3900	Wood, solid sheeting, incl. wales, braces and spacers,										
	3910	drive, extract & salvage, 8' deep excavation	B-31	330	.121	S.F.	1.52	2.79	.46	4.77	6.55	
	4000	10' deep, 50 S.F./hr. in & 150 S.F./hr. out		300	.133		1.56	3.07	.51	5.14	7.10	
	4100	12' deep, 45 S.F./hr. in & 135 S.F./hr. out		270	.148		1.61	3.41	.56	5.58	7.75	
	4200	14' deep, 42 S.F./hr. in & 126 S.F./hr. out		250	.160		1.66	3.68	.61	5.95	8.30	
	4300	16' deep, 40 S.F./hr. in & 120 S.F./hr. out		240	.167		1.71	3.84	.64	6.19	8.65	
	4400	18' deep, 38 S.F./hr. in & 114 S.F./hr. out		230	.174		1.76	4	.66	6.42	8.95	
	4500	20' deep, 35 S.F./hr. in & 105 S.F./hr. out		210	.190		1.82	4.38	.73	6.93	9.70	
	4520	Left in place, 8' deep, 55 S.F./hr		440	.091		2.73	2.09	.35	5.17	6.70	
	4540	10' deep, 50 S.F./hr		400	.100		2.88	2.30	.38	5.56	7.20	
	4560	12' deep, 45 S.F./hr.		360	.111		3.04	2.56	.42	6.02	7.85	
	4565	14' deep, 42 S.F./hr.		335	.119		3.22	2.75	.45	6.42	8.35	
	4570	16' deep, 40 S.F./hr.		320	.125		3.42	2.88	.48	6.78	8.80	
	4580	18' deep, 38 S.F./hr.		305	.131		3.65	3.02	.50	7.17	9.30	
	4590	20' deep, 35 S.F./hr.		280	.143		3.91	3.29	.54	7.74	10.05	
	4700	Alternate pricing, left in place, 8' deep		1.76	22.727	M.B.F.	615	525	86.50	1,226.50	1,600	
	4800	Drive, extract and salvage, 8' deep		1.32	30.303	"	545	700	115	1,360	1,825	
	5000	For treated lumber add cost of treatment to lumber										
	5010	See division 063-102										

021 620 | Cribbing & Walers

624	0010	SOLDIER BEAMS & LAGGING H piles with 3" wood sheeting										624
	0070	horizontal between piles, including removal of wales & braces										
	0100	No hydrostatic head, 15' deep, 1 line of braces, minimum	B-50	545	.206	S.F.	6.45	5.40	2.74	14.59	19.05	
	0200	Maximum		495	.226		7.15	5.95	3.01	16.11	21	
	0400	15' to 22' deep with 2 lines of braces, 10" H, minimum		360	.311		7.60	8.20	4.14	19.94	26.50	
	0500	Maximum		330	.339		8.60	8.95	4.52	22.07	29	

EXHIBIT NO. (JBS-6)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 10 OF 12

021 | Site Preparation & Excavation Support

021 400 | Dewatering

			CREW	DAILY OUTPUT	LABOR-HOURS	UNIT	1999 BARE COSTS MAT.	LABOR	EQUIP.	TOTAL	TOTAL INCL O&P	
404	2000	24" pipe, corrugated, 14 ga. R021-440	B-6	40	.600	L.F.	21.50	14.1	5.45	40.95	52	404
	2200	Wood lining, up to 4' x 4', add	↓	300	.080	SFCA	3	1.87	.73	5.60	7	
	9950	See div. 021 444 for wellpoints										
	9960	See div. 021 484 for deep well systems										
	9970	See div. 152 400 for pumps										

021 440 | Wellpoints

444	0010	WELLPOINTS For wellpoint equipment rental, see div. 016-490 R021-440										444
	0100	Installation and removal of single stage system										
	0110	Labor only, .75 labor hours per L.F., minimum	1 Clab	10.70	.748	LF Hdr		16.05		16.05	25	
	0200	2.0 labor-hours per L.F., maximum	"	4	2	"		43		43	67.50	
	0400	Pump operation, 1 @ 6 hr. shifts										
	0410	Per 24 hour day	4 Eqlt	1.27	25.197	Day		685		685	1,050	
	0500	Per 168 hour week, 160 hr. straight, 8 hr. double time		.18	177	Week		4,875		4,825	7,350	
	0550	Per 4.3 week month		.04	800	Month		21,600		21,800	33,100	
	0600	Complete installation, operation, equipment rental, fuel &										
	0610	removal of system with 2" wellpoints 5' O.C.										
	0700	100' long header, 6" diameter, first month	4 Eqlt	3.23	9.907	LF Hdr	100	269		369	520	
	0800	Thereafter, per month		4.13	7.748		80	211		291	410	
	1000	200' long header, 8" diameter, first month		6	5.333		100	145		245	330	
	1100	Thereafter, per month		8.39	3.814		45	104		149	208	
	1300	500' long header, 8" diameter, first month		10.63	3.010		35	82		117	163	
	1400	Thereafter, per month		20.91	1.530		25	41.50		66.50	91	
	1600	1,000' long header, 10" diameter, first month		11.62	2.754		30	75		105	147	
	1700	Thereafter, per month	↓	41.81	.765	↓	15	21		36	48	
	1900	Note: above figures include pumping 168 hrs. per week										
	1910	and include the pump operator and one stand-by pump.										

021 480 | Relief Wells

484	0010	WELLS For dewatering 10' to 20' deep, 2" diameter										484
	0020	with steel casing, minimum	B-6	165	.145	V.L.F.	2	3.40	1.33	6.73	8.95	
	0050	Average		98	.245		4	5.70	2.23	11.93	15.75	
	0100	Maximum	↓	49	.490	↓	10	11.45	4.47	25.92	33.50	
	0300	For pumps for dewatering, see division 016 420-4100 to 4400										
	0500	For domestic water wells, see division 026-704										

021 520 | Shores

524	0010	SHORING Existing building, with timber, no salvage allowance	B-51	2.20	21.818	M.B.F	645	475	78	1,198	1,550	524
	1000	With 3" ton screw jacks, per box and jack	"	3.60	13.333	Jack	40	291	47.50	378.50	550	
	1100	Masonry openings in walls, see div. 020-704										

021 560 | Underpinning

564	0010	UNDERPINNING FOUNDATIONS Including excavation,										564
	0020	footing, reinforcing, concrete and equipment										
	0100	5' to 10' below grade, 100 to 500 C.Y.	B-52	2.30	24.348	C.Y.	168	615	188	971	1,350	
	0200	Over 500 C.Y.		2.50	22.400		152	565	173	890	1,250	
	0400	15' to 25' below grade, 100 to 500 C.Y.		2	28		185	705	216	1,106	1,550	
	0500	Over 500 C.Y.		2.10	26.667		175	670	206	1,051	1,475	
	0700	20' to 40' below grade, 100 to 500 C.Y.		1.60	35		202	880	270	1,352	1,900	
	0800	Over 500 C.Y.	↓	1.80	31.111		185	785	240	1,210	1,700	
	0900	For under 50 C.Y., add					10%	40%				
	1000	For 50 C.Y. to 100 C.Y., add				↓	5%	20%				

EXHIBIT NO. _____ (JBS-6)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 11 OF 12

021 | Site Preparation & Excavation Support

			CREW	DAILY OUTPUT	LABOR-HOURS	UNIT	1999 BARE COSTS MAT.	LABOR	EQUIP.	TOTAL	TOTAL INCL O&P
021 140 | Stripping											
144	0010	STRIPPING Topsoil, and stockpiling, sandy loam									
	0020	200 H.P. dozer, ideal conditions	B-10B	2,300	.005	C.Y.		.14	.36	.50	.61
	0100	Adverse conditions	"	1,150	.010			.27	.73	1	1.22
	0200	300 HP dozer, ideal conditions	B-10M	3,000	.004			.10	.38	.48	.57
	0300	Adverse conditions	"	1,650	.007			.19	.69	.88	1.04
021 150 | Selective Clearing											
154	0010	SELECTIVE CLEARING									
	1000	Stump removal on site by hydraulic backhoe, 1-1/2 C.Y.									
	1040	4" to 6" diameter	B-17	60	.533	Ea.		12.30	9.70	22	29.50
	1050	8" to 12" diameter	B-30	33	.727			17.60	48.50	66.10	80
	1100	14" to 24" diameter		25	.960			23	64	87	106
	1150	26" to 36" diameter		16	1.500			36.50	100	136.50	166
	2000	Remove selective trees, on site using chain saws and chipper,									
	2050	not incl. stumps, up to 6" diameter	B-7	18	2.667	Ea.		61	66	127	168
	2100	8" to 12" diameter		12	4			92	99	191	252
	2150	14" to 24" diameter		10	4.800			110	119	229	300
	2200	26" to 36" diameter		8	6			138	148	286	380
	2300	Machine load, 2 mile haul to dump, 12" diam. tree, add								150	225
021 200 | Structure Moving											
204	0010	MOVING BUILDINGS One day move, up to 24' wide									
	0020	Reset on new foundation, patch & hook-up, average move				Total					8,700
	0040	Wood or steel frame bldg., based on ground floor area	B-4	185	.259	S.F.		5.70	2.57	8.27	11.70
	0060	Masonry bldg., based on ground floor area	"	137	.350			7.65	3.47	11.12	15.80
	0200	For 24' to 42' wide, add									15%
	0220	For each additional day on road, add	B-4	1	48	Day		1,050	475	1,525	2,175
	0240	Construct new basement, move building, 1 day									
	0300	move, patch & hook up, based on ground floor area	B-3	155	.310	S.F.	5.75	7.15	11.30	24.20	30
021 400 | Dewatering											
404	0010	DEWATERING Excavate drainage trench, 2' wide, 2' deep R021-440	B-11C	90	.178	C.Y.		4.43	2.43	6.86	9.50
	0100	2' wide, 3' deep, with backhoe loader	"	135	.119			2.95	1.62	4.57	6.35
	0700	Excavate sump pits by hand, light soil	1 Clab	7.10	1.127			24		24	38
	0800	Heavy soil	"	3.50	2.286			49		49	77
	0900	Pumping 8 hr., attended 2 hrs. per day, including 20 L.F.									
	0960	of suction hose & 100 L.F. discharge hose									
	0600	2" diaphragm pump used for 8 hours	B-10H	4	3	Day		78	11.10	89.10	132
	0620	Add per additional pump							35	35	40
	0650	4" diaphragm pump used for 8 hours	B-10I	4	3			78	23.50	101.50	146
	0670	Add per additional pump							75	75	85
	0800	8 hrs. attended, 2" diaphragm pump	B-10H	1	12			315	44.50	359.50	530
	0820	Add per additional pump							35	35	40
	0900	3" centrifugal pump	B-10J	1	12			315	58	373	545
	0920	Add per additional pump							49.50	49.50	54.50
	1000	4" diaphragm pump	B-10I	1	12			315	94	409	585
	1020	Add per additional pump							85	85	98
	1100	6" centrifugal pump	B-10K	1	12			315	220	535	720
	1120	Add per additional pump							110	110	125
	1300	CMP, incl. excavation 3' deep, 12" diameter	B6	115	.209	L.F.	8.95	4.88	1.90	15.73	19.45
	1400	18" diameter		100	.240	"	9.95	5.60	2.19	17.74	22
	1600	Sump hole construction, incl. excavation and gravel, pit		1,250	.019	C.F.	.56	.45	.18	1.19	1.51
	1700	With 12" gravel collar, 12" pipe, corrugated, 16 ga.		70	.343	L.F.	11.90	8	3.13	23.03	29
	1800	15" pipe, corrugated, 16 ga.		55	.436		14.65	10.20	3.98	28.83	36.50
	1900	18" pipe, corrugated, 16 ga.		50	.480		13.30	11.20	4.38	28.88	37

EXHIBIT NO. _____ (JBS-6)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 12 OF 12

Exhibit ____(JBS-7)

Conceptual Diagram –
EVA "Cooperative" Rail Delivery System

EXHIBIT NO. _____ (JBS-7)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 1 OF 2

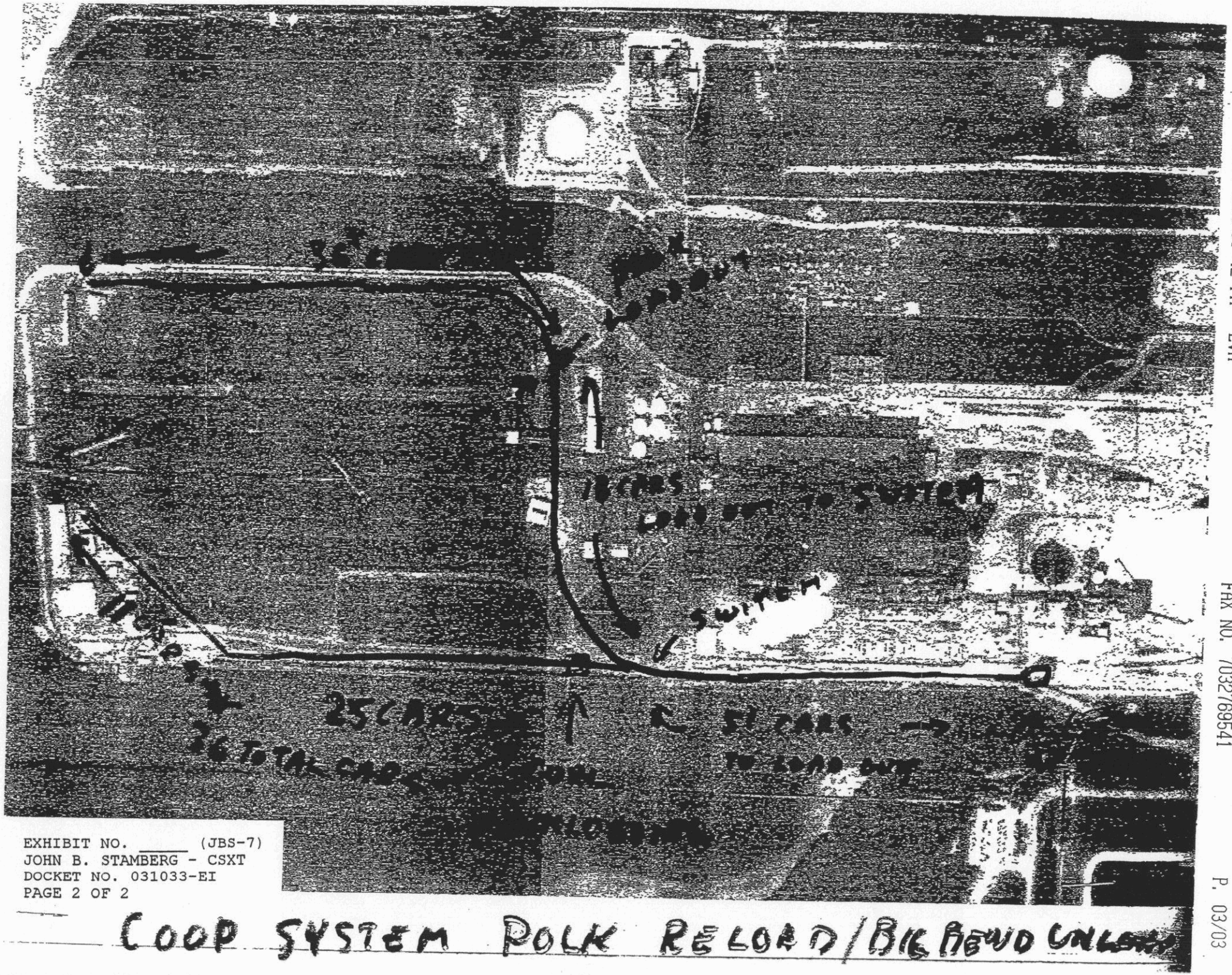


EXHIBIT NO. _____ (JBS-7)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 2 OF 2

COOP SYSTEM POLK RELOAD/BIG BEND UNLOAD

OVERVIEW OF RAIL DELIVERY OPTIONS TO BIG BEND

	CSX's 1.0-2.0 MMTpy	EVA Adjustment	CSX's 2.0-5.0 MMtpy	EVA Adjustment	Potential Cooperative System (New Equipment)	Potential Cooperative System (Gannon Equipment)
Estimated Cost	$4,283,000	N/C	$7,130,000	$8,163,825	$4,979,225	$3,641,866
CSX's Bid Estimate	$4,500,000	N/A	$7,100,000	N/A	N/A	N/A
CSX's Funding Limit	$5,400,000	N/C	$8,520,000	$8,520,000	$8,520,000	$8,520,000
Capacity	1,500 TPH	1,500 TPH	2,500 TPH	2,500 TPH	2,500 TPH	3,200 TPH
Railcars Per Hour	15	15	25	25	25	32
Unloading Time With Switching Time	7.5 Hours	7.5 Hours	5.1 Hours	5.1 Hours	5.3 Hours	4.5 Hours
Construction Time	10 Months	10 Months	10 Months	10 Months	10 Months	7 Months
If Pre-Engineering Pre-Permitted	8 Months	8 Months	8 Months	8 Months	8 Months	5 Months
Permit Modification Needed.	Yes	Yes	Yes	Yes	Yes	Yes

EXHIBIT NO. _____ (JBS-8)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 1 OF 1

CONFIDENTIAL

TAMPA ELECTRIC COMPANY
DOCKET NO. 031033-EI
FIPUG'S 1st REQUEST FOR POD

Sargent & Lundy LLC

Tampa Electric Company
Big Bend and Polk Generating Stations

CSX Transportation
Alternate Method of Coal Delivery

SL-008160
September 18, 2003

Prepared By: P. Guletsky, S. Madan, G. Bowater

Reviewed By: P. Guletsky

Approved By: B. H. Yee

BOCK H. YEE CERTIFICATE NO. PE 0048811 STATE OF FLORIDA PROFESSIONAL ENGINEER

EXHIBIT NO. _____ (JBS-9)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 1 OF 44

CONFIDENTIAL

TAMPA ELECTRIC COMPANY
DOCKET NO. 031033-EI
FIPUG'S 1st REQUEST FOR POD

TABLE OF CONTENTS

EXHIBITS

EXHIBIT NO. _____ (JBS-9)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 2 OF 44

I. Executive Summary

Sargent & Lundy L.L.C. has reviewed the proposal issued to Tampa Electric by CSX Transportation for alternate method of coal delivery to the Big Bend and Polk Generating Stations. The proposal, dated August 11, 2003, offers conceptual design and cost information to bring coal to the stations by rail direct rather than by the traditional barge transport.

The purpose of the S&L review is to validate the capital cost for each option proposed, to provide operating cost estimates for each, and to provide assessment of assumptions made which qualify the bid. The Tampa Electric Fuels Strategy Group will use the results of the S&L analysis to evaluate this option against the other coal transportation bids received.

Although CSXT has done an admirable job in their conceptual plan, in some cases the concept provided would not be feasible in its proposed form. Where possible, we have made the necessary adjustments to the design and have provided costs for the adjusted plan. Specific examples include:

- The limestone unloading facility at Big Bend will not be used for unloading coal by rail.
- New track placement interferes with existing facilities in some areas. The track has been rerouted where necessary to accommodate existing operations.
- The conveyor belt sizing for the 2 –5.5 MM ton Big Bend Option is marginal. The estimate provided increases the belt width to 60 inches. A 60-inch conveyor is appropriate for the duty rating expected.

Each case is discussed more fully in the following section of the report.

The cost information provided with the proposal appears to be low in all cases. The costs provided appear to include material for new equipment only. Therefore, the installation cost and costs associated with modification to existing facilities need to be added. The capital cost estimate comparison for each scenario is as follows:

	CSXT Estimate	S&L Estimate
Big Bend 2 to 5.5 Million Ton Build In	$ 10,846,000	$50,525,000
Big Bend 1 to 2 Million Ton Build In	$6,798,000	$32,233,000
Polk Build In Shuttle Train Unload	$ 2,318,000	$15,418,000
Polk Direct Delivery – Rotary Dump	$ 6,502,000	$41,059,000
Polk Direct Delivery – Bottom Dump	$ 4,520,000	$26,105,000

The estimates provided in the rail delivery bids do not take into account the additional operating costs required at each station. Fixed operating cost increases will be required for most of the options included in the bid package because of the additional operating staff that will be required to manage the coal unloading and storage. Variable operating costs will also increase at each station as a result of the additional equipment. Increased electrical load and equipment maintenance costs make up the majority of the variable operating cost estimate.

	Yearly Estimated Operating Cost
Big Bend 2 to 5.5 Million Ton Build In	$2.2MM to $2.7MM
Big Bend 1 to 2 Million Ton Build In	$1.4MM to $1.5 MM
Polk Build In Shuttle Train Unload	$1.1 MM
Polk Direct Delivery – Rotary Dump	$1.3 MM
Polk Direct Delivery – Bottom Dump	$0.97 MM

The proposal options offered by CSXT have identified the demurrage rate assumed in each case. In some instances, we believe that the rates provided are more aggressive than can be reasonably achieved. These discrepancies can either be used as a point of negotiation or as a probable cost to Tampa Electric. We have not included demurrage fees in the operating cost estimates but rather provide the data for your use and evaluation during your contract negotiations.

	Demurrage Allowed In Bid	Estimated Unload Time Required
Big Bend 2 to 5.5 Million Ton Build In	4 hour	6 hour
Big Bend 1 to 2 Million Ton Build In	24 hour	9 hour
Polk Build In Shuttle Train Unload	N/A	3 hour
Polk Direct Delivery – Rotary Dump	N/A	9 hour
Polk Direct Delivery – Bottom Dump	N/A	9 hour

Environmental considerations that need to be addressed in the full evaluation of these coal transportation options include wetlands reconstruction, coal pile runoff, and noise abatement. These issues are discussed later in this report.

II. Bid Analysis

A. Big Bend 2 to 5.5 Million Ton Build In

The conceptual design that is proposed for this option requires three alterations:

EXHIBIT NO. _____ (JBS-9)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 4 OF 44

1. The independent S&L estimate does not use the limestone unloading facility at Big Bend for coal unloading. An independent unloading facility has been priced with no addition of truck unloading of limestone. The reasons for this adjustment to the design include:

   (a) The existing limestone unloading facility does not have adequate capacity for rapid discharge of coal. The maximum capacity of the existing system is approximately 800 T/hr of coal. Minor modification to the system (42" conveyor width and 45° idlers) would increase the capacity to 1200 T/hr which is still insufficient.

   (b) Extensive modification of the existing limestone unloading station to accommodate rapid discharge coal unloading would be required. The feasibility of this approach needs to be studied in detail. Before this approach could be considered as a serious plan, forward analyses of the following issues would have to be performed:

   - A condition assessment of the existing facility.
   - A study of the structural design and subsequent integrity of the design once the concrete is cut for the 60" conveyor path.
   - A review of the pit length to determine design suitability with rail cars identified.
   - Modifications required due to safety and dusting issues associated with PRB coal.

   For these reasons, it would not be prudent to assume that the existing limestone unloading facility can be used for coal for less capital than a new coal unloader with no new limestone truck unloading.

2. The 45 car rail spur identified in the proposal for use at the new railcar load- out which transfers coal to be sent to the Polk Station is located within the boundaries of the existing desalinization plant which is owned and operated by Tampa Bay Water. It is suggested that this rail spur be moved to the south side of the rail loading facility. This change has been incorporated into the estimate. It represents a minor cost impact.

3. CSXT proposal included 54" wide belt conveyors for unloading. The 54" wide conveyors would have to operate at a fairly high belt speed (~ 700 fpm) for handling the required capacity. At this high belt speed, we would expect a high potential of coal spillage and dusting problems; therefore, we would recommend 60" wide conveyor bolts for the new train unloading belts. The 60" wide conveyors would require a slower (580 gpm) belt speed for handling the required tonnage.

The capital cost estimate that is provided with this option appears to be quite low. As illustrated in the executive summary, we would expect the installed cost for this scope of work to be more than double the proposed amount. Although the basis of the

EXHIBIT NO. _____ (JBS-9)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 5 OF 44

estimate is not identified specifically, it would appear that the estimate provided by CSXT in the proposal represents the capital cost for the engineered equipment for coal transport only. Exhibits 2A-1 and 2A-2 are the respective CSXT and S&L cost estimates for Big Bend 2-5.5 MM Ton Rail Coal delivery option.

S&L has assumed that hooded conveyors will be acceptable and permitable for the new conveyors except the transfer conveyor that travels over the intake canal. The transfer conveyor is totally enclosed from the blending bin to the proposed transfer tower. Should environmental permitting require all of the conveyor to be totally enclosed, then the increase to the capital estimate will be approximately $2,000,000.

In addition to the new equipment and installation costs, S&L has included costs for the following support tasks required to complete the scope work:

- Fire Loop Extension
- Dust Suppression System
- Repair to Existing On-Site Track
- Modifications to Transfer House T2
- Demo/Reconstruct Storm Storage Area
- Re-Grading for Storm Water and Runoff
- Underground Utility Identification and Relocation
- Installation of Rail Bridge Over Water Lines on East Side of Property
- Conveyor Lighting
- Blending Bin Modifications
- Adjustments for High Water Table
- Adjustment for FL Building Code
- Transformers for Electrical Supply
- Double End Bus Substation
- PLC
- Electrical Interconnect
- I/C Interconnect
- Services Interconnect (Instrument Air, Service Air, Water)
- Environmental Permitting Evaluation
- Contractor G&A and Fee
- Tampa Electric Overheads

The overhead costs include engineering oversight by the Owner's AE, construction oversight, and Tampa Electric internal project costs.

Operating cost considerations to be included in the overall bid evaluation are tabulated in Exhibit 2A-3. The combined fixed and variable operating costs for this option range from $2,167,200 to $2,697,500 per year depending on the quantity of coal handled.

B. Big Bend 1 to 2 Million Ton Build In

The conceptual design proposed by CSXT requires a new coal unloading station for coal as described above. We have made the same adjustment to this option as described in the 2 to 5.5 MM Ton Rail Delivery Option described above.

This option introduces some operating constraints that do not otherwise exist. This option provides a radial stacker to stack the coal and does not tie into the existing conveyor systems. This arrangement limits coal storage to one of the three existing coal storage bays. Coal pile management will therefore be more complicated and require more labor to maintain.

The capital cost estimate provided with the CSXT proposal is provided in Exhibit 2B-1. Again, the capital costs provided are low compared to the independent total installed cost estimate prepared as part of this evaluation. Exhibit 2B-2 provides the details of the independent estimate prepared by S&L.

In addition to the new equipment and installation costs, S&L has included costs for the following support tasks required to complete the scope work:

- Underground Reclaim Hopper
- Bulldozer
- Fire Loop Extension
- Dust Suppression System
- Repair to Existing On-Site Track
- Demo/Reconstruct Storm Storage Area
- Re-Grading for Storm Water and Runoff
- Underground Utility Identification and Relocation
- Installation of Rail Bridge Over Water Lines on East Side of Property
- Conveyor Lighting
- Adjustments for High Water Table
- Adjustment for FL Building Code
- Transformers for Electrical Supply
- Double End Bus Substation
- PLC
- Electrical Interconnect
- I/C Interconnect
- Services Interconnect (Instrument Air, Service Air, Water)
- Environmental Permitting Evaluation
- Contractor G&A and Fee
- Tampa Electric Overheads

No modifications to the T2 transfer tower and blending bin are required for this option and we have assumed hooded conveyors are acceptable. The estimated increased cost for totally enclosed conveyors should they be required is $1,250,000

Operating cost considerations to be included in the overall bid evaluation are tabulated in Exhibit 2B-3. The combined fixed and variable operating costs for this option range from $1,411,000 to $1,492,000 per year.

C. *Polk Build In Shuttle Train Unload*

This design option provided in the CSXT proposal for the Polk Plant is the least expensive and the least intrusive to the current plant operations.

The independent, estimated total installed cost for this option is $15,418,000 which is over six times higher than the capital cost identified in the CSXT proposal. Exhibit 2C-1 and Exhibit 2C-2 provide the details of the CSXT and S&L capital estimates respectively.

In addition to the new equipment and installation costs, S&L has included, in the independent estimate, costs for the following support tasks required to complete the scope of work.

- Underground Reclaim Hopper
- Bulldozer
- Fire Loop Extension
- Dust Suppression
- Repair to Existing On-Site Track
- Modifications to Existing Coal Silo
- Grading for Stormwater/Coal Runoff
- Underground Utility Identification and Relocation
- Wetlands Relocation
- Conveyor Lighting
- Adjustment for FL Building Code
- Adjustments for the High Water Table
- Transformers
- Double End Bus Substation
- I/O Blocks
- Electrical Interconnect
- DCS Interconnect
- Services Interconnect
- Environmental Permitting
- Contractor G&A and Fee
- Tampa Electric Overheads

Operating cost considerations to be included in the overall bid evaluation of this option are tabulated in Exhibit 2C-3. The combined fixed and variable operating costs for this option are $1,130,000 per year.

D. *Polk Direct Delivery – Rotary Dump and Bottom Dump Scenarios*

The conceptual design of this option proposed by CSXT introduces coal storage to the Polk station. The domed storage facility minimizes the environmental impact to the station. The loop track provides sufficient storage to prevent obstruction of other plant operations.

The proposal provided by CSXT includes two scenarios for this option. The first uses a rotary car dumper; the second is similar but uses a bottom dump rail car. We have included a car shaker with the bottom dump rail car estimate. The independent estimates prepared for this option are included as Exhibit 2D-1 and Exhibit 2D-2. The CSXT proposal estimate, again lower than the estimated installed costs prepared by S&L, is provided as Exhibit 2D-3.

Items included in the independent total installed cost, in addition to the new equipment, are:

- Underground Reclaim Hopper
- Bulldozer
- Fire Loop Extension
- Dust Suppression
- Repair to Existing On-Site Track
- Modifications to Existing Coal Silo
- Grading, Stormwater/Coal Runoff Modification
- Underground Utility Identification and Relocation
- Conveyor Lighting
- Adjustment for FL Building Code
- Adjustment for High Water Table
- Transformers
- Double End Bus Substation
- I/O Blocks
- Electrical Interconnect
- DCS Interconnect
- Services Interconnect
- Environmental Permitting
- Wetland Relocation
- Contractor G&A and Fee
- Tampa Electric Overheads

Operating cost considerations to be included in the overall bid evaluation of this option are tabulated in Exhibit 2D-4. The combined fixed and variable operating costs for this option are $1,349,000 per year for the rotary dumper and $972,000 per year for the bottom dump rail car scenario.

III. Assumptions

- No additional real estate purchase is required for track or relocation of facilities and wetlands.
- No track upgrade or repair is required outside of the plant real estate boundaries.
- Tampa Electric has no provisions for holding second train for CSX.
- Coal unloading is to be performed during day shifts only.
- Primary power for new equipment is available at each for the stations.
- No allowances or provisions have been included in the cost estimate for schedule constraints (labor overtimes, double shifts, accelerated shipment of equipment or commodities, etc.).
- Project contingency of 20% is required to mitigate the risk on costs due to the short evaluation period.
- The current barge unloading facility will remain operational at the Big Bend Station.
- The current truck transfer station will remain operational at the Big Bend Station.
- The current truck unloading facility will remain operational at the Polk Station.

IV. Issues for Further Consideration

Coal unloading by rail at the Big Bend Station will necessitate blocking Gate 32 for several periods of time during the day. For the 2 – 5.5 MM ton scenario, we estimate that approximately two trains a day will be received during the week. We would expect that for each train Gate 32 will be blocked about 15 minutes while the train is entering the site, 45 minutes during the unloading of each of the two 45 car segments, and another 15 minutes during the train re-assembly and exit from the plant. This equates to Gate 32 being blocked from access approximately 17% of the day.

For the 1-2 MM ton scenario at the Big Bend Station, we would anticipate Gate 32 to be blocked approximately 6-8% of the day. The Polk alternative appears to have minimal impact on current plant operations.

Low frequency noise will be emitted from the locomotives operating on the site. This type of noise is not easily mitigated nor can it be dampened with the construction of berms. If this proposal is considered further, S&L recommends that a noise study be performed for each station. The noise levels could result in daytime only use of the system.

EXHIBIT NO. _____ (JBS-9)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 10 OF 44

TAMPA ELECTRIC COMPANY
DOCKET NO. 031033-EI
FIPUG'S 1st REQUEST FOR POD

V. References

1) CSX Transportation July 30, 2003 Proposal
2) CSX Transportation August 11, 2003 Proposal
3) TECO Memorandum, August 29, 2003, D. Konstas
4) TECO Email (Painter), Electrical Input, 8/29/03
5) TECO Email (Alfonso), I&C Inputs, 8/29/03
6) TECO Email (Barrette), Reference Drawings, 8/29/03
7) TECO Email (Painter), Big Bend/Unloading Labor, 9/3/03
8) TECO Email (Painter), Revised Capital Cost Factors, 9/3/03
9) TECO Email (Painter), Polk/Coal Unloading Labor, 9/3/03
10) TECO Email (Painter), Insurance and Tax Rates, 9/2/03
11) TECO Email (Painter), CSXT Evaluation Tampa Electric Contacts, 8/29/03
12) TECO Email (Painter), Coal Delivery By Rail, 9/5/03
13) TECO Email (Painter), Desal Plant Owner, 9/5/03
14) TECO Email (Painter), CSXT Evaluation - Affected Wetlands Area, 9/5/03
15) TECO Email (Barrette), CSXT S&L Report, 9/17/03

Tampa Electric Company
Big Bend and Polk Generating Stations
CSX Transportation
Alternate Method of Coal Delivery

SL-008160
Project No. 09476-019
September 18, 2003

TAMPA ELECTRIC COMPANY
DOCKET NO. 031033-EI
FIPUG'S 1st REQUEST FOR POD

EXHIBIT 2A-1

BIG BEND CAPITAL COST 2 - 5.5 MM TONS

CSXT COST ESTIMATE

Big Bend 2 - 5.5 mm TPY Option (Rapid Discharge Cars)

System Rated at 2500 TPH

Rapid Discharge System	$1,600,000
Long Conveyor 3300 ft.	$3,100,000
Short Conveyor 500 ft.	$650,000
Transfer Station	$230,000
Three 45 Car Tracks	$1,200,000
Truck Dump and Conveyor	$350,000
Total	$7,130,000

Equipment to Load Shuttle Trains

Conveyors and Transfer Station	$2,250,000
250 Ton Batch Silo	$1,066,000
New 45 Car Track	$400,000
Total	$3,716,000

Grand Total	$10,846,000

EXHIBIT NO. _____ (JBS-9)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 12 OF 44

CONFIDENTIAL

EXHIBIT 2A-2

S&L COST ESTIMATE FOR
BIG BEND 2 - 5.5 MM TON
RAIL COAL DELIVERY OPTION

EXHIBIT NO. _____ (JBS-9)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 13 OF 44

CONFIDENTIAL

TAMPA ELECTRIC COMPANY
DOCKET NO. 031033-EI
FIPUG'S 1st REQUEST FOR POD

EXHIBIT: 2A-2 Sargent & Lundy LLC Chicago		Cost Type: Est=Estimated B=Bid OPB=Other Project Bid Q=Vendor Quote		Tampa Electric Big Bend Rail Delivery Order of Magnitude -PRELIMINARY AND CONFIDENTIAL-					Estimate No.: 21222A Project No.: 09478-019 Date: 9/11/03 Run Date: 9/11/03 Preparer: GBB/SM Reviewer: PAG		
Acct. No.	**Description**	**Scope Definition**	**Cost Type**	**Quantity**	**Total Equipment or Material Cost**	**Total Construction & Erection Cost**	**Sub-Contracts**	**DOR (Furnish)**	**DOR (Install)**	**Total Projected Cost**	**Sub-Totals**
	2 - 5.5 MM TPY OPTION WITH RAPID DISCHARGE CARS										
	Equipment To Unload Trains @ 2500 TPH										21,460,000
	Excavation for track hopper pit foundation		Est	1	0	1,000,000				1,000,000	
	Concrete work for track hopper		Est	1	800,000	320,000				1,120,000	
	Track hopper building		Est	1	150,000	60,000				210,000	
	Hopper and grizzly		Est	1	200,000	80,000				280,000	
	Track hopper dust suppression		Est	1	100,000	40,000				140,000	
	Belt feeders	2 Each	Est	1	200,000	80,000				280,000	
	Concrete work for conveyor / tunnel		Est	1	200,000	80,000				280,000	
	Belt conveyor, 60" wide, 250 ft long		Est	1	500,000	400,000				900,000	
	Transfer house		Est	1	100,000	40,000				140,000	
	Foundation for transfer house		Est	1	50,000	20,000				70,000	
	Belt conveyor, 60" wide, 3200 ft long, hooded conveyor		Est	1	4,800,000	3,840,000				8,640,000	
	Transfer house		Est	1	300,000	240,000				540,000	
	Foundation for transfer house		Est	1	50,000	20,000				70,000	
	Belt conveyor to existing transfer house, 60" wide, 500 ft long		Est	1	750,000	600,000				1,350,000	
	Existing transfer house modification house modification		Est	1	100,000	80,000				180,000	
	Foundation work for conveyors		Est	1	100,000	80,000				180,000	
	Dust suppression for belt conveyors		Est	1	200,000	80,000				280,000	
	Fire protection for conveyors		Est	1	160,000	160,000				320,000	
	HVAC for track hopper pit and transfer houses		Est	1	200,000	80,000				280,000	
	Sump pump system at track hopper		Est	1	50,000	20,000				70,000	
	Hoists and trolleys		Est	1	50,000	20,000				70,000	
	Track work modification - add three 45 car tracks	7500 LF	Est	1	750,000	750,000				1,500,000	
	Temporary Coffer Dam		Est	1	1,000,000	2,085,000				3,085,000	
	Dewatering		Est	1	4,000	471,000				475,000	
	Equipment To load Shuttle Trains										6,546,000
	Modification at existing bin		Est	1	50,000	20,000				70,000	
	Belt feeder		Est	1	60,000	24,000				84,000	
	Belt Conveyor to transfer house, 1000 tph, 42" wide, 1200 ft long, enclosed conveyor		Est	1	1,700,000	680,000				2,380,000	
	Transfer house		Est	1	50,000	20,000				70,000	
	Foundation for transfer house		Est	1	50,000	20,000				70,000	
	Belt conveyor to load out station, 1000 tph, 42" wide, 700 ft long enclosed conveyor		Est	1	1,000,000	400,000				1,400,000	

455

EXHIBIT NO. ______ (JBS-9)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 14 OF 44

EXHIBIT: 2A-2
Sargent & Lundy LLC
Chicago

Tampa Electric
Big Bend
Rail Delivery
Order of Magnitude
-PRELIMINARY AND CONFIDENTIAL-

Estimate No.: 21222A
Project No.: 09478-019
Date: 9/11/03
Run Date: 9/11/03
Preparer: GBB/SM
Reviewer: PAG

Cost Type:
Est=Estimated
Bid
OPB=Other Project Bid
QV=Vendor Quote

Acct. No.	Description	Scope Definition	Cost Type	Quantity	Total Equipment or Material Cost	Total Construction & Erection Cost	Sub-Contract	DOR (Furnish)	DOR (Install)	Total Projected Cost	Sub-Totals
	Loadout bin structure		Est	1	750,000	300,000				1,050,000	
	Foundation work for conveyors		Est	1	100,000	80,000				180,000	
	Dust suppression for belt conveyors		Est	1	200,000	80,000				280,000	
	Fire protection for conveyors		Est	1	200,000	80,000				280,000	
	HVAC for transfer house and loadout station		Est	1	50,000	20,000				70,000	
	Sump pump system at loadout station		Est	1	50,000	20,000				70,000	
	Hoists and trolleys		Est	1	30,000	12,000				42,000	
	Track work modification, add one 45 car track	2500 LF	Est	1	250,000	250,000				500,000	
											2,287,000
	Electrical - Aux. Power										
	Vacuum Circuit Breaker and Cubicles		Est	2	50,000	3,000				53,000	
	480 V Transformer	Includes Switchgear	Est	2	270,000	28,000				298,000	
	MCC	480 V (66 Motors)	Est	8	200,000	53,000				253,000	
	Trays	Trays (Transformer Feed)	Est.	2,000	60,000	58,000				118,000	
	Conduits	Conduits (500 LF typ per motor feed)	Est	33,000	99,000	285,000				384,000	
	Transformer Feeder Cable	MV-90	Est	2,000	16,000	40,000				56,000	
	MV Wiring	3/C #2 - 500 LF per motor	Est	33,000	165,000	525,000				690,000	
	Electrical Building - Pre Fabricated - Complete	Elevated supports and foundations	Est	1	200,000	60,000				260,000	
	Conveyor Lighting	5400 LF	Est	1	82,000	93,000				175,000	
											556,000
	Control & Instrumentation										
	DCS Upgrades	6 I/O's per Motor	Est	1	250,000	250,000				500,000	
	DCS BOP Equipment		Est	1	25,000	25,000				50,000	
	Locally Mounted Instruments		Est	1	2,000	4,000				6,000	
											773,640
	BOP Items										
	Fire Protection Upgrade - underground	1000 LF	Est	1	95,000	84,000				179,000	
	Demo/Reconstruction of Storage Area	Elevated at +15' (99,000 CY)	Est	2	0	30,000				30,000	
	Storm water/Coal Runoff Grading Upgrades	2000 LF	Est	1	2,000	6,000				8,000	
	Underground Utility Identification and Relocation	Tampa - Allowance	Est	1	25,000	25,000				50,000	
	Rail Bridge Over Water Lines	2 - 20' lines	Est	1	50,000	80,000				130,000	
	General Services Interconnection (water & air, etc.)	Allowance	Est	1	50,000	50,000				100,000	
	Adjustment for FL Building Code										
	Steel @ 7%	Applied to Estimated Steel Cost	Est	1	0	148,960				148,960	
	Concrete @ 10%	Applied to Estimated Concrete Cost	Est	1	0	127,680				127,680	

EXHIBIT NO. _____ (JBS-9)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 15 OF 44

CONFIDENTIAL

EXHIBIT: 2A-2
Sargent & Lundy LLC
Chicago

Tampa Electric
Big Bend
Rail Delivery
Order of Magnitude
-PRELIMINARY AND CONFIDENTIAL-

Estimate No.: 21222A
Project No.: 09476-019
Date: 9/11/03
Run Date: 9/11/03
Preparer: GBB/SM
Reviewer: PAD

Cost Type:
Est=Estimated
B=Bid
OPB=Other Project Bid
Q=Vendor Quote

Acct. No.	Description	Scope Definition	Cost Type	Quantity	Total Equipment or Material Cost	Total Construction & Erection Cost	Sub-Contracts	DOR (Furnish)	DOR (Install)	Total Projected Cost	Sub-Totals
	Sub-Total				16,995,000	14,627,640				31,622,640	
	Other Costs/Adjustments										2,194,000
	Contractor's General & Administrative Costs	Based 5% of Equip, Material, and Labor				731,000				731,000	
	Contractor's Profit	Based 10% of Equip, Material, and Labor				1,463,000				1,463,000	
	Total Equipment, Material and Labor Costs				16,995,000	16,821,640				33,816,640	33,816,640
	Freight, Duties, Taxes, Etc.										0
	Freight-ExWorks To Site	Included in Material & Equipment Costs								Included in Material & Equipment Costs	
	Taxes - Sales/Use/VAT/Business/Etc.	Not Included								Not Included	
	Total Direct Project Costs				16,995,000	16,821,640				33,816,640	33,816,640
	Indirect Costs										3,368,881
	Insurance									Not Included	
	Builders Risk									2,367,165	
	Engineering/Procurement									236,716	
	Tampa Electric Interface with A/E	Project Mgmnt, Eng and Construction Support								600,000	
	Tampa Electric Management of EPC Contractor	Four men for 2 yrs @ $75K.								163,000	
	Permits and Fees	Tampa									

457

EXHIBIT NO. _____ (JBS-9)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 16 OF 44

TAMPA ELECTRIC COMPANY
DOCKET NO. 031033-EI
FIPUG'S 1st REQUEST FOR POD

CONFIDENTIAL

EXHIBIT: 2A-2
Sargent & Lundy LLC
Chicago

Tampa Electric
Big Bend
Rail Delivery
Order of Magnitude
-PRELIMINARY AND CONFIDENTIAL-

Cost Type:
Est=Estimated
B=Bid
OPB=Other Project Bid
Q=Vendor Quote

Estimate No.: 21222A
Project No.: 09476-019
Date: 9/11/03
Run Date: 9/11/03
Preparer: GBB/SM
Reviewer: PAG

Acct. No.	Description	Scope Definition	Cost Type	Quantity	Total Equipment or Material Cost	Total Construction & Erection Cost	Sub-Contracts	DOR (Furnish)	DOR (Install)	Total Projected Cost	Sub-Totals
	Total Indirect Project Costs									3,366,881	
	Escalation	*Not Included*								Not Included	0
	EPC Costs									4,920,321	4,920,321
	General & Administrative (G&A) @ 5% of Direct Costs									1,690,832	
	Efficacy Insurance @ .8% of Direct Costs									270,533	
	Fee @ 8% of Direct Costs	Profit and Home Office Overhead								2,705,331	
	Performance Bond @ .75% of Direct Costs									253,625	
	Contingency										8,420,768
	Contingency	20% of overall cost								8,420,768	
	Interest During Construction (AFUDC)	Not Included								*Not Included*	0
	Total Project Cost									50,524,611	50,524,61'

458

EXHIBIT NO. ______ (JBS-9)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 17 OF 44

TAMPA ELECTRIC COMPANY
DOCKET NO. 031033-EI
FIPUG'S 1st REQUEST FOR POD

CONFIDENTIAL

TAMPA ELECTRIC COMPANY
DOCKET NO. 031033-EI
FIPUG'S 1st REQUEST FOR POD

EXHIBIT 2A-3

OPERATING COST ESTIMATE FOR 2 - 5.5 MILLION TON RAIL DELIVERY OF COAL BIG BEND STATION

Variable		
Power[1]	$68,000 - $128,000	
Surfactant	$97,000 - $266,000	
Labor	$301,308 - $903,925	
Fixed		
Labor	$301,308	
Lease for Locomotive	Not Available	
Taxes and Insurance (2.085% Installed Capital Cost)	$573,900	
Maintenance (3% of Installed Cost)	$825,720	
Total Operating Cost Per Year	$2,167,200	$2,697,500

[1]Calculated on replacement fuel cost only.

CONFIDENTIAL

TAMPA ELECTRIC COMPANY
DOCKET NO. 031033-EI
FIPUG'S 1st REQUEST FOR POD

EXHIBIT 2B-1

BIG BEND CAPITAL COST 1- 2 MM TON

CSXT ESTIMATE

Big Bend 1 - 2 MM TPY Option (Standard Coal Hoppers)

System Rated at 1500 TPH

Modify Limestone Pit	$250,000
Long Conveyor	$1,953,000
Transfer Station	$230,000
Short Conveyor	$280,000
Three 45 Car Tracks	$1,200,000
200' Radial Stacker	$250,000
Truck Dump and Conveyor	$350,000
Total	$4,513,000

Equipment to Load Shuttle Trains

Reclaim Hopper with Feed to Batch Silo	$469,000
250 Ton Batch Silo	$1,066,000
Loader/Dozer	$750,000
Total	$2,285,000

Grand Total	$10,846,000

EXHIBIT NO. _____ (JBS-9)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 19 OF 44

CONFIDENTIAL

TAMPA ELECTRIC COMPANY
DOCKET NO. 031033-EI
FIPUG'S 1st REQUEST FOR POD

EXHIBIT 2B-2

BIG BEND 1 TO 2 MILLION TON BUILD IN

S&L INDEPENDENT ESTIMATE

EXHIBIT NO. _____ (JBS-9)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 20 OF 44

CONFIDENTIAL

EXHIBIT: 2B-2
Sargent & Lundy LLC
Chicago

Tampa Electric
Big Bend
Rail Delivery
Order of Magnitude
-PRELIMINARY AND CONFIDENTIAL-

Cost Type:
Est=Estimated
B=Bid
OPB=Other Project Bid
Q=Vendor Quote

Estimate No.: 21223A
Project No.: 09478-019
Date: 8/11/03
Run Date: 8/11/03
Preparer: GBB/SM
Reviewer: PAG

Acct. No.	Description	Scope Definition	Cost Type	Quantity	Total Equipment or Material Cost	Total Construction & Erection Cost	Sub-Contracts	DOR (Furnish)	DOR (Install)	Total Projected Cost	Sub-Totals
	1 - 2 MM TPY OPTION WITH BOTTOM DUMP HOPPER										
	Equipment To Unload Trains @ 1500 TPH										**10,965,000**
	Excavation for track hopper pit foundation		Est	1	0	500,000				500,000	
	Concrete work for track hopper		Est	1	400,000	160,000				560,000	
	Track hopper building		Est	1	120,000	48,000				168,000	
	Car shaker / support steel		Est	1	60,000	24,000				84,000	
	Hopper and grizzly		Est	1	150,000	60,000				210,000	
	Track hopper dust suppression		Est	1	100,000	40,000				140,000	
	Belt feeders		Est	2	120,000	48,000				168,000	
	Concrete work for conveyor / tunnel		Est	1	150,000	60,000				210,000	
	Belt conveyor, 48" wide, 250 ft long		Est	1	375,000	150,000				525,000	
	Transfer house		Est	1	80,000	32,000				112,000	
	Foundation for transfer house		Est	1	40,000	16,000				56,000	
	Belt conveyor, 48" wide, 1,500 ft long, hooded conveyor		Est	1	1,800,000	720,000				2,520,000	
	Transfer house		Est	1	200,000	160,000				360,000	
	Foundation for transfer house		Est	1	50,000	20,000				70,000	
	Belt conveyor to radial stacker, 48" wide, 400 ft long, hooded conveyor		Est	1	500,000	200,000				700,000	
	Transfer house at radial stacker		Est	1	100,000	80,000				180,000	
	Foundation for transfer house		Est	1	40,000	16,000				56,000	
	Radial stacker, 48" wide, 200 ft long		Est	1	250,000	200,000				450,000	
	Foundation work for conveyors		Est	1	100,000	80,000				180,000	
	Dust suppression for belt conveyors		Est	1	200,000	80,000				280,000	
	Fire protection for conveyors		Est	1	118,000	118,000				236,000	
	HVAC for track hopper pit and transfer houses		Est	1	200,000	80,000				280,000	
	Sump pump system at track hopper		Est	1	50,000	20,000				70,000	
	Hoists and trolleys		Est	1	50,000	20,000				70,000	
	Track work modification, add one 45 car track	2500 LF	Est	1	250,000	750,000				1,000,000	
	Temporary Coffer Dam		Est	1	500,000	1,042,000				1,542,000	
	Dewatering		Est	1	2,000	236,000				238,000	
	Equipment To load Shuttle Trains										**5,371,000**
	Excavation for reclaim hopper pit foundation		Est	1	0	300,000				300,000	
	Concrete work for RECLAIM hopper		Est	1	300,000	120,000				420,000	
	Hopper and grizzly		Est	1	150,000	60,000				210,000	
	Belt feeder	2 Each	Est	1	120,000	48,000				168,000	
	Concrete work for conveyor / tunnel		Est	1	100,000	40,000				140,000	

462

EXHIBIT NO. _______ (JBS-9)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 21 OF 44

TAMPA ELECTRIC COMPANY
DOCKET NO. 031033-EI
FIPUG'S 1st REQUEST FOR POD

CONFIDENTIAL

EXHIBIT: 2B-2
Sargent & Lundy LLC
Chicago

Tampa Electric
Big Bend
Rail Delivery
Order of Magnitude
-PRELIMINARY AND CONFIDENTIAL-

Estimate No.: 21223A
Project No.: 09478-019
Date: 9/11/03

Cost Type:
Est=Estimated
B=Bid
OPB=Other Project Bid
Q=Vendor Quote

Run Date: 9/11/03
Preparer: GBB/SM
Reviewer: PAG

Acct. No.	Description	Scope Definition	Cost Type	Quantity	Total Equipment or Material Cost	Total Construction & Erection Cost	Sub-Contracts	DOR (Furnish)	DOR (Install)	Total Projected Cost	Sub-Totals
	Belt conveyor, 48" wide, 500 ft long		Est	1	500,000	200,000				700,000	
	Loadout bin structure		Est	1	750,000	300,000				1,050,000	
	Foundation work for conveyors		Est	1	30,000	24,000				54,000	
	Dust suppression for belt conveyors		Est	1	200,000	80,000				280,000	
	Fire protection for conveyors		Est	1	25,000	25,000				50,000	
	HVAC for reclaim hopper, loadout station		Est	1	50,000	20,000				70,000	
	Sump pump system at reclaim hopper and loadout station		Est	1	50,000	20,000				70,000	
	Hoists and trolleys		Est	1	30,000	12,000				42,000	
	Loader / dozer		Est	1	750,000	0				750,000	
	Temporary Coffer Dam		Est	1	300,000	625,000				925,000	
	Dewatering		Est	1	1,000	141,000				142,000	
	Electrical - Aux. Power										2,329,000
	Vacuum Circuit Breaker and Cubicles		Est	2	50,000	3,000				53,000	
	480 V Transformer	Includes Switchgear	Est	2	270,000	28,000				298,000	
	MCC	480 V (71 Motors)	Est	6	240,000	63,000				303,000	
	Trays	Trays (Transformer Feed)	Est	2,000	60,000	58,000				118,000	
	Conduits	Conduits (500 LF typ per motor feed)	Est	35,500	107,000	306,000				413,000	
	Transformer Feeder Cable	MV-90	Est	2,000	16,000	40,000				56,000	
	MV Wiring	3/C #2 - 500 LF per motor	Est	35,500	178,000	564,000				742,000	
	Electrical Building - Pre Fabricated - Complete	Elevated supports and foundations	Est	1	200,000	60,000				260,000	
	Conveyor Lighting	2850 LF	Est	1	40,000	46,000				86,000	
	Control & Instrumentation										856,000
	DCS Upgrades	6 I/O's per Motor	Est	1	300,000	300,000				600,000	
	DCS BOP Equipment		Est	1	25,000	25,000				50,000	
	Locally Mounted Instruments		Est	1	2,000	4,000				6,000	
	BOP Items										685,846
	Fire Protection Upgrade	1000 LF	Est	1	95,000	84,000				179,000	
	Demo/Reconstruction of Storage Area	Elevated at +15' (90,000 CY)	Est	2	0	30,000				30,000	
	Storm water/Coal Runoff Grading Upgrades	3000 LF	Est	1	2,000	6,000				8,000	
	Underground Utility Identification and Relocation	Tampa - Allowance	Est	1	25,000	25,000				50,000	
	Rail Bridge Over Water Lines	2 - 20" lines	Est	1	50,000	80,000				130,000	
	General Services Interconnection (water & air, etc.)	Allowance	Est	1	50,000	50,000				100,000	

TAMPA ELECTRIC COMPANY
DOCKET NO. 031033-EI
FIPUG'S 1st REQUEST FOR POD

463

EXHIBIT NO. ______ (JBS-9)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 22 OF 44

CONFIDENTIAL

EXHIBIT: 2B-2											
Sargent & Lundy LLC				Tampa Electric					Estimate No.:	21223A	
Chicago				Big Bend					Project No.:	09478-019	
				Rail Delivery					Date:	9/11/03	
		Cost Type:		Order of Magnitude							
		Est=Estimated		-PRELIMINARY AND CONFIDENTIAL-							
		B=Bid							Run Date:	9/11/03	
		OPB=Other Project Bid							Preparer:	GBB/SM	
		Q=Vendor Quote							Reviewer:	PAG	
Acct. No.	**Description**	**Scope Definition**	**Cost Type**	**Quantity**	**Total Equipment or Material Cost**	**Total Construction & Erection Cost**	**Sub-Contracts**	**DOR (Furnish)**	**DOR (Install)**	**Total Projected Cost**	**Sub-Totals**
	Adjustment for FL Building Code										
	Steel @ 7%	Applies to Estimated Steel Cost	Est	1	0	188,846				188,846	
	Concrete @ 10%	Applies to Estimated Concrete Cost	Est	1	0	161,868				161,868	
	Sub-Total				11,071,000	8,935,846				20,006,846	
	Other Costs/Adjustments										1,341,000
	Contractor's General & Administrative Costs	Based 5% of Equip, Material, and Labor				447,000				447,000	
	Contractor's Profit	Based 10% of Equip, Material, and Labor				894,000				894,000	
	Total Equipment, Material and Labor Costs				11,071,000	10,276,846				21,347,846	21,347,846
	Freight, Duties, Taxes, Etc.										
	Freight-ExWorks To Site	Included in Material & Equipment Costs								Included in Material & Equipment Costs	
	Taxes - Sales/Use/VAT/Business/Etc.	Not Included								Not Included	
	Total Direct Project Costs				11,071,000	10,276,846				21,347,846	21,347,84
	Indirect Costs										2,408,78
	Insurance										
	Builders Risk									Not Included	
	Engineering/Procurement									1,494,349	

TAMPA ELECTRIC COMPANY
DOCKET NO. 031033-EI
FIPUG'S 1st REQUEST FOR POD

464

EXHIBIT NO. ______ (JBS-9)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 23 OF 44

CONFIDENTIAL

EXHIBIT: 2B-2
Sargent & Lundy LLC
Chicago

Tampa Electric
Big Bend
Rail Delivery
Order of Magnitude
-PRELIMINARY AND CONFIDENTIAL-

Cost Type:
Est=Estimated
B=Bid
OPB=Other Project Bid
Q=Vendor Quote

Estimate No.: 21223A
Project No.: 09478-019
Date: 9/11/03
Run Date: 9/11/03
Preparer: GBB/SM
Reviewer: PAG

Acct. No.	Description	Scope Definition	Cost Type	Quantity	Total Equipment or Material Cost	Total Construction & Erection Cost	Sub-Contracts	DOR (Furnish)	DOR (Install)	Total Projected Cost	Sub-Totals
										149,435	
	Tampa Electric Interface with A/E	Project Mgmnt, Eng and Construction Support								600,000	
	Tampa Electric Management of EPC Contractor	Four men for 2 yrs @ $75K.								183,000	
	Permits and Fees	Tampa								2,408,784	
	Total Indirect Project Costs									Not Included	0
	Escalation	Not Included								3,106,112	3,106,112
	EPC Costs									1,067,392	
	General & Administrative (G&A) @ 5% of Direct Costs									170,783	
	Efficacy Insurance @ .8% of Direct Costs									1,707,828	
	Fee @ 8% of Direct Costs	Profit and Home Office Overhead								160,109	
	Performance Bond @ .75% of Direct Costs										5,372,148
	Contingency									5,372,148	
	Contingency	20% of overall cost								Not Included	
	Interest During Construction (AFUDC)	Not Included								32,232,890	32,232,89[illegible]
	Total Project Cost										

TAMPA ELECTRIC COMPANY
DOCKET NO. 031033-EI
FIPUG'S 1st REQUEST FOR POD

465

EXHIBIT NO. ____ (JBS-9)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 24 OF 44

EXHIBIT 2B-3

BIG BEND 1 TO 2 MILLION TON BUILD IN

OPERATING COST CONSIDERATIONS

Variable	
Power	$34,000 - $68,000
Surfactant	$50,000 - $97,000
Labor	$301,308
Fixed	
Lease for Locomotive	Not Available
Taxes and Insurance (2.085% of Capital)	$420,400
Maintenance (3% of Capital)	$605,000
Total	$1,492,000

CONFIDENTIAL

TAMPA ELECTRIC COMPANY
DOCKET NO. 031033-EI
FIPUG'S 1st REQUEST FOR POD

EXHIBIT 2C-1

TECO BID POLK CAPITAL COSTS

CSXT ESTIMATE

Shuttle Train Unload System	
Bottom Dump with Conveyor to Silos 1500 TPH.....	$1,818,000
2500' of Track at $200 foot.....	$500,000
Total.....	$2,318,000

EXHIBIT NO. _____ (JBS-9)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 26 OF 44

CONFIDENTIAL

Tampa Electric Company
Big Bend and Polk Generating Stations
CSX Transportation
Alternate Method of Coal Delivery

Sargent & Lundy

SL-008160
Project No. 09476-019
September 18, 2003

TAMPA ELECTRIC COMPANY
DOCKET NO. 031033-EI
FIPUG'S 1st REQUEST FOR POD

EXHIBIT 2C-2

POLK BUILD IN SHUTTLE TRAIN UNLOAD

S&L CAPITAL ESTIMATES

EXHIBIT NO. _____ (JBS-9)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 27 OF 44

CONFIDENTIAL

EXHIBIT: 2C-2				Tampa Electric					Estimate No.:	21224A	
Sargent & Lundy LLC				Polk Station					Project No.:	09479-019	
Chicago				Rail Delivery					Date:	9/11/03	
		Cost Type:		Order of Magnitude							
		Est=Estimated		-PRELIMINARY AND CONFIDENTIAL-							
		B=Bid							Run Date:	9/11/03	
		OPB=Other Project Bid							Preparer:	GBB/SM	
		Q=Vendor Quote							Reviewer:	PAG	
Acct. No.	**Description**	**Scope Definition**	**Cost Type**	**Quantity**	**Total Equipment or Material Cost**	**Total Construction & Erection Cost**	**Sub-Contract #**	**DOR (Furnish)**	**DOR (Install)**	**Total Projected Cost**	**Sub-Totals**
	SHUTTLE TRAIN UNLOADING SYSTEM										
	Equipment To Unload Trains @ 1500 TPH										6,737,500
	Excavation for track hopper pit foundation		Est	1	0	500,000				900,000	
	Concrete work for track hopper		Est	1	400,000	180,000				280,000	
	Track hopper building		Est	1	120,000	48,000				108,000	
	Car shaker / support steel		Est	1	60,000	24,000				174,000	
	Hopper and grizzly		Est	1	150,000	60,000				160,000	
	Track hopper dust suppression		Est	1	100,000	40,000				160,000	
	Belt feeders	2 EACH	Est	1	120,000	48,000				198,000	
	Concrete work for conveyor / tunnel		Est	1	150,000	60,000				780,000	
	Belt conveyor, 48" wide, 600 ft long		Est	1	720,000	576,000				606,000	
	Diverter gate on top of silos		Est	1	30,000	12,000				112,000	
	Transfer conveyor on top of silos, 36" wide, 50 ft		Est	1	100,000	40,000				90,000	
	Modification on top of the silo		Est	1	50,000	20,000				50,000	
	Foundation work for conveyors		Est	1	30,000	24,000				224,000	
	Dust suppression for belt conveyors		Est	1	200,000	80,000				113,000	
	Fire protection for conveyors		Est	1	33,000	32,500				232,500	
	HVAC for track hopper pit, electrical bldg.		Est	1	200,000	80,000				130,000	
	Sump pump system		Est	1	50,000	20,000				70,000	
	Hoists and trolleys		Est	1	50,000	20,000				70,000	
	Track work cost	2500 LF	Est	1	250,000	250,000				500,000	
	Temporary Coffer Dam		Est	1	500,000	1,042,000				1,542,000	
	Dewatering		Est	1	2,000	236,000				238,000	
	Electrical - Aux. Power - 13.8 KV										1,510,000
	Vacuum Circuit Breaker and Cubicles		Est	2	50,000	3,000				53,000	
	480 V Transformer	Includes Switchgear	Est	2	300,000	26,000				326,000	
	MCC	480 V (40 Motors)	Est	3	120,000	32,000				152,000	
	Trays	Trays (Transformer Feed)	Est	2,000	60,000	58,000				118,000	
	Conduits	Conduits (500 LF typ per motor feed)	Est	20,000	60,000	173,000				233,000	
	Transformer Feeder Cable	MV-90	Est	2,000	18,000	40,000				58,000	
	MV Wiring	3/C #2 - 500 LF per motor	Est	20,000	100,000	316,000				416,000	
	Electrical Building - Pre Fabricated - Complete	Includes foundation	Est	1	110,000	22,000				132,000	

TAMPA ELECTRIC COMPANY
DOCKET NO. 031033-EI
FIPUG'S 1st REQUEST FOR POD

463

EXHIBIT NO. ______ (JBS-9)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 28 OF 44

CONFIDENTIAL

EXHIBIT: 2C-2

Sargent & Lundy LLC

Chicago

Tampa Electric			Estimate No.:	21224A
Polk Station			Project No.:	09476-619
Rail Delivery			Date:	9/11/03
Order of Magnitude				
-PRELIMINARY AND CONFIDENTIAL-			Run Date:	9/11/03
			Preparer:	GBB/SM
			Reviewer:	PAG

Cost Type:
Est=Estimated
B=Bid
OPB=Other Project Bid
Q=Vendor Quote

Acct. No.	Description	Scope Definition	Cost Type	Quantity	Total Equipment or Material Cost	Total Construction & Erection Cost	Sub-Contract $	DOR (Furnish)	DOR (Install)	Total Projected Cost	Sub-Totals
	Conveyor Lighting	650 LF	Est	1	9,000	11,000				20,000	
											333,000
	Control & Instrumentation										
	DCS Upgrades	6 I/O's per Motor	Est	1	140,000	140,000				280,000	
	DCS BOP Equipment		Est	1	25,000	25,000				50,000	
	Locally Mounted Instruments		Est	1	1,000	2,000				3,000	
											736,125
	BOP Items										
	Fire Protection Upgrade	500 LF	Est	1	48,000	42,000				90,000	
	Storm water/Coal Runoff Grading Upgrades	1500 LF	Est	1	1,000	6,000				7,000	
	Relocation of Wetlands	23 Acres	Est	1	115,000	376,000				491,000	
	Underground Utility Identification and Relocation	Tampa - Allowance	Est	1	13,000	12,000				25,000	
	General Services Interconnection (water & air, etc.)	Allowance	Est	1	25,000	25,000				50,000	
	Adjustment for FL Building Code										
	Steel @ 7%	Applies to Estimated Steel Cost	Est	1	0	39,375				39,375	
	Concrete @ 10%	Applies to Estimated Concrete Cost	Est	1	0	33,750				33,750	
					4,508,000	4,724,875				9,316,625	
	Sub-Total										708,000
	Other Costs/Adjustments										
	Contractor's General & Administrative Costs	Based 5% of Equip, Material, and Labor				236,000				236,000	
	Contractor's Profit	Based 10% of Equip, Material, and Labor				472,000				472,000	
	Total Equipment, Material and Labor Costs				4,508,000	5,432,875				10,024,625	10,024,625
											0
	Freight, Duties, Taxes, Etc.										

N:\INFODIV\PROJECTS\GIBSON PBO\21224A_Polk Studio Tests_2C-2.xls\CSXT Estimate Review
9/11/03

TAMPA ELECTRIC COMPANY
DOCKET NO. 031033-EI
FIPUG'S 1st REQUEST FOR POD

470

EXHIBIT NO. ______ (JBS-9)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 29 OF 44

EXHIBIT: 2C-2

Sargent & Lundy LLC

Chicago

Tampa Electric
Polk Station
Rail Delivery
Order of Magnitude
-PRELIMINARY AND CONFIDENTIAL-

Estimate No.: 21224A
Project No.: 09478-019
Date: 9/11/03

Cost Type:
Est=Estimated
B=Bid
OPB=Other Project Bid
Q=Vendor Quote

Run Date: 9/11/03
Preparer: GBS/SM
Reviewer: PAG

Acct. No.	Description	Scope Definition	Cost Type	Quantity	Total Equipment or Material Cost	Total Construction & Erection Cost	Sub-Contracts	DOR (Furnish)	DOR (Install)	Total Projected Cost	Sub-Totals
	Freight-ExWorks To Site	Included in Material & Equipment Costs								Included in Material & Equipment Costs	
	Taxes - Sales/Use/VAT/Business/Etc.	Not Included								Not Included	
	Total Direct Project Costs				4,508,000	5,432,875				10,024,625	10,024,625
											1,364,896
	Indirect Costs										
	Insurance									Not Included	
	Builders Risk									701,724	
	Engineering/Procurement									70,172	
	Tampa Electric Interface with A/E	Project Mgmnt, Eng and Construction Support								300,000	
	Tampa Electric Management of EPC Contractor	Two men for 2 yrs @ $75K.								293,000	
	Permits and Fees	Tampa								1,364,896	
	Total Indirect Project Costs									Not Included	0
	Escalation	Not Included								1,458,583	1,458,583
	EPC Costs									501,231	
	General & Administrative (G&A) @ 5% of Direct Costs									80,197	
	Efficacy Insurance @ .8% of Direct Costs									801,970	
	Fee @ 8% of Direct Costs	Profit and Home Office Overhead								75,185	
	Performance Bond @ .75% of Direct Costs										2,569,621
	Contingency									2,569,621	
	Contingency	20% of overall cost									

H:\NFODIV\PROJECTS\GIBSON FGD\21224A_Polk Shuttle Train_2C-2.xls\CSXT Estimate Review
9/11/03

CONFIDENTIAL

TAMPA ELECTRIC COMPANY
DOCKET NO. 031033-EI
FIPUG'S 1st REQUEST FOR POD

EXHIBIT NO. _____ (JBS-9)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 30 OF 44

474

CONFIDENTIAL

EXHIBIT: 2C-2				Tampa Electric						Estimate No.:	21224A	
Sargent & Lundy LLC				Polk Station						Project No.:	09478-019	
Chicago				Rail Delivery						Date:	9/11/03	
		Cost Type:		Order of Magnitude								
		Est=Estimated		-PRELIMINARY AND CONFIDENTIAL-						Run Date:	9/11/03	
		B=Bid								Preparer:	GBB/SM	
		OPB=Other Project Bid								Reviewer:	PAG	
		Q=Vendor Quote										
Acct. No.	**Description**	**Scope Definition**	**Cost Type**	**Quantity**	**Total Equipment or Material Cost**	**Total Construction & Erection Cost**	**Sub-Contracts**	**DOR (Furnish)**	**DOR (Install)**	**Total Projected Cost**		**Sub-Totals**
										Not Included		0
	Interest During Construction (AFUDC)	Not Included										
										15,417,725		15,417,725
	Total Project Cost											

TAMPA ELECTRIC COMPANY
DOCKET NO. 031033-EI
FIPUG'S 1st REQUEST FOR POD

EXHIBIT NO. ______ (JBS-9)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 31 OF 44

472

[illegible]
9/11/03

EXHIBIT 2C-3

OPERATING COST ESTIMATE FOR
POLK BUILD IN SHUTTLE DELIVERY

Variable	
Power[1]	$20,000
Chemical for Dust Control	$50,000
Fixed	
Labor	$601,088
Maintenance (3% Capital Cost)	$300,700
Lease on Locomotive	Not Available
Taxes and Insurance (1.58% Capital Cost)	$158,400
Total Operating Cost Per Year	$1,130,000

[1]Calculated on replacement fuel cost only.

CONFIDENTIAL

Tampa Electric Company
Big Bend and Polk Generating Stations
CSX Transportation
Alternate Method of Coal Delivery

SL-008160
Project No. 09476-019
September 18, 2003

TAMPA ELECTRIC COMPANY
DOCKET NO. 031033-EI
FIPUG'S 1st REQUEST FOR POD

EXHIBIT 2D-1

POLK DIRECT DELIVERY - ROTARY DUMP SCENARIOS

S&L INDEPENDENT ESTIMATES

EXHIBIT NO. _____ (JBS-9)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 33 OF 44

CONFIDENTIAL

EXHIBIT: 2D-1
Sargent & Lundy LLC
Chicago

Tampa Electric
Polk Station
Rail Delivery
Order of Magnitude
-PRELIMINARY AND CONFIDENTIAL-

Estimate No.: 21229A
Project No.: 09478-019
Date: 9/11/03
Run Date: 9/11/03
Prepared: GBB/SM
Reviewed: PAQ

Cost Type:
Est=Estimated
B=Bid
OPB=Other Project Bid
Q=Vendor Quote

Acct. No.	Description	Scope Definition	Cost Type	Quantity	Total Equipment or Material Cost	Total Construction & Erection Cost	Sub-Contracts	DOR (Furnish)	DOR (Install)	Total Projected Cost	Sub-Totals
	ROTARY DUMPER AT PLANT - 2,500 TPH										
	Equipment To Unload Trains										**22,141,000**
	Excavation for rotary car dumper foundation		Est	1	0	1,300,000				1,300,000	
	Concrete work for rotary car dumper / positioner		Est	1	1,700,000	660,000				2,360,000	
	Dumper building including control room		Est	1	400,000	160,000				560,000	
	Hopper and grizzly		Est	1	200,000	80,000				280,000	
	Dumper dust suppression		Est	1	100,000	40,000				140,000	
	Rotary car dumper		Est	1	1,100,000	990,000				2,090,000	
	Positioner		Est	1	1,100,000	500,000				1,600,000	
	Belt feeders		Est	2	400,000	80,000				480,000	
	Concrete work for conveyor / tunnel		Est	1	400,000	160,000				560,000	
	Belt conveyor, 60" wide, 500 ft long		Est	1	750,000	600,000				1,350,000	
	Storage dome, 15,000 tons		Est	1	150,000	60,000				210,000	
	Foundation for storage dome		Est	1	200,000	80,000				280,000	
	Lowering well inside dome		Est	1	100,000	40,000				140,000	
	Excavation for reclaim hopper pit foundation		Est	1	0	300,000				300,000	
	Concrete work for reclaim hopper		Est	1	300,000	120,000				420,000	
	Hopper and grizzly		Est	1	150,000	60,000				210,000	
	Belt feeder	2 Each	Est	1	120,000	48,000				168,000	
	Concrete work for conveyor / tunnel		Est	1	100,000	40,000				140,000	
	Belt conveyor, 48" wide, 1000 ft long		Est	1	1,000,000	400,000				1,400,000	
	Diverter gate on top of silos		Est	1	30,000	12,000				42,000	
	Transfer conveyor on top of silos, 48" wide, 50 ft		Est	1	100,000	40,000				140,000	
	Modification on top of the silo		Est	1	50,000	20,000				70,000	
	Foundation work for conveyors		Est	1	30,000	24,000				54,000	
	Dust suppression for belt conveyors		Est	1	200,000	80,000				280,000	
	Fire protection for conveyors		Est	1	75,000	75,000				150,000	
	HVAC for dumper pit and transfer house		Est	1	200,000	80,000				280,000	
	Sump pump system		Est	1	50,000	20,000				70,000	
	Hoists and trolleys		Est	1	50,000	20,000				70,000	
	Loop track cost	8000 LF	Est	1	800,000	800,000				1,600,000	
	Loader / dozer		Est	1	750,000	0				750,000	
	Temporary Coffer Dam		Est	1	1,300,000	2,710,000				4,010,000	
	Dewatering		Est	1	5,000	612,000				617,000	
	Electrical - *Aux. Power* - 13.8 KV										**1,748,000**

EXHIBIT NO. _____ (JBS-9)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 34 OF 44

TAMPA ELECTRIC COMPANY
DOCKET NO. 031033-EI
FIPUG'S 1ST REQUEST FOR POD

CONFIDENTIAL

EXHIBIT: 2D-1				Tampa Electric				Estimate No.:	21225A	
Sargent & Lundy LLC				Polk Station				Project No.:	09478-019	
Chicago				Rail Delivery				Date:	9/11/03	
				Order of Magnitude						
		Cost Type:		-PRELIMINARY AND CONFIDENTIAL-						
		Est=Estimated						Run Date:	9/11/03	
		B=Bid						Preparer:	GBB/SM	
		OPB=Other Project Bid						Reviewer:	PAO	
		Q=Vendor Quote								

Acct. No.	Description	Scope Definition	Cost Type	Quantity	Total Equipment or Material Cost	Total Construction & Erection Cost	Sub-Contracts	DOR (Furnish)	DOR (Install)	Total Projected Cost	Sub-Totals
	Vacuum Circuit Breaker and Cubicles		Est	2	50,000	3,000				53,000	
	480 V Transformer	Includes Switchgear	Est	2	300,000	28,000				328,000	
	MCC	480 V (50 Motors)	Est	4	160,000	42,000				202,000	
	Trays	Trays (Transformer Feed)	Est	2,000	60,000	58,000				118,000	
	Conduits	Conduits (500 LF typ per motor feed)	Est	25,000	75,000	216,000				291,000	
	Transformer Feeder Cable	MV-90	Est	2,000	18,000	40,000				58,000	
	MV Wiring	3/C #2 - 500 LF per motor	Est	25,000	125,000	398,000				523,000	
	Electrical Building - Pre Fabricated - Complete	Includes foundations	Est	1	110,000	22,000				132,000	
	Conveyor Lighting	1500 LF	Est	1	21,000	24,000				45,000	
											406,000
	Control & Instrumentation										
	DCS Upgrades	6 I/O's per Motor	Est	1	175,000	175,000				350,000	
	DCS BOP Equipment		Est	1	25,000	25,000				50,000	
	Locally Mounted Instruments		Est	1	2,000	4,000				6,000	
											1,360,530
	BOP Items										
	Fire Protection Upgrade	500 LF	Est	1	48,000	42,000				90,000	
	Storm water/Coal Runoff Grading Upgrades	1500 LF	Est	1	1,000	6,000				7,000	
	Relocation of Wetlands	43 Acres	Est	1	215,000	703,000				918,000	
	Underground Utility Identification and Relocation	Tampa - Allowance	Est	1	13,000	12,000				25,000	
	General Services Interconnection (water & air, etc.)	Allowance	Est	1	25,000	25,000				50,000	
	Adjustment for FL Building Code										
	Steel @ 7%	Applies to Estimated Steel Cost	Est	1	0	145,670				145,670	
	Concrete @ 10%	Applies to Estimated Concrete Cost	Est	1	0	124,860				124,860	
	Sub-Total				13,331,000	12,324,530				25,655,530	
											1,848,000
	Other Costs/Adjustments										
	Contractor's General & Administrative Costs	Based 5% of Equip, Material, and Labor				616,000				618,000	

EXHIBIT NO. ______ (JBS-9)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 35 OF 44

476

TAMPA ELECTRIC COMPANY
DOCKET NO. 031033-EI
FIPUG'S 1st REQUEST FOR POD

CONFIDENTIAL

EXHIBIT: 2D-1					Tampa Electric					Estimate No.:	21223A
Sargent & Lundy LLC					Polk Station					Project No.:	09470-010
Chicago					Rail Delivery					Date:	9/11/03
		Cost Type:			Order of Magnitude						
		Est=Estimated			-PRELIMINARY AND CONFIDENTIAL-						
		B=Bid								Rev Date:	9/11/03
		OPB=Other Project Bid								Preparer:	GBB/SM
		Q=Vendor Quote								Reviewer:	PAG
Acct. No.	**Description**	**Scope Definition**	**Cost Type**	**Quantity**	**Total Equipment or Material Cost**	**Total Construction & Erection Cost**	**Sub-Contracts**	**DOR (Furnish)**	**DOR (Install)**	**Total Projected Cost**	**Sub-Totals**
	Contractor's Profit	Based 10% of Equip, Material, and Labor				1,232,000				1,232,000	
	Total Equipment, Material and Labor Costs				13,331,000	14,172,530				27,503,530	27,503,530
	Freight, Duties, Taxes, Etc.										0
	Freight-ExWorks To Site	Included in Material & Equipment Costs								Included in Material & Equipment Costs	
	Taxes - Sales/Use/VAT/Business/Etc.	Not Included								Not Included	
	Total Direct Project Costs				13,331,000	14,172,530				27,503,530	27,503,530
	Indirect Costs										2,710,772
	Insurance										
	Builders Risk									Not Included	
	Engineering/Procurement									1,925,247	
	Tampa Electric Interface with A/E	Project Mgmnt, Eng and Construction Support								192,525	
	Tampa Electric Management of EPC Contractor	Two men for 2 yrs @ $75K.								300,000	
	Permits and Fees	Tampa								293,000	
	Total Indirect Project Costs									2,710,772	
	Escalation	Not Included								Not Included	0
	EPC Costs									4,001,764	4,001,764
	General & Administrative (G&A) @ 5% of Direct Costs									1,375,177	

TAMPA ELECTRIC COMPANY
DOCKET NO. 031033-EI
FIPUG'S 1st REQUEST FOR POD

EXHIBIT NO. ______ (JBS-9)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 36 OF 44

4777

CONFIDENTIAL

EXHIBIT: 2D-1				Tampa Electric					Estimate No.:	21223A	
Sargent & Lundy LLC				Polk Station					Project No.:	09478-019	
Chicago				Rail Delivery					Date:	9/11/03	
		Cost Type:		Order of Magnitude							
		Est=Estimated		-PRELIMINARY AND CONFIDENTIAL-							
		B=Bid							Run Date:	9/11/03	
		OPB=Other Project Bid							Preparer:	GBB/SM	
		Q=Vendor Quote							Reviewer:	PAG	

Acct. No.	Description	Scope Definition	Cost Type	Quantity	Total Equipment or Material Cost	Total Construction & Erection Cost	Sub-Contracts	DOR (Furnish)	DOR (Install)	Total Projected Cost	Sub-Totals
	Efficacy Insurance @ .8% of Direct Costs									220,028	
	Fee @ 8% of Direct Costs	Profit and Home Office Overhead								2,200,282	
	Performance Bond @ .75% of Direct Costs									206,276	
	Contingency										6,843,213
	Contingency	20% of overall cost								6,843,213	
	Interest During Construction (AFUDC)	Not Included								Not Included	0
	Total Project Cost									41,059,279	41,059,279

478

EXHIBIT NO. ______ (JBS-9)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 37 OF 44

TAMPA ELECTRIC COMPANY
DOCKET NO. 031033-EI
FIPUG'S 1st REQUEST FOR POD

CONFIDENTIAL

Sargent & Lundy

Tampa Electric Company
Big Bend and Polk Generating Stations
CSX Transportation
Alternate Method of Coal Delivery

SL-008160
Project No. 09476-019
September 18, 2003

TAMPA ELECTRIC COMPANY
DOCKET NO. 031033-EI
FIPUG'S 1st REQUEST FOR POD

EXHIBIT 2D-2

POLK DIRECT DELIVERY - BOTTOM DUMP SCENARIOS

S&L INDEPENDENT ESTIMATES

EXHIBIT NO. _____ (JBS-9)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 38 OF 44

CONFIDENTIAL

EXHIBIT: 2D-2
Sargent & Lundy LLC
Chicago

Tampa Electric
Polk Station
Rail Delivery
Order of Magnitude
-PRELIMINARY AND CONFIDENTIAL-

Estimate No.: 21226A
Project No.: 09476-019
Date: 9/11/03
Run Date: 9/11/03
Preparer: GBS/SM
Reviewer: PAG

Cost Type:
Est=Estimated
B=Bid
OPB=Other Project Bid
Q=Vendor Quote

Acct. No.	Description	Scope Definition	Cost Type	Quantity	Total Equipment or Material Cost	Total Construction & Erection Cost	Sub-Contract $	DOR (Furnish)	DOR (Install)	Total Projected Cost	Sub-Totals
	BOTTOM DUMPER AT *PLANT* - 1,500 TPH										
	***Equipment* To Unload Trains**										12,741,000
	Excavation for track hopper pit foundation		Est	1	0	500,000				500,000	
	Concrete work for track hopper		Est	1	400,000	160,000				560,000	
	Track hopper building		Est	1	120,000	48,000				168,000	
	Car shaker / support steel		Est	1	60,000	24,000				84,000	
	Hopper and grizzly		Est	1	150,000	60,000				210,000	
	Track hopper dust suppression		Est	1	100,000	40,000				140,000	
	Belt feeders	2 EACH	Est	1	120,000	48,000				168,000	
	Concrete work for conveyor / tunnel		Est	1	150,000	60,000				210,000	
	Belt conveyor, 48" wide, 500 ft long		Est	1	600,000	460,000				1,060,000	
	Storage dome, 15,000 tons		Est	1	150,000	60,000				210,000	
	Foundation for storage dome		Est	1	200,000	80,000				280,000	
	Lowering well inside dome		Est	1	100,000	40,000				140,000	
	Excavation for reclaim hopper pit foundation		Est	1	0	300,000				300,000	
	Concrete work for reclaim hopper		Est	1	300,000	120,000				420,000	
	Hopper and grizzly		Est	1	150,000	60,000				210,000	
	Belt feeder	2 EACH	Est	1	120,000	48,000				168,000	
	Concrete work for conveyor / tunnel		Est	1	100,000	40,000				140,000	
	Belt conveyor, 36" wide, 1000 ft long		Est	1	1,000,000	400,000				1,400,000	
	Diverter gate on top of silos		Est	1	30,000	12,000				42,000	
	Transfer conveyor on top of silos, 36" wide, 60 ft		Est	1	100,000	40,000				140,000	
	Modification on top of the silo		Est	1	50,000	20,000				70,000	
	Foundation work for conveyors		Est	1	30,000	24,000				54,000	
	Dust suppression for belt conveyors		Est	1	200,000	80,000				280,000	
	Fire protection for conveyors		Est	1	75,000	75,000				150,000	
	HVAC for dumper pit and transfer house		Est	1	200,000	80,000				280,000	
	Sump pump system		Est	1	50,000	20,000				70,000	
	Hoists and trolleys		Est	1	50,000	20,000				70,000	
	Loop track cost	8000 LF	Est	1	800,000	800,000				1,600,000	
	Loader / dozer		Est	1	750,000	0				750,000	
	Temporary Coffer Dam		Est	1	800,000	1,668,000				2,468,000	
	Dewatering		Est	1	3,000	376,000				379,000	
	Electrical - Aux. Power - 13.8 KV										1,748,000
	Vacuum Circuit Breaker and Cubicles		Est	2	50,000	3,000				53,000	
	480 V Transformer	Includes Switchgear	Est	2	300,000	28,000				328,000	

TAMPA ELECTRIC COMPANY
DOCKET NO. 031033-EI
FIPUG'S 1st REQUEST FOR POD

480

EXHIBIT NO. ______ (JBS-9)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 39 OF 44

EXHIBIT: 2D-2
Sargent & Lundy LLC
Chicago

Tampa Electric
Polk Station
Rail Delivery
Order of Magnitude
-PRELIMINARY AND CONFIDENTIAL-

Estimate No.: 21226A
Project No.: 09476-019
Date: 9/11/03
Run Date: 9/11/03
Preparer: GBB/SM
Reviewer: PAQ

Cost Type:
Est=Estimated
B=Bid
OPB=Other Project Bid
QV=Vendor Quote

Acct. No.	Description	Scope Definition	Cost Type	Quantity	Total Equipment or Material Cost	Total Construction & Erection Cost	Sub-Contract $	DOR (Furnish)	DOR (Install)	Total Projected Cost	Sub-Totals
	MCC	480 V (50 Motors)	Est	4	160,000	42,000				202,000	
	Trays	Trays (Transformer Feed)	Est	2,000	60,000	56,000				116,000	
	Conduits	Conduits (500 LF typ per motor feed)	Est	25,000	75,000	216,000				291,000	
	Transformer Feeder Cable	MV-90	Est	2,000	16,000	40,000				56,000	
	MV Wiring	3/C #2 - 500 LF per motor	Est	25,000	125,000	398,000				523,000	
	Electrical Building - Pre Fabricated - Complete	Includes foundations	Est	1	110,000	22,000				132,000	
	Conveyor Lighting	1500 LF	Est	1	21,000	24,000				45,000	
	Control & Instrumentation										**406,000**
	DCS Upgrades	6 I/O's per Motor	Est	1	175,000	175,000				350,000	
	DCS BOP Equipment		Est	1	25,000	25,000				50,000	
	Locally Mounted Instruments		Est	1	2,000	4,000				6,000	
	BOP Items										**1,250,030**
	Fire Protection Upgrade	500 LF	Est	1	48,000	42,000				90,000	
	Storm water/Coal Runoff Grading Upgrades	1500 LF	Est	1	1,000	6,000				7,000	
	Relocation of Wetlands	43 Acres	Est	1	215,000	703,000				918,000	
	Underground Utility Identification and Relocation	Tampa - Allowance	Est	1	12,000	12,000				25,000	
	General Services Interconnection (water & air, etc.)	Allowance	Est	1	25,000	25,000				50,000	
	Adjustment for FL Building Code										
	Steel @ 7%	Applies to Estimated Steel Cost	Est	1	0	86,170				86,170	
	Concrete @ 10%	Applies to Estimated Concrete Cost	Est	1	0	73,860				73,860	
	Sub-Total				8,379,000	7,766,030				16,145,030	
	Other Costs/Adjustments										**1,165,000**
	Contractor's General & Administrative Costs	Based 5% of Equip, Material, and Labor				388,000				388,000	
	Contractor's Profit	Based 10% of Equip, Material, and Labor				777,000				777,000	

EXHIBIT NO. _____ (JBS-9)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 40 OF 44

CONFIDENTIAL

TAMPA ELECTRIC COMPANY
DOCKET NO. 031033-EI
FIPUG'S 1st REQUEST FOR POD

EXHIBIT: 2D-2
Sargent & Lundy LLC
Chicago

Tampa Electric
Polk Station
Rail Delivery
Order of Magnitude
-PRELIMINARY AND CONFIDENTIAL-

Cost Type:
Est=Estimated
B=Bid
OPB=Other Project Bid
Q=Vendor Quote

Estimate No.: 21226A
Project No.: 09476-019
Date: 9/11/03
Run Date: 9/11/03
Preparer: GBB/SM
Reviewer: PAG

Acct. No.	Description	Scope Definition	Cost Type	Quantity	Total Equipment or Material Cost	Total Construction & Erection Cost	Sub-Contracts	DOR (Furnish)	DOR (Install)	Total Projected Cost	Sub-Totals
	Total Equipment, Material and Labor Costs				8,379,000	8,931,030				17,310,030	17,310,030
	Freight, Duties, Taxes, Etc.										0
	Freight-ExWorks To Site	Included in Material & Equipment Costs								Included in Material & Equipment Costs	
	Taxes - Sales/Use/VAT/Business/Etc.	Not included								Not included	
	Total Direct Project Costs				8,379,000	8,931,030				17,310,030	17,310,030
	Indirect Costs										1,925,872
	Insurance										
	Builders Risk									Not included	
	Engineering/Procurement									1,211,702	
	Tampa Electric Interface with A/E	Project Mgmnt, Eng and Construction Support								121,170	
	Tampa Electric Management of EPC Contractor	Two men for 2 yrs @ $75K.								300,000	
	Permits and Fees	Tampa								293,000	
	Total Indirect Project Costs									1,925,872	
	Escalation	Not included								Not included	0
	EPC Costs									2,518,609	2,518,609
	General & Administrative (G&A) @ 5% of Direct Costs									865,502	
	Efficacy Insurance @ .8% of Direct Costs									138,480	
	Fee @ 8% of Direct Costs	Profit and Home Office Overhead								1,384,802	
	Performance Bond @ .75% of Direct Costs									129,825	

482

EXHIBIT NO. ____ (JBS-9)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 41 OF 44

CONFIDENTIAL

EXHIBIT: 2D-2				Tampa Electric					Estimate No.:	21228A	
Sargent & Lundy LLC				Polk Station					Project No.:	09476-019	
Chicago				Rail Delivery					Date:	9/11/03	
		Cost Type:		Order of Magnitude							
		Est=Estimated		-PRELIMINARY AND CONFIDENTIAL-							
		B=Bid							Run Date:	9/11/03	
		OPB=Other Project Bid							Preparer:	GBB/SM	
		Q=Vendor Quote							Reviewer:	PAG	

Acct. No.	Description	Scope Definition	Cost Type	Quantity	Total Equipment or Material Cost	Total Construction & Erection Cost	Sub-Contracts	DOR (Furnish)	DOR (Install)	Total Projected Cost	Sub-Totals
	Contingency										4,350,902
	Contingency	20% of overall cost								4,350,902	
	Interest During Construction (AFUDC)	Not Included								Not Included	0
	Total Project Cost									26,105,414	26,105,414

483

EXHIBIT NO. ______ (JBS-9)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 42 OF 44

TAMPA ELECTRIC COMPANY
DOCKET NO. 031033-EI
FIPUG'S 1st REQUEST FOR POD

Tampa Electric Company
Big Bend and Polk Generating Stations
CSX Transportation
Alternate Method of Coal Delivery

SL-008160
Project No. 09476-019
September 18, 2003

TAMPA ELECTRIC COMPANY
DOCKET NO. 031033-EI
FIPUG'S 1st REQUEST FOR POD

EXHIBIT 2D-3

POLK DIRECT DELIVERY

CSXT ESTIMATE

Build In Strategy

Item	Cost
Scenario #1 Rotary Dump at Plant	
Loop Track	$1,102,000
Rotary Dumper with Conveyor to Silo 2500 tph	$3,800,000
New 15,000 Ton Dome	$1,600,000
Total	$6,502,000
Scenario #2 Bottom Dump at Plant	
Loop Track	$1,102,000
Bottom Dump with Conveyor to Silo 1500 tph	$1,818,000
New 15,000 Ton Dome	$1,600,000
Total	$4,520,000

Tampa Electric Company
Big Bend and Polk Generating Stations
CSX Transportation
Alternate Method of Coal Delivery

Sargent & Lundy

SL-008160
Project No. 09476-019
September 18, 2003

TAMPA ELECTRIC COMPANY
DOCKET NO. 031033-EI
FIPUG'S 1st REQUEST FOR POD

EXHIBIT 2D-4

OPERATING COST ESTIMATE FOR POLK DIRECT RAIL DELIVERY

Variable		
	Power[1]	$25,000
	Surfactant	$50,000
Fixed		
	Labor	$157,440
	Maintenance (3% Capital Cost)	$730,500 / $484,000
	Lease on Locomotive	Not Available
	Taxes and Insurance (1.584% Capital Cost)	$385,700/$255,500
Total		$1,349,000/$972,000

[1]Calculated on replacement fuel cost only.

Final draft
Marked copy

Sargent & Lundy LLC

Tampa Electric Company
Big Bend and Polk Generating Stations

CSX Transportation
Alternate Method of Coal Delivery

DRAFT

SL-008160

September 4, 2003

Prepared By: _____

Reviewed By: _____

Approved By: _____

\\dms\tampaelectric\09476-019\SL-008160.doc

EXHIBIT NO. _____ (JBS-10)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 1 OF 107

Tampa Electric Company
Big Bend and Polk Generating Stations
CSX Transportation
Alternate Method of Coal Delivery

SL-008160
Project No. 09476-019
September 4, 2003

TABLE OF CONTENTS

EXHIBITS

EXHIBIT NO. _____ (JBS-10)
JOHN B. STAMBERG – CSXT
DOCKET NO. 031033-EI
PAGE 2 OF 107

Sargent & Lundy LLC

Tampa Electric Company
Big Bend and Polk Generating Stations
CSX Transportation
Alternate Method of Coal Delivery

SL-008160
Project No. 09476-019
September 4, 2003

I. Executive Summary

Sargent & Lundy L.L.C. has reviewed the proposal issued to Tampa Electric by CSX Transportation for alternate method of coal delivery to the Big Bend and Polk Generating Stations. The proposal, dated August 11, 2003, offers conceptual design and cost information to bring coal to the stations by rail direct rather than by the traditional barge transport.

The purpose of the S&L review is to validate the capital cost for each option proposed, to provide differential operating cost estimates for each, and to provide assessment of assumptions made which qualify the bid. The Tampa Electric Fuels Strategy Group will use the results of the S&L analysis to evaluate this option against the other coal transportation bids received.

Although CSXT has done an admirable job in their conceptual plan, in some cases the concept provided would not be feasible in its proposed form. For those cases, we have made the necessary adjustments to the design and have provided costs for the adjusted plan. Specific examples include:

- The limestone unloading facility at Big Bend will not be used for unloading coal by rail. Contamination of the limestone with coal would present several process obstacles with the FGDS and gypsum byproduct.
- New track placement interferes with existing facilities in some areas. The track has been rerouted where necessary to accommodate existing operations.
- The conveyor belt sizing for the 2 –5.5 MM ton Big Bend Option is marginal. The estimate provided increases the belt width to 60 inches. A 60-inch conveyor is appropriate for the duty rating expected.

Each case is discussed more fully in the following section of the report.

The cost information provided with the proposal appears to be low in all cases. The costs provided appear to include material and new equipment only. Therefore, the installation cost and costs associated with modification to existing facilities need to be added. The capital cost estimate comparison for each scenario is as follows:

	CSXT Estimate	S&L Estimate
Big Bend 2 to 5.5 Million Ton Build In	$ 10,846,000	41,354,394
Big Bend 1 to 2 Million Ton Build In	$6,798,000	30,557,576
Polk Build In Shuttle Train Unload	$ 2,318,000	14,910,143
Polk Direct Delivery – Rotary Dump	$ 6,502,000	35,226,497
Polk Direct Delivery – Rotary Dump	$ 4,520,000	23,160,079

EXHIBIT NO. _____ (JBS-10)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 3 OF 107

The estimates provided in the rail delivery bids do not take into account the additional operating costs required at each station. Fixed operating cost increases will be required for most of the options included in the bid package because of the additional operating staff that will be required to manage the coal unloading and storage. Variable operating costs will also increase at each station as a result of the additional equipment. Increased electrical load and equipment maintenance costs make up the majority of the variable operating cost estimate.

	Fixed Operating Cost	Variable Operating Cost
Big Bend 2 to 5.5 Million Ton Build In		
Big Bend 1 to 2 Million Ton Build In		
Polk Build In Shuttle Train Unload		
Polk Direct Delivery – Rotary Dump		
Polk Direct Delivery – Rotary Dump		

The proposal options offered by CSXT have identified the demurrage rate assumed in each case. In some instances, we believe that the rates provided are more aggressive than can be reasonably achieved. These discrepancies can either be used as a point of negotiation or as a probable cost to Tampa Electric. We have not included demurrage fees in the operating cost estimates but rather provide the data for your use and evaluation during your contract negotiations.

	Demurrage Allowed in Bid	Estimated Unload Time Required
Big Bend 2 to 5.5 Million Ton Build In	4 hour	6
Big Bend 1 to 2 Million Ton Build In	24 hour	9
Polk Build In Shuttle Train Unload		
Polk Direct Delivery – Rotary Dump		
Polk Direct Delivery – Rotary Dump		

Environmental considerations that need to be addressed in the full evaluation of these coal transportation options include wetlands reconstruction, coal pile runoff, and noise abatement. These issues are discussed at the end of this report.

II. Bid Analysis

A. Big Bend 2 to 5.5 Million Ton Build In

requires rail load

The conceptual design that is proposed for this option ~~is acceptable~~ with three alterations:

EXHIBIT NO. _____ (JBS-10)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 4 OF 107

Sargent & Lundy

Tampa Electric Company
Big Bend and Polk Generating Stations
CSX Transportation
Alternate Method of Coal Delivery

SL-008160
Project No. 09476-019
September 4, 2003

1. The use of the limestone unloading facility for coal unloading is not desirable. Although introducing small amounts of limestone to the coal supply is not a particular problem, introducing small amounts of coal to the limestone supply is indeed a problem. Coal introduced through the FGD system will adversely effect its process design. First, the coal will contaminate the gypsum byproduct that is currently being sold for wallboard manufacture. Second, the coal will contaminate the water reclaimed from the FGD system and will therefore concentrate in the process loop. This will increase the suspended solids in the reclaim water, which is used for mist eliminator washing. Higher suspended solids can result in plugging of the wash nozzles, headers and piping, and in erosion of the mist eliminator vanes. For these reasons, it is not common practice to share unloading of coal with limestone supplies for FGD. The estimate provided herein included provisions to install a new separate coal unloading station due west of the existing limestone unloading station and directly south of the existing FGDS.

2. The 45 car rail spur identified in the proposal for use at the new railcar load- out which transfers coal to be sent to the Polk Station is located within the boundaries of the existing desalinization plant which is owned and operated by ????. It is suggested that this rail spur be moved to the south side of the rail loading facility. This change has been incorporated into the estimate. It represents a minor cost impact.

3. **SAM, please provide text on the conveyor width.**

Covanta is operator
E-mail to RLB for correct desal owner name

The capital cost estimate that is provided with this option appears to be quite low. As illustrated in the executive summary, we would expect the installed cost for this scope of work to be more than double the proposed amount. Although the basis of the estimate is not identified specifically, it would appear that the estimate provided by CSXT in the proposal represents the capital cost for the engineered equipment for coal transport only. **Exhibits 2A-1 and 2A-2** are the respective CSXT and S&L cost estimates for Big Bend 2-5.5 MM Ton Rail Coal delivery option.

S&L has assumed that hooded conveyors will be acceptable and permitable for the new conveyors except the transfer conveyor that travels over the intake canal. The transfer conveyor is totally enclosed from the blending bin to the proposed transfer tower. Should environmental permitting require all of the conveyor to be totally enclosed, then the increase to the capital estimate will be approximately $?????????.

In addition to the new equipment and installation costs, S&L has included costs for the following support tasks required to complete the scope work:

- Fire Loop Extension
- Dust Suppression System
- Repair to Existing On-Site Track
- Modifications to Transfer House T2

EXHIBIT NO. _____ (JBS-10)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 5 OF 107

- Demo/Reconstruct Storm Storage Area
- Re-Grading for Storm Water and Runoff
- Underground Utility Identification and Relocation
- Installation of Rail Bridge Over Water Lines on East Side of Property
- Conveyor Lighting
- Blending Bin Modifications
- Adjustments for High Water Table
- Adjustment for FL Building Code
- Transformers for Electrical Supply
- Double End Bus Substation
- PLC
- Electrical Interconnect
- I/C Interconnect
- Services Interconnect (Instrument Air, Service Air, Water)
- Environmental Permitting Evaluation
- Contractor G&A and Fee
- Tampa Electric Overheads

The overhead costs include engineering oversight by the Owner's AE, construction oversight, and Tampa Electric internal project costs.

Operating cost considerations to be included in the overall bid evaluation are tabulated in **Exhibit 2A-3**. The combined fixed and variable operating costs for this option are **$??????** per year.

B. Big Bend 1 to 2 Million Ton Build In

The conceptual design proposed by CSXT is adequate except for the use of the limestone unloading station for coal. We have made the same adjustment to this option as described in the 2 to 5.5 MM Ton Rail Delivery Option described above.

This option introduces some operating constraints that do not otherwise exist. This option provides a radial stacker to stack the coal and does not tie into the existing conveyor systems. This arrangement is adequate for the smaller coal throughput but limits coal storage to one of the three existing coal storage bays. Coal pile management will therefore be more complicated and require more labor to maintain.

The capital cost estimate provided with the CSXT proposal is provided in **Exhibit 2B-1**. Again, the capital costs provided appear to be low compared to the independent total installed cost estimate prepared as part of this evaluation. **Exhibit 2B-2** provides the details of the independent estimate prepared by S&L.

EXHIBIT NO. _____ (JBS-10)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 6 OF 107

In addition to the new equipment and installation costs, S&L has included costs for the following support tasks required to complete the scope work:

- Fire Loop Extension
- Dust Suppression System
- Repair to Existing On-Site Track
- Demo/Reconstruct Storm Storage Area
- Re-Grading for Storm Water and Runoff
- Underground Utility Identification and Relocation
- Installation of Rail Bridge Over Water Lines on East Side of Property
- Conveyor Lighting
- Adjustments for High Water Table
- Adjustment for FL Building Code
- Transformers for Electrical Supply
- Double End Bus Substation
- PLC
- Electrical Interconnect
- I/C Interconnect
- Services Interconnect (Instrument Air, Service Air, Water)
- Environmental Permitting Evaluation
- Contractor G&A and Fee
- Tampa Electric Overheads

No modifications to the T2 transfer tower and blending bin are required for this option and we have assumed hooded conveyors are acceptable. The increased cost for totally enclosed conveyors should they be required is **$?????.**

Operating cost considerations to be included in the overall bid evaluation are tabulated in **Exhibit 2B-3.** The combined fixed and variable operating costs for this option are **$?????? per year.**

C. *Polk Build In Shuttle Train Unload*

This design option provided in the CSXT proposal for the Polk Plant is the least expensive and the least intrusive to the current plant operations although coordination with sulfuric acid deliveries will be required.

The independent, estimated total installed cost for this option is **$????????** which is **??%** higher than the capital cost identified in the CSXT proposal. **Exhibit 2C-1** and **Exhibit 2C-2** provide the details of the CSXT and S&L capital estimates respectively.

Currently, sulfuric acid deliveries are by truck. Trains may not interfere.

EXHIBIT NO. _____ (JBS-10)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 7 OF 107

In addition to the new equipment and installation costs, S&L has included, in the independent estimate, costs for the following support tasks required to complete the scope work.

- Underground Reclaim Hopper
- Bulldozer
- Fire Loop Extension
- Dust Suppression
- Repair to Existing On-Site Track
- Modifications to Existing Coal Silo
- Grading for Stormwater/Coal Runoff
- Underground Utility Identification and Relocation
- Wetlands Relocation
- Conveyor Lighting
- Adjustment for FL Building Code
- Adjustments for the High Water Table
- Transformers
- Double End Bus Substation
- I/O Blocks
- Electrical Interconnect
- DCS Interconnect
- Services Interconnect
- Environmental Permitting
- Contractor G&A and Fee
- Tampa Electric Overheads

Operating cost considerations to be included in the overall bid evaluation of this option are tabulated in **Exhibit 2C-3**. The combined fixed and variable operating costs for this option are **$??????** per year.

D. Polk Direct Delivery – Rotary Dump and Bottom Dump Scenarios

The conceptual design of this option proposed by CSXT is adequate. This option introduces coal storage to the Polk station. The domed storage facility minimizes the environmental impact to the station. The loop track provides sufficient storage to prevent obstruction of other plant operations.

The proposal provided by CSXT includes two scenarios for this option. The first uses a rotary car dumper and a coal-unloading rate of xxx ton/hr. The second is similar but uses a bottom dump rail car at a lower unloading rate of yyy ton/hr. We have included

EXHIBIT NO. _____ (JBS-10)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 8 OF 107

a car shaker with the bottom dump rail car estimate. The independent estimates prepared for this option are included as **Exhibit 2D-1** and **Exhibit 2D-2.** The CSXT proposal estimate, again lower than the estimated installed costs prepared by S&L, is provided as **Exhibit 2D-3.**

Items included in the independent total installed cost, in addition to the new equipment, are:

- Underground Reclaim Hopper
- Bulldozer
- Fire Loop Extension
- Dust Suppression
- Repair to Existing On-Site Track
- Modifications to Existing Coal Silo
- Grading, Stormwater/Coal Runoff Modification
- Underground Utility Identification and Relocation
- Conveyor Lighting
- Adjustment for FL Building Code
- Adjustment for High Water Table
- Transformers
- Double End Bus Substation
- I/O Blocks
- Electrical Interconnect
- DCS Interconnect
- Services Interconnect
- Environmental Permitting
- Wetland Relocation
- Contractor G&A and Fee
- Tampa Electric Overheads

Operating cost considerations to be included in the overall bid evaluation of this option are tabulated in Exhibit 2D-4. The combined fixed and variable operating costs for this option are $?????? per year.

III. Assumptions

- No additional real estate purchase is required for track or relocation of facilities and wetlands.
- No track upgrade or repair is required outside of the plant real estate boundaries.
- Tampa Electric has no provisions for holding second train for CSX.

EXHIBIT NO. _____ (JBS-10)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 9 OF 107

- Coal unloading is to be performed during day shifts only.
- Primary power for new equipment is available at each for the stations.
- ~~No coal blending is required.~~
- No allowances or provisions have been included in the cost estimate for schedule constraints (labor overtimes, double shifts, accelerated shipment of equipment or commodities, etc.).
- Project contingency of 20% is required to mitigate the risk on costs due to the short evaluation period.
- The current barge unloading facility will remain operational at the Big Bend Station.
- The current truck transfer station will remain operational at the Big Bend Station.
- The current truck unloading facility will remain operational at the Polk Station.

IV. Issues for Further Consideration

Coal unloading by rail at the Big Bend Station will necessitate blocking Gate 32 for several periods of time during the day. For the 2 – 5.5 MM ton scenario, we estimate that approximately two trains a day will be received during the week. We would expect that for each train Gate 32 will be blocked about 15 minutes while the train is entering the site, 45 minutes during the unloading of each of the two 45 car segments, and another 15 minutes during the train re-assembly and exit from the plant. This equates to Gate 32 being blocked from access approximately 17% of the day.

SAM, please provide similar input regarding access constraints for each option.

Low frequency noise will be emitted from the locomotives operating on the site. This type of noise is not easily mitigated nor can it be dampened with the construction of berms. If this proposal is considered further, S&L recommends that a noise study be performed for each station.

SAM, have I missed anything else here?

V. References

1) CSX Transportation July 30, 2003 Proposal
2) CSX Transportation August 11, 2003 Proposal
3) TECO Memorandum, August 29, 2003, D. Konstas
4) TECO Email (Painter), Electrical Input, 9/2/03
5) TECO Email (Cesar), I&C Inputs, 9/2/03
6) TECO Email (Barrette), Reference Drawings, 9/2/03
7) TECO Email (Painter), Big Bend/Unloading Labor, 9/3/03
8) TECO Email (Painter), Revised Capital Cost Factors, 9/3/03
9) TECO Email (Painter), Polk/Coal Unloading Labor, 9/3/03
10) TECO Email (Painter), Insurance and Tax Rates, 9/2/03

EXHIBIT NO. _____ (JBS-10)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 10 OF 107

Sargent & Lundy

Tampa Electric Company
Big Bend and Polk Generating Stations
CSX Transportation
Alternate Method of Coal Delivery

SL-008160
Project No. 09476-019
September 4, 2003

Sargent & Lundy

Tampa Electric Company
Big Bend and Polk Generating Stations
CSX Transportation
Alternate Method of Coal Delivery

SL-008160
Project No. 09476-019
September 4, 2003

EXHIBIT 2A-1

BIG BEND CAPITAL COST 2 - 5.5 MM TONS

CSXT COST ESTIMATE

Big Bend 2 - 5.5 mm TPY Option (Rapid Discharge Cars)

System Rated at 2500 TPH

Rapid Discharge System	$1,600,000
Long Conveyor 3300 ft.	$3,100,000
Short Conveyor 500 ft.	$650,000
Transfer Station	$230,000
Three 45 Car Tracks	$1,200,000
Truck Dump and Conveyor	$350,000
Total	$7,130,000

Equipment to Load Shuttle Trains

Conveyors and Transfer Station	$2,250,000
250 Ton Batch Silo	$1,066,000
New 45 Car Track	$400,000
Total	$3,716,000

Grand Total	$10,846,000

EXHIBIT 2A-2
S&L Estimate for BioBeneficial
2-5.5MM TPY Option

CONFIDENTIAL

DOCKET NO. 031033-EI
CSXT'S SIXTH REQUEST
FOR PRODUCTION OF DOCUMENTS

EXHIBIT NO. ______ (JBS-10)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 14 OF 107

15

EXHIBIT: 2A-2			Tampa Electric	Estimate No.:	XXXX
Sargent & Lundy LLC			Big Bend	Project No.:	08476-019
Chicago			Rail Delivery	Date:	9/4/03
		Cost Type:	Order of Magnitude		DRAFT
		Est=Estimated	-PRELIMINARY AND CONFIDENTIAL-		
		B=Bid		Run Date:	9/4/03
		OPB=Other Project Bid		Preparer:	GSB/SM
		Q=Vendor Quote		Reviewer:	

Acct. No.	Description	Scope Definition	Cost Type	Quantity	Unit of Measure	Unit Equip./ Mat. Cost	Total Equipment or Material Cost	Total Construction & Erection Cost	Sub-Contracts	DOR (Furnish)	DOR (Install)	Total Projected Cost	Sub-Totals
	2 - 5.5 MM TPY OPTION WITH RAPID DISCHARGE CARS												
	Equipment To Unload Trains @ 2500 TPH												15,360,000
	Excavation for track hopper pit foundation		Est	1	LS	0.00	0	1,000,000				1,000,000	
	Concrete work for track hopper		Est	1	LS	800,000.00	800,000	320,000				1,120,000	
	Track hopper building		Est	1	LS	150,000.00	150,000	60,000				210,000	
	Hopper and grizzly		Est	1	LS	200,000.00	200,000	80,000				280,000	
	Track hopper dust suppression		Est	1	LS	100,000.00	100,000	40,000				140,000	
	Belt feeders	2 Each	Est	1	LS	200,000.00	200,000	80,000				280,000	
	Concrete work for conveyor / tunnel		Est	1	LS	200,000.00	200,000	80,000				280,000	
	Belt conveyor, 60" wide, 250 ft long		Est	1	LS	500,000.00	500,000	400,000				900,000	
	Transfer house		Est	1	LS	100,000.00	100,000	40,000				140,000	
	Foundation for transfer house		Est	1	LS	50,000.00	50,000	20,000				70,000	
	Belt conveyor, 60" wide, 3200 ft long, hooded conveyor		Est	1	LS	480,000.00	480,000	3,840,000				4,320,000	
	Transfer house		Est	1	LS	300,000.00	300,000	240,000				540,000	
	Foundation for transfer house		Est	1	LS	50,000.00	50,000	20,000				70,000	
	Belt conveyor to existing transfer house, 60" wide, 500 ft long		Est	1	LS	750,000.00	750,000	600,000				1,350,000	
	Existing transfer house modification house modification		Est	1	LS	100,000.00	100,000	80,000				180,000	
	Foundation work for conveyors		Est	1	LS	100,000.00	100,000	80,000				180,000	
	Dust suppression for belt conveyors		Est	1	LS	200,000.00	200,000	80,000				280,000	
	Fire protection for conveyors		Est	1	LS	160,000.00	160,000	160,000				320,000	
	HVAC for track hopper pit and transfer houses		Est	1	LS	200,000.00	200,000	80,000				280,000	
	Sump pump system at track hopper		Est	1	LS	50,000.00	50,000	20,000				70,000	
	Hoists and trolleys		Est	1	LS	50,000.00	50,000	20,000				70,000	
	Track work modification - add three 45 car tracks	7500 LF	Est	1	LS	750,000.00	750,000	750,000				1,500,000	
	Temporary Coffer Dam		Est	1	LS	500,000.00	500,000	1,042,000				1,542,000	
	Dewatering		Est	1	LS	2,000.00	2,000	236,000				238,000	
	Equipment To load Shuttle Trains												6,546,000
	Modification at existing bin		Est	1	LS	50,000.00	50,000	20,000				70,000	
	Belt feeder		Est	1	LS	60,000.00	60,000	24,000				84,000	

CONFIDENTIAL

EXHIBIT: 2A-2
Sargent & Lundy LLC
Chicago

Tampa Electric
Big Bend
Rail Delivery
Order of Magnitude
-PRELIMINARY AND CONFIDENTIAL-

Cost Type:
Est=Estimated
B=Bid
OPB=Other Project Bid
Q=Vendor Quote

Estimate No.: XXXX
Project No.: 09476-019
Date: 9/4/03
DRAFT
Run Date: 9/4/03
Preparer: GBB/SM
Reviewer:

Acct. No.	Description	Scope Definition	Cost Type	Quantity	Unit of Measure	Unit Equip./Mat. Cost	Total Equipment or Material Cost	Total Construction & Erection Cost	Sub-Contracts	DOR (Furnish)	DOR (Install)	Total Projected Cost	Sub-Totals
	Belt Conveyor to transfer house, 1000 tph, 42" wide, 1200 ft long, enclosed conveyor		Est	1	LS	1,700,000.00	1,700,000	680,000				2,380,000	
	Transfer house		Est	1	LS	50,000.00	50,000	20,000				70,000	
	Foundation for transfer house		Est	1	LS	50,000.00	50,000	20,000				70,000	
	Belt conveyor to load out station, 1000 tph, 42" wide, 700 ft long enclosed conveyor		Est	1	LS	1,000,000.00	1,000,000	400,000				1,400,000	
	Loadout bin structure		Est	1	LS	750,000.00	750,000	300,000				1,050,000	
	Foundation work for conveyors		Est	1	LS	100,000.00	100,000	80,000				180,000	
	Dust suppression for belt conveyors		Est	1	LS	200,000.00	200,000	80,000				280,000	
	Fire protection for conveyors		Est	1	LS	200,000.00	200,000	80,000				280,000	
	HVAC for transfer house and loadout station		Est	1	LS	50,000.00	50,000	20,000				70,000	
	Sump pump system at loadout station		Est	1	LS	50,000.00	50,000	20,000				70,000	
	Hoists and trolleys		Est	1	LS	30,000.00	30,000	12,000				42,000	
	Track work modification,, add one 45 car track	2500 LF	Est	1	LS	250,000.00	250,000	250,000				500,000	
	Electrical - Aux. Power												2,326,000
	Vacuum Circuit Breaker and Cubicles		Est	2	EA	25,000.00	50,000	3,000				53,000	
	480 V Transformer	Includes Switchgear	Est	2	Ea	135,000.00	270,000	28,000				298,000	
	MCC	480 V (65 Motors)	Est	5	EA	40,000.00	200,000	53,000				253,000	
	Trays	Trays (Transformer Feed)	Est	2,000	LF	30.00	60,000	58,000				118,000	
	Conduits	Conduits (500 LF typ per motor feed)	Est	33,000	LF	3.00	99,000	285,000				384,000	
	Transformer Feeder Cable	MV-90	Est	2,000	LF	8.00	16,000	40,000				56,000	
	MV Wiring	3/C #2 - 500 LF per motor	Est	33,000	LF	5.00	165,000	525,000				690,000	
	Transformer Firewalls	2 Transf.	Est	1	LT	30,000.00	30,000	9,000				39,000	
	Electrical Building - Pre Fabricated - Complete	Elevated supports and foundations	Est	1	LS	200,000.00	200,000	60,000				260,000	
	Conveyor Lighting	5850 LF	Est	1	LS	81,900.00	82,000	93,000				175,000	
	Control & Instrumentation												556,000
	DCS Upgrades	6 I/O's per Motor	Est	1	LS	250,000.00	250,000	250,000				500,000	
	DCS BOP Equipment		Est	1	LS	25,000.00	25,000	25,000				50,000	
	Locally Mounted Instruments		Est	1	LS	1,500.00	2,000	4,000				6,000	

H:\WPCDIV\PROJECTS\GIBSON FGD\BigBend_2-65 TYP Option.xls\CSXT Estimate Review 9/4/03

cast coal

Not required for dry-type transformers

16

EXHIBIT NO. ____ (JBS-10)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 15 OF 107

DOCKET NO. 031033-EI
CSXT'S SIXTH REQUEST
FOR PRODUCTION OF DOCUMENTS

EXHIBIT: 2A-2						Tampa Electric					Estimate No.:	XXXX	
Sargent & Lundy LLC						Big Bend					Project No.:	09476-019	
Chicago						Rail Delivery					Date:	9/4/03	
		Cost Type:				Order of Magnitude						DRAFT	
		Est=Estimated				-PRELIMINARY AND CONFIDENTIAL-							
		Bid									Run Date:	9/4/03	
		OPB=Other Project Bid									Preparer:	GSB/SM	
		Q=Vendor Quote									Reviewer:		
Acct. No.	Description	Scope Definition	Cost Type	Quantity	Unit of Measure	Unit Equip./ Mat. Cost	Total Equipment or Material Cost	Total Construction & Erection Cost	Sub-Contracts	DOR (Furnish)	DOR (Install)	Total Projected Cost	Sub-Totals
	BOP Items												773,640
	Fire Protection Upgrade - underground	1000 LF	Est	1	LS	95,000.00	95,000	84,000				179,000	
	Demo/Reconstruction of Storage Area	Elevated at +15' (99,000 CY)	Est	2	LS	0.00	0	30,000				30,000	
	Stormwater/Coal Runoff Grading Upgrades	3000 LF	Est	1	LS	2,000.00	2,000	6,000				8,000	
	Underground Utility Identification and Relocation	Tampa - Allowance	Est	1	LS	25,000.00	25,000	25,000				50,000	
	Rail Bridge Over Water Lines	2 - 20" lines	Est	1	LS	50,000.00	50,000	80,000				130,000	
	General Services Interconnection (water & air, etc.)	Allowance	Est	1	LS	50,000.00	50,000	50,000				100,000	
	Adjustment for FL Building Code												
	Steel @ 7%	Applied to Estimated Steel Cost	Est	1	LS		0	148,960				148,960	
	Concrete @ 10%	Applied to Estimated Concrete Cost	Est	1	LS		0	127,680				127,680	
	Sub-Total						12,203,000	13,358,640				25,561,640	
	Other Costs/Adjustments												2,004,000
	Contractor's General & Administrative Costs	Based 5% of Equip, Material, and Labor						668,000				668,000	
	Contractor's Profit	Based 10% of Equip, Material, and Labor						1,336,000				1,336,000	
	Total Equipment, Material and Labor Costs						12,203,000	15,362,640				27,565,640	27,565,640
	Freight, Duties, Taxes, Etc.												0

H:\INFODIV\PROJECTS\GIBSON FGD\BigBend_3-65 TYP Option.xls\CSXT Estimate Review
9/4/03

Page 3 of 5

EXHIBIT NO. _____ (JBS-10)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 16 OF 107

CONFIDENTIAL

DOCKET NO. 031033-EI
CSXT'S SIXTH REQUEST
FOR PRODUCTION OF DOCUMENTS

EXHIBIT: 2A-2						Tampa Electric					Estimate No.: XXXX		
Sargent & Lundy LLC						Big Bend					Project No.: 05478-019		
Chicago						Rail Delivery					Date: 9/4/03		
		Cost Type:				Order of Magnitude						DRAFT	
		E=Estimated				-PRELIMINARY AND CONFIDENTIAL-							
		B=Bid									Run Date: 9/4/03		
		OPB=Other Project Bid									Preparer: GBB/SM		
		Q=Vendor Quote									Reviewer:		

Acct. No.	Description	Scope Definition	Cost Type	Quantity	Unit of Measure	Unit Equip./ Mat. Cost	Total Equipment or Material Cost	Total Construction & Erection Cost	Sub-Contracts	DOR (Furnish)	DOR (Install)	Total Projected Cost	Sub-Totals
	Freight-ExWorks To Site	Included in Material & Equipment Costs										Included in Material & Equipment Costs	
	Taxes - Sales/Use/VAT/Business/Etc.	Not Included										Not Included	
	Total Direct Project Costs						12,203,000	15,362,640				27,565,640	27,565,640
	Indirect Costs												2,885,554
	Insurance												
	Builders Risk											Not Included	
	Engineering/Procurement											1,929,595	
	Tampa Electric Interface with A/E	Project Mgmnt, Eng and Construction Support										192,959	
	Tampa Electric Management of EPC Contractor	Four men for 2 yrs @ $75K.										600,000	
	Permits and Fees	Tampa										163,000	
	Total Indirect Project Costs											2,885,554	
	Escalation	Not Included										Not Included	0
	EPC Costs											4,010,801	4,010,801
	General & Administrative (G&A) @ 5% of Dirct Costs											1,378,282	
	Efficacy Insurance @ .8% of Direct Costs											220,526	
	Fee @ 8% of Direct Costs	Profit and Home Office Overhead										2,205,251	
	Performance Bond @ .75% of Direct Costs											206,742	
	Contingency												6,892,399

EXHIBIT NO. _____ (JBS-10)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 17 OF 107

19

EXHIBIT: 2A-2
Sargent & Lundy LLC
Chicago

Tampa Electric
Big Bend
Rail Delivery
Order of Magnitude
-PRELIMINARY AND CONFIDENTIAL-

Cost Type:
Est=Estimated
B=Bid
OPB=Other Project Bid
Q=Vendor Quote

Estimate No.: XXXX
Project No.: 09478-019
Date: 9/4/03
DRAFT
Run Date: 9/4/03
Preparer: GSB/SM
Reviewer:

Acct. No.	Description	Scope Definition	Cost Type	Quantity	Unit of Measure	Unit Equip./ Mat. Cost	Total Equipment or Material Cost	Total Construction & Erection Cost	Sub-Contracts	DOR (Furnish)	DOR (Install)	Total Projected Cost	Sub-Totals
	Contingency	20% of overall cost										6,892,399	
	Interest During Construction (AFUDC)	Not Included										Not Included	0
	Total Project Cost											**41,354,394**	**41,354,394**

19

EXHIBIT NO. ______ (JBS-10)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 18 OF 107

Sargent & Lundy

Tampa Electric Company
Big Bend and Polk Generating Stations
CSX Transportation
Alternate Method of Coal Delivery

SL-008160
Project No. 09476-019
September 4, 2003

EXHIBIT 2A-3

OPERATING COST ESTIMATE FOR
2 - 5.5 MILLION TON RAIL DELIVERY OF COAL
BIG BEND STATION

Variable

Power[1]	$68,000 - $128,000
Surfactant	
Labor	$301,308 - $903,925

Fixed

Labor	$301,308
Lease for Locomotive	
Taxes and Insurance (2.085% Installed Capital Cost)	2.085%
Maintenance (3% of Installed Cost)	290,000 Maint

[1]Calculated on replacement fuel cost only.

Sargent & Lundy

Tampa Electric Company
Big Bend and Polk Generating Stations
CSX Transportation
Alternate Method of Coal Delivery

SL-008160
Project No. 09476-019
September 4, 2003

EXHIBIT 2B-1

BIG BEND CAPITAL COST 1- 2 MM TON

CSXT Cost Estimate

Big Bend 1 - 2 MM TPY Option (Standard Coal Hoppers)

System Rated at 1500 TPH

Modify Limestone Pit	$250,000
Long Conveyor	$1,953,000
Transfer Station	$230,000
Short Conveyor	$280,000
Three 45 Car Tracks	$1,200,000
200' Radial Stacker	$250,000
Truck Dump and Conveyor	$350,000
Total	$4,513,000

Equipment to Load Shuttle Trains

Reclaim Hopper with Feed to Batch Silo	$469,000
250 Ton Batch Silo	$1,066,000
Loader/Dozer	$750,000
Total	$2,285,000
Grand Total	$10,846,000

EXHIBIT 2B-2

S&L Estimate for Big Bend
1-2 HMTPY option

CONFIDENTIAL

EXHIBIT: 2B-2

Sargent & Lundy [LLC]
Chicago

Tampa Electric
Big Bend
Rail Delivery
Order of Magnitude
-PRELIMINARY AND CONFIDENTIAL-

Cost Type:
Est=Estimated
B=Bid
OPB=Other Project Bid
Q=Vendor Quote

Estimate No.: XXXX
Project No.: 09478-019
Date: 9/4/03
DRAFT
Run Date: 9/4/03
Preparer: GBB/SM
Reviewer:

Acct. No.	Description	Scope Definition	Cost Type	Quantity	Unit of Measure	Unit Equip./ Mat. Cost	Total Equipment or Material Cost	Total Construction & Erection Cost	Sub-Contracts	DOR (Furnish)	DOR (Install)	Total Projected Cost	Sub-Totals
	1 - 2 MM TPY OPTION WITH RAPID DISCHARGE CARS												
	Equipment To Unload Trains @ 1500 TPH												10,965,000
	Excavation for track hopper pit foundation		Est	1	LS	0.00	0	500,000				500,000	
	Concrete work for track hopper		Est	1	LS	400,000.00	400,000	160,000				560,000	
	Track hopper building		Est	1	LS	120,000.00	120,000	48,000				168,000	
	Car shaker / support steel		Est	1	LS	60,000.00	60,000	24,000				84,000	
	Hopper and grizzly		Est	1	LS	150,000.00	150,000	60,000				210,000	
	Track hopper dust suppression		Est	1	LS	100,000.00	100,000	40,000				140,000	
	Belt feeders		Est	2	LS	60,000.00	120,000	48,000				168,000	
	Concretework for conveyor / tunnel		Est	1	LS	150,000.00	150,000	60,000				210,000	
	Belt conveyor, 48" wide, 250 ft long		Est	1	LS	375,000.00	375,000	150,000				525,000	
	Transfer house		Est	1	LS	80,000.00	80,000	32,000				112,000	
	Foudation for transfer house		Est	1	LS	40,000.00	40,000	16,000				56,000	
	Belt conveyor, 48" wide, 1,500 ft long, hooded conveyor		Est	1	LS	1,800,000.00	1,800,000	720,000				2,520,000	
	Transfer house		Est	1	LS	200,000.00	200,000	160,000				360,000	
	Foudation for transfer house		Est	1	LS	50,000.00	50,000	20,000				70,000	
	Belt conveyor to radial stacker, 48" wide, 400 ft long, hooded conveyor		Est	1	LS	500,000.00	500,000	200,000				700,000	
	Transfer house at radial stacker		Est	1	LS	100,000.00	100,000	80,000				180,000	
	Foudation for transfer house		Est	1	LS	40,000.00	40,000	16,000				56,000	
	Radial stacker, 48" wide, 200 ft long		Est	1	LS	250,000.00	250,000	200,000				450,000	
	Fondation work for conveyors		Est	1	LS	100,000.00	100,000	80,000				180,000	
	Dust suppression for belt conveyors		Est	1	LS	200,000.00	200,000	80,000				280,000	
	Fire protection for conveyors		Est	1	LS	118,000.00	118,000	118,000				236,000	
	HVAC for track hopper pit and transfer houses		Est	1	LS	200,000.00	200,000	80,000				280,000	
	Sump pump system at track hopper		Est	1	LS	50,000.00	50,000	20,000				70,000	
	Hoists and trolleys		Est	1	LS	50,000.00	50,000	20,000				70,000	
	Track work midification, add one 45 car track	2500 LF	Est	1	LS	250,000.00	250,000	750,000				1,000,000	
	Temporary Coffer Dam		Est	1	LS	500,000.00	500,000	1,042,000				1,542,000	
	Dewatering		Est	1	LS	2,000.00	2,000	236,000				238,000	
	Equipment To load Shuttle Trains												4,304,000
	Excavation for reclaim hopper pit foundation		Est	1	LS	0.00	0	300,000				300,000	
	Concrete work for RECLAIM hopper		Est	1	LS	300,000.00	300,000	120,000				420,000	
	Hopper and grizzly		Est	1	LS	150,000.00	150,000	60,000				210,000	
	Belt feeder	2 Each	Est	1	LS	120,000.00	120,000	48,000				168,000	
	Concretework for conveyor / tunnel		Est	1	LS	100,000.00	100,000	40,000				140,000	

TAMPA ELECTRIC COMPANY
DOCKET NO. 031033-EI
CSXT'S SIXTH REQUEST
FOR PRODUCTION OF DOCUMENTS

23

EXHIBIT NO. ______ (JBS-10)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 22 OF 107

CONFIDENTIAL

EXHIBIT: 2B-2
Sargent & Lundy LLC
Chicago

Tampa Electric
Big Bend
Rail Delivery
Order of Magnitude
-PRELIMINARY AND CONFIDENTIAL-

Cost Type:
Est=Estimated
B=Bid
OPB=Other Project Bid
Q=Vendor Quote

Estimate No.: XXXX
Project No.: 09478-019
Date: 9/4/03
DRAFT
Run Date: 9/4/03
Preparer: GBB/SM
Reviewer:

Acct. No.	Description	Scope Definition	Cost Type	Quantity	Unit of Measure	Unit Equip./ Mat. Cost	Total Equipment or Material Cost	Total Construction & Erection Cost	Sub-Contracts	DOR (Furnish)	DOR (Install)	Total Projected Cost	Sub-Totals
	Belt conveyor, 48" wide, 500 ft long		Est	1	LS	500,000.00	500,000	200,000				700,000	
	Loadout bin structure		Est	1	LS	750,000.00	750,000	300,000				1,050,000	
	Fondation work for conveyors		Est	1	LS	30,000.00	30,000	24,000				54,000	
	Dust suppression for belt conveyors		Est	1	LS	200,000.00	200,000	80,000				280,000	
	Fire protection for conveyors		Est	1	LS	25,000.00	25,000	25,000				50,000	
	HVAC forreclaim hopperr, loadout station		Est	1	LS	50,000.00	50,000	20,000				70,000	
	Sump pump system at reclaim hopper and loadout station		Est	1	LS	50,000.00	50,000	20,000				70,000	
	Hoists and trolleys		Est	1	LS	30,000.00	30,000	12,000				42,000	
	Loader / dozer		Est	1	LS	750,000.00	750,000	0				750,000	
	Electrical - Aux. Power												2,368,000
	Vacuum Circuit Breaker and Cubicles		Est	2	EA	25,000.00	50,000	3,000				53,000	
	480 V Transformer	Includes Switchgear	Est	2	Ea	135,000.00	270,000	28,000				298,000	
	MCC	480 V (71 Motors)	Est	6	EA	40,000.00	240,000	63,000				303,000	
	Trays	Trays (Transformer Feed)	Est	2,000	LF	30.00	60,000	58,000				118,000	
	Conduits	Conduits (500 LF typ per motor feed)	Est	35,500	LF	3.00	107,000	306,000				413,000	
	Transformer Feeder Cable	MV-90	Est	2,000	LF	8.00	16,000	40,000				56,000	
	MV Wiring	3/C #2 - 500 LF per motor	Est	35,500	LF	5.00	178,000	564,000				742,000	
	Transformer Firewalls	2 Transf.	Est	1	LT	30,000.00	30,000	9,000				39,000	
	Electrical Building - Pre Fabricated - Complete	Elevated supports and foundations	Est	1	LS	200,000.00	200,000	60,000				260,000	
	Conveyor Lighting	2850 LF	Est	1	LS	40,000.00	40,000	46,000				86,000	
	Control & Instrumentation												656,000
	DCS Upgrages	6 I/O's per Motor	Est	1	LS	300,000.00	300,000	300,000				600,000	
	DCS BOP Equipment		Est	1	LS	25,000.00	25,000	25,000				50,000	
	Locally Mounted Instruments		Est	1	LS	1,500.00	2,000	4,000				6,000	
	BOP Items												685,846
	Fire Protection Upgrade	1000 LF	Est	1	LS	95,000.00	95,000	84,000				179,000	
	Demo/Reconstruction of Storage Area	Elevated at +15' (99,000 CY)	Est	2	LS	0.00	0	30,000				30,000	
	Stormwater/Coal Runoff Grading Upgrades	3000 LF	Est	1	LS	2,000.00	2,000	6,000				8,000	
	Underground Utility Identification and Relocation	Tampa - Allowance	Est	1	LS	25,000.00	25,000	25,000				50,000	
	Rail Bridge Over Water Lines	2 - 20" lines	Est	1	LS	50,000.00	50,000	80,000				130,000	
	General Services Interconnection (water & air, etc.)	Allowance	Est	1	LS	50,000.00	50,000	50,000				100,000	

Not required - dry type cast coil transformers.

24

EXHIBIT NO. _____ (JBS-10)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 23 OF 107

TAMPA ELECTRIC COMPANY
DOCKET NO. 031033-EI
CSXT'S SIXTH REQUEST
FOR PRODUCTION OF DOCUMENTS

EXHIBIT: 2B-2
Sargent & Lundy LLC
Chicago

Tampa Electric
Big Bend
Rail Delivery
Order of Magnitude
-PRELIMINARY AND CONFIDENTIAL-

Estimate No.: XXXX
Project No.: 69476-619
Date: 9/4/03
DRAFT
Run Date: 9/4/03
Preparer: GBB/BM
Reviewer:

Cost Type:
Est=Estimated
B=Bid
OPB=Other Project Bid
Q=Vendor Quote

Acct. No.	Description	Scope Definition	Cost Type	Quantity	Unit of Measure	Unit Equip./ Mat. Cost	Total Equipment or Material Cost	Total Construction & Erection Cost	Sub-Contracts	DOR (Furnish)	DOR (Install)	Total Projected Cost	Sub-Totals
	Adjustment for FL Building Code												
	Steel @ 7%	Applies to Estimated Steel Cost	Est	1	LS		0	188,846				188,846	
	Concrete @ 10%	Applies to Estimated Concrete Cost	Est	1	LS		0	161,868				161,868	
	Sub-Total						10,800,000	8,178,846				18,978,846	
	Other Costs/Adjustments												1,227,000
	Contractor's General & Administrative Costs	Based 5% of Equip, Material, and Labor						409,000				409,000	
	Contractor's Profit	Based 10% of Equip, Material, and Labor						818,000				818,000	
	Total Equipment, Material and Labor Costs						10,800,000	9,405,846				20,205,846	20,205,846
	Freight, Duties, Taxes, Etc.												0
	Freight-ExWorks To Site	Included in Material & Equipment Costs										Included in Material & Equipment Costs	
	Taxes - Sales/Use/VAT/Business/Etc.	Not Included										Not Included	
	Total Direct Project Costs						10,800,000	9,405,846				20,205,846	20,205,846
	Indirect Costs												2,318,850
	Insurance												
	Builders Risk											Not Included	
	Engineering/Procurement											1,414,409	

H:\INFODM\PROJECTS\OBSON FOD\Big Bend 1-2 TPY Option.xls\CSXT Ballmer Review
9/4/03

EXHIBIT: 2B-2
Sargent & Lundy LLC
Chicago

Tampa Electric
Big Bend
Rail Delivery
Order of Magnitude
-PRELIMINARY AND CONFIDENTIAL-

Estimate No.: XXXX
Project No.: 60476-019
Date: 6/4/03
DRAFT
Run Date: 6/4/03
Preparer: GBB/SM
Reviewer:

Cost Type:
Est=Estimated
B=Bid
OPB=Other Project Bid
Q=Vendor Quote

Acct. No.	Description	Scope Definition	Cost Type	Quantity	Unit of Measure	Unit Equip./ Mat. Cost	Total Equipment or Material Cost	Total Construction & Erection Cost	Sub-Contracts	DOR (Furnish)	DOR (Install)	Total Projected Cost	Sub-Totals
	Tampa Electric Interface with A/E	Project Mgmnt, Eng and Construction Support										141,441	
	Tampa Electric Management of EPC Contractor	Four men for 2 yrs @ $75K.										600,000	
	Permits and Fees	Tampa										163,000	
	Total Indirect Project Costs											2,318,850	
	Escalation	Not Included										Not Included	0
	EPC Costs											2,939,951	2,939,951
	General & Administrative (G&A) @ 5% of Dirct Costs											1,010,292	
	Efficacy Insurance @ .5% of Direct Costs											161,647	
	Fee @ 8% of Direct Costs	Profit and Home Office Overhead										1,616,468	
	Performance Bond @ .75% of Direct Costs											151,544	
	Contingency												5,092,929
	Contingency	20% of overall cost										5,092,929	
	Interest During Construction (AFUDC)	Not Included										Not Included	0
	Total Project Cost											30,557,576	30,557,576

Sargent & Lundy

Tampa Electric Company
Big Bend and Polk Generating Stations
CSX Transportation
Alternate Method of Coal Delivery

SL-008160
Project No. 09476-019
September 4, 2003

EXHIBIT 2C-1

TECO BID POLK CAPITAL COSTS

CSXT Cost Estimate

Shuttle Train Unload System

Bottom Dump with Conveyor to Silos 1500 THP	$1,818,000
2500' of Track at $200 foot	$500,000
Total	$2,318,000

EXHIBIT NO. _____ (JBS-10)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 26 OF 107

EXHIBIT 20.2

S&L Estimate for

Polk shuttle train Unload

EXHIBIT: 2C-2
Sargent & Lundy LLC
Chicago

Tampa Electric
Polk Station
Rail Delivery
Order of Magnitude
-PRELIMINARY AND CONFIDENTIAL-

Estimate No.: XXXX
Project No.: 09476-019
Date: 9/4/03
DRAFT
Run Date: 9/4/03
Preparer: GBB/SM
Reviewer:

Cost Type:
Est=Estimated
B=Bid
OPB=Other Project Bid
Q=Vendor Quote

Acct. No.	Description	Scope Definition	Cost Type	Quantity	Unit of Measure	Unit Equip./ Mat. Cost	Total Equipment or Material Cost	Total Construction & Erection Cost	Sub-Contracts	DOR (Furnish)	DOR (Install)	Total Projected Cost	Sub-Totals
	SHUTTLE TRAIN UNLOADING SYSTEM												
	Equipment To Unload Trains @ 1500 TPH												6,737,500
	Excavation for track hopper pit foundation		Est	1	LS	0.00	0	500,000				900,000	
	Concrete work for track hopper		Est	1	LS	400,000.00	400,000	160,000				280,000	
	Track hopper building		Est	1	LS	120,000.00	120,000	48,000				108,000	
	Car shaker / support steel		Est	1	LS	80,000.00	80,000	24,000				174,000	
	Hopper and grizzly		Est	1	LS	150,000.00	150,000	60,000				160,000	
	Track hopper dust suppression		Est	1	LS	100,000.00	100,000	40,000				160,000	
	Belt feeders	2 EACH	Est	1	LS	120,000.00	120,000	48,000				198,000	
	Concretework for conveyor / tunnel		Est	1	LS	150,000.00	150,000	60,000				780,000	
	Belt conveyor, 48" wide, 600 ft long		Est	1	LS	720,000.00	720,000	576,000				606,000	
	Diverter gate on top of silos		Est	1	LS	30,000.00	30,000	12,000				112,000	
	Transfer conveyor on top of silos, 36" wide, 80 ft		Est	1	LS	100,000.00	100,000	40,000				90,000	
	Modification on top of the silo		Est	1	LS	50,000.00	50,000	20,000				80,000	
	Foundation work for conveyors		Est	1	LS	30,000.00	30,000	24,000				234,000	
	Dust suppression for belt conveyors		Est	1	LS	200,000.00	200,000	80,000				113,000	
	Fire protection for conveyors		Est	1	LS	82,500.00	33,000	32,500				232,500	
	HVAC for track hopper pit, electrical bldg		Est	1	LS	200,000.00	200,000	80,000				130,000	
	Sump pump system		Est	1	LS	50,000.00	50,000	20,000				70,000	
	Hoists and trolleys		Est	1	LS	50,000.00	50,000	20,000				70,000	
	Track work cost	2500 LF	Est	1	LS	250,000.00	250,000	250,000				500,000	
	Temporary Coffer Dam		Est	1	LS	500,000.00	500,000	1,042,000				1,542,000	
	Dewatering		Est	1	LS	2,000.00	2,000	236,000				238,000	
	Electrical - Aux. Power - 13.8 KV												1,549,000
	Vapuum Circuit Breaker and Cubicles		Est	2	EA	25,000.00	50,000	3,000				53,000	
	480 V Transformer	Includes Switchgear	Est	2	Ea	150,000.00	300,000	28,000				328,000	
	MCC	480 V (40 Motors)	Est	3	EA	40,000.00	120,000	32,000				152,000	
	Trays	Trays (Transformer Feed)	Est	2,000	LF	30.00	60,000	58,000				118,000	
	Conduits	Conduits (800 LF typ per motor feed)	Est	20,000	LF	3.00	60,000	173,000				233,000	
	Transformer Feeder Cable	MV-90	Est	2,000	LF	8.00	16,000	40,000				56,000	
	MV Wiring	3/C #2 - 500 LF per motor	Est	20,000	LF	5.00	100,000	318,000				418,000	
	Transformer Firewalls	2 Transf.	Est	1	LT	30,000.00	30,000	9,000				39,000	

H:\INPDW\PROJECTS\GIBSON FGD\Polk Shuttle Train.xls\CSXT Estimo Review 9/4/03

not required cast coil dry type transformers

EXHIBIT NO. _____ (JBS-10)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 28 OF 107

CONFIDENTIAL

EXHIBIT: 2C-2						Tampa Electric					Estimate No.:	XXXX	
Sargent & Lundy LLC						Polk Station					Project No.:	09479-019	
Chicago						Rail Delivery					Date:	9/4/03	
		Cost Type:				Order of Magnitude						DRAFT	
		Est=Estimated				-PRELIMINARY AND CONFIDENTIAL-							
		B=Bid									Run Date:	9/4/03	
		OPB=Other Project Bid									Preparer:	GBB/SM	
		Q=Vendor Quote									Reviewer:		
Acct. No.	**Description**	**Scope Definition**	**Cost Type**	**Quantity**	**Unit of Measure**	**Unit Equip / Mat. Cost**	**Total Equipment or Material Cost**	**Total Construction & Erection Cost**	**Sub-Contracts**	**DOR (Furnish)**	**DOR (Install)**	**Total Projected Cost**	**Sub-Totals**
	SHUTTLE TRAIN UNLOADING SYSTEM												
	Electrical Building - Pre Fabricated - Complete	Includes foundation	Est	1	LS	110,000.00	110,000	22,000				132,000	
	Conveyor Lighting	650 LF	Est	1	LS	9,100.00	9,000	11,000				20,000	
	Control & Instrumentation												**333,000**
	DCS Upgrages	6 I/O's per Motor	Est	1	LS	140,000.00	140,000	140,000				280,000	
	DCS BOP Equipment		Est	1	LS	25,000.00	25,000	25,000				50,000	
	Locally Mounted Instruments		Est	1	LS	750.00	1,000	2,000				3,000	
	BOP Items												**385,125**
	Fire Protection Upgrade	500 LF	Est	1	LS	47,500.00	48,000	42,000				90,000	
	Stormwater/Coal Runoff Grading Upgrades	1500 LF	Est	1	LS	1,000.00	1,000	6,000				7,000	
	Relocation of Wetlands	6 Acres	Est	1	LS	5,000.00	5,000	135,000				140,000	
	Underground Utility Identificaiton and Relocation	Tampa - Allowance	Est	1	LS	12,500.00	13,000	12,000				25,000	
	General Services Interconnection (water & air, etc.)	Allowance	Est	1	LS	25,000.00	25,000	25,000				50,000	
	Adjustment for FL Building Code												
	Steel @ 7%	Applies to Estimated Steel Cost	Est	1	LS		0	39,375				39,375	
	Concrete @ 10%	Applies to Estimated Concrete Cost	Est	1	LS		0	33,750				33,750	
	Sub-Total						**4,428,000**	**4,492,875**				**9,004,625**	
	Other Costs/Adjustments												**674,000**
	Contractor's General & Administrative Costs	Based 5% of Equip, Material, and Labor						225,000				225,000	
	Contractor's Profit	Based 10% of Equip, Material, and Labor						449,000				449,000	
	Total Equipment, Material and Labor Costs						**4,428,000**	**5,166,875**				**9,678,625**	**9,678,625**

H:\NFCDIV\PROJECTS\GIBSON FGD\Polk Shuttle Train.xls\CSXT Estimate Review 9/4/03

30

EXHIBIT NO. ______ (JBS-10)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 29 OF 107

DOCKET NO. 031033-EI
CSXT'S SIXTH REQUEST
FOR PRODUCTION OF DOCUMENTS

CONFIDENTIAL

TAMPA ELECTRIC COMPANY
DOCKET NO. 031033-EI
CSXT'S SIXTH REQUEST
FOR PRODUCTION OF DOCUMENTS

EXHIBIT NO. ______ (JBS-10)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 30 OF 107

31

EXHIBIT: 2C-2						Tampa Electric					Estimate No.:	XXXX	
Sargent & Lundy LLC						Polk Station					Project No.:	09476-019	
Chicago						Rail Delivery					Date:	9/4/03	
		Cost Type:				Order of Magnitude						DRAFT	
		Est=Estimated				-PRELIMINARY AND CONFIDENTIAL-							
		B=Bid									Run Date:	9/4/03	
		OPB=Other Project Bid									Preparer:	GBB/SM	
		Q=Vendor Quote									Reviewer:		
Acct. No.	**Description**	**Scope Definition**	**Cost Type**	**Quantity**	**Unit of Measure**	**Unit Equip./ Mat. Cost**	**Total Equipment or Material Cost**	**Total Construction & Erection Cost**	**Sub-Contracts**	**DOR (Furnish)**	**DOR (Install)**	**Total Projected Cost**	**Sub-Totals**
	SHUTTLE TRAIN UNLOADING SYSTEM												
	Freight, Duties, Taxes, Etc.												0
	Freight-ExWorks To Site	Included in Material & Equipment Costs										Included in Material & Equipment Costs	
	Taxes - Sales/Use/VAT/Business/Etc.	Not Included										Not Included	
	Total Direct Project Costs						4,428,000	5,166,875				9,678,625	9,678,625
	Indirect Costs												1,338,254
	Insurance												
	Builders Risk											Not Included	
	Engineering/Procurement											677,504	
	Tampa Electric Interface with A/E	Project Mgmnt, Eng and Construction Support										67,750	
	Tampa Electric Management of EPC Contractor	Two men for 2 yrs @ $75K.										300,000	
	Permits and Fees	Tampa										293,000	
	Total Indirect Project Costs											1,338,254	
	Escalation	Not Included										Not Included	0
	EPC Costs											1,408,240	1,408,240
	General & Administrative (G&A) @ 5% of Dirct Costs											483,931	
	Efficacy Insurance @ .8% of Direct Costs											77,429	
	Fee @ 8% of Direct Costs	Profit and Home Office Overhead										774,290	
	Performance Bond @ .75% of Direct Costs											72,590	

TAMPA ELECTRIC COMPANY
DOCKET NO. 031033-EI
CSXT'S SIXTH REQUEST
FOR PRODUCTION OF DOCUMENTS

EXHIBIT: 2C-2
Sargent & Lundy LLC
Chicago

Tampa Electric
Polk Station
Rail Delivery
Order of Magnitude
-PRELIMINARY AND CONFIDENTIAL-

Estimate No.: XXXX
Project No.: 09475-010
Date: 9/4/03
DRAFT
Run Date: 9/4/03
Preparer: GBB/SM
Reviewer:

Cost Type:
Est=Estimated
B=Bid
OPB=Other Project Bid
Q=Vendor Quote

Acct. No.	Description	Scope Definition	Cost Type	Quantity	Unit of Measure	Unit Equip./ Mat. Cost	Total Equipment or Material Cost	Total Construction & Erection Cost	Sub-Contracts	DOR (Furnish)	DOR (Install)	Total Projected Cost	Sub-Totals
	SHUTTLE TRAIN UNLOADING SYSTEM												
	Contingency												2,485,024
	Contingency	20% of overall cost										2,485,024	
	Interest During Construction (AFUDC)	Not Included										Not Included	0
	Total Project Cost											14,910,143	14,910,143

32

EXHIBIT NO. ______ (JBS-10)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 31 OF 107

Sargent & Lundy

Tampa Electric Company
Big Bend and Polk Generating Stations
CSX Transportation
Alternate Method of Coal Delivery

SL-008160
Project No. 09476-019
September 4, 2003

EXHIBIT 2C-3

OPERATING COST ESTIMATE FOR POLK BUILD IN SHUTTLE DELIVERY

Variable

Power[1]	$20,000
Chemical for Dust Control	

Fixed

Labor	$601,088
Maintenance (3% Capital Cost)	
Lease on Locomotive	
Taxes and Insurance (1.58% Capital Cost)	

[1]Calculated on replacement fuel cost only.

EXHIBIT NO. _____ (JBS-10)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 32 OF 107

Sargent & Lundy

Tampa Electric Company
Big Bend and Polk Generating Stations
CSX Transportation
Alternate Method of Coal Delivery

SL-008160
Project No. 09476-019
September 4, 2003

EXHIBIT 2D-3

POLK DIRECT DELIVERY

CSXT COST ESTIMATE

Build In Strategy

Item	Cost
Scenario #1 Rotary Dump at Plant	
Loop Track	$1,102,000
Rotary Dumper with Conveyor to Silo 2500 tph	$3,800,000
New 15,000 Ton Dome	$1,600,000
Total	$6,502,000
Scenario #2 Bottom Dump at Plant	
Loop Track	$1,102,000
Bottom Dump with Conveyor to Silo 1500 tph	$1,818,000
New 15,000 Ton Dome	$1,600,000
Total	$4,520,000

EXHIBIT NO. _____ (JBS-10)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 33 OF 107

EXHIBIT 2D-1

S&L Estimate
Polk Rotary Dump Estimate

EXHIBIT NO. _____ (JBS-10)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 34 OF 107

EXHIBIT: 2D-1					Tampa Electric				Estimate No.: XXXX		
Sargent & Lundy LLC					Polk Station				Project No.: 09478-019		
Chicago					Rail Delivery				Date: 9/4/03		
	Cost Type:				Order of Magnitude						
	Est=Estimated				-PRELIMINARY AND CONFIDENTIAL-						
	B=Bid								Run Date: 9/4/03		
	OPB=Other Project Bid								Preparer: GBB/SM		
	Q=Vendor Quote								Reviewer:		

Acct. No.	Description	Scope Definition	Cost Type	Quantity	Unit of Measure	Unit Equip./ Mat. Cost	Total Equipment or Material Cost	Total Construction & Erection Cost	Sub-Contracts	DOR (Furnish)	DOR (Install)	Total Projected Cost	Sub-Totals
	ROTARY DUMPER AR PLANT - 2,500 TPH												
	Equipment To Unload Trains												**19,294,000**
	Excavation for rotary car dumper foundation		Est	1	LS	0.00	0	1,300,000				1,300,000	
	Concrete work for rotary car dumper / positioner		Est	1	LS	1,700,000.00	1,700,000	680,000				2,380,000	
	Dumper building including control room		Est	1	LS	400,000.00	400,000	160,000				560,000	
	Hopper and grizzly		Est	1	LS	200,000.00	200,000	80,000				280,000	
	Dumper dust suppression		Est	1	LS	100,000.00	100,000	40,000				140,000	
	Rotary car dumper		Est	1	LS	1,100,000.00	1,100,000	990,000				2,090,000	
	Positioner		Est	1	LS	1,100,000.00	1,100,000	500,000				1,600,000	
	Belt feeders		Est	2	LS	200,000.00	400,000	80,000				480,000	
	Concretework for conveyor / tunnel		Est	1	LS	400,000.00	400,000	160,000				560,000	
	Belt conveyor, 60" wide, 500 ft long		Est	1	LS	750,000.00	750,000	600,000				1,350,000	
	Storage dome, 15,000 tons		Est	1	LS	150,000.00	150,000	60,000				210,000	
	Foundation for storage dome		Est	1	LS	200,000.00	200,000	80,000				280,000	
	Lowering well inside dome		Est	1	LS	100,000.00	100,000	40,000				140,000	
	Excavation for reclaim hopper pit foundation		Est	1	LS	0.00	0	300,000				300,000	
	Concrete work for reclaim hopper		Est	1	LS	300,000.00	300,000	120,000				420,000	
	Hopper and grizzly		Est	1	LS	150,000.00	150,000	60,000				210,000	
	Belt feeder	2 Each	Est	1	LS	120,000.00	120,000	48,000				168,000	
	Concretework for conveyor / tunnel		Est	1	LS	100,000.00	100,000	40,000				140,000	
	Belt conveyor, 48" wide, 1000 ft long		Est	1	LS	1,000,000.00	1,000,000	400,000				1,400,000	
	Diverter gate on top of silos		Est	1	LS	30,000.00	30,000	12,000				42,000	
	Transfer conveyor on top of silos, 48" wide, 50 ft		Est	1	LS	100,000.00	100,000	40,000				140,000	
	Modification on top of the silo		Est	1	LS	50,000.00	50,000	20,000				70,000	
	Foundation work for conveyors		Est	1	LS	30,000.00	30,000	24,000				54,000	
	Dust suppression for belt conveyors		Est	1	LS	200,000.00	200,000	80,000				280,000	
	Fire protection for conveyors		Est	1	LS	75,000.00	75,000	75,000				150,000	
	HVAC for dumper pit and transfer house		Est	1	LS	200,000.00	200,000	80,000				280,000	
	Sump pump system		Est	1	LS	50,000.00	50,000	20,000				70,000	
	Hoists and trolleys		Est	1	LS	50,000.00	50,000	20,000				70,000	
	Loop track cost	6000 LF	Est	1	LS	800,000.00	800,000	800,000				1,600,000	
	Loader / dozer		Est	1	LS	750,000.00	750,000	0				750,000	
	Temporary Coffer Dam		Est	1	LS	900,000.00	500,000	1,042,000				1,542,000	
	Dewatering		Est	1	LS	2,000.00	2,000	236,000				238,000	
	Electrical - Aux. Power - 13.8 KV												**1,787,000**

CONFIDENTIAL

EXHIBIT: 2D-1
Sargent & Lundy LLC
Chicago

Tampa Electric
Polk Station
Rail Delivery
Order of Magnitude
-PRELIMINARY AND CONFIDENTIAL-

Estimate No.: XXXX
Project No.: 09476-019
Date: 9/4/03
Run Date: 9/4/03
Preparer: GBB/SM
Reviewer:

Cost Type:
Est=Estimated
B=Bid
OPB=Other Project Bid
Q=Vendor Quote

Acct. No.	Description	Scope Definition	Cost Type	Quantity	Unit of Measure	Unit Equip./ Mat. Cost	Total Equipment or Material Cost	Total Construction & Erection Cost	Sub-Contracts	DOR (Furnish)	DOR: (Install)	Total Projected Cost	Sub-Totals
	ROTARY DUMPER AR PLANT - 2,500 TPH												
	Vacuum Circuit Breaker and Cubicles		Est	2	EA	25,000.00	50,000	3,000				53,000	
	480 V Transformer	Includes Switchgear	Est	2	Ea	150,000.00	300,000	28,000				328,000	
	MCC	480 V (50 Motors)	Est	4	EA	40,000.00	160,000	42,000				202,000	
	Trays	Trays (Transformer Feed)	Est	2,000	LF	30.00	60,000	58,000				118,000	
	Conduits	Conduits (500 LF typ per motor feed)	Est	25,000	LF	3.00	75,000	216,000				291,000	
	Transformer Feeder Cable	MV-90	Est	2,000	LF	8.00	16,000	40,000				56,000	
	MV Wiring	3/C #2 - 500 LF per motor	Est	25,000	LF	5.00	125,000	398,000				523,000	
	Transformer Firewalls	2 Transf.	Est	1	LT	30,000.00	30,000	9,000				39,000	
	Electrical Building - Pre Fabricated - Complete	Includes foundations	Est	1	LS	110,000.00	110,000	22,000				132,000	
	Conveyor Lighting	1500 LF	Est	1	LS	21,000.00	21,000	24,000				45,000	
	Control & Instrumentation												**406,000**
	DCS Upgrages	6 I/O's per Motor	Est	1	LS	175,000.00	175,000	175,000				350,000	
	DCS BOP Equipment		Est	1	LS	25,000.00	25,000	25,000				50,000	
	Locally Mounted Instruments		Est	1	LS	1,500.00	2,000	4,000				6,000	
	BOP Items												**582,530**
	Fire Protection Upgrade	500 LF	Est	1	LS	47,500.00	48,000	42,000				90,000	
	Stormwater/Coal Runoff Grading Upgrades	1500 LF	Est	1	LS	1,000.00	1,000	6,000				7,000	
	Relocation of Wetlands	8 Acres	Est	1	LS	5,000.00	5,000	135,000				140,000	
	Underground Utility Identificaiton and Relocation	Tampa - Allowance	Est	1	LS	12,500.00	13,000	12,000				25,000	
	General Services Interconnection (water & air, etc.)	Allowance	Est	1	LS	25,000.00	25,000	25,000				50,000	
	Adjustment for FL Building Code												
	Steel @ 7%	Applies to Estimated Steel Cost	Est	1	LS		0	145,670				145,670	
	Concrete @ 10%	Applies to Estimated Concrete Cost	Est	1	LS		0	124,860				124,860	
	Sub-Total						**12,348,000**	**9,721,530**				**22,069,530**	
	Other Costs/Adjustments												**1,458,000**

H:\INFODIV\PROJECTS\GIBSON FGD\Polk Direct Rotary Dumper 2500tph.xls\CSXT Estimate Review
9/4/03

Not required for cast coil dry-type transformers.

37

EXHIBIT NO. ____ (JBS-10)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 36 OF 107

DOCKET NO. 031033-EI
CSXT'S SIXTH REQUEST
FOR PRODUCTION OF DOCUMENTS

CONFIDENTIAL

DOCKET NO. 031033-EI
CSXT'S SIXTH REQUEST
FOR PRODUCTION OF DOCUMENTS

EXHIBIT: 2D-1
Sargent & Lundy LLC
Chicago

Tampa Electric
Polk Station
Rail Delivery
Order of Magnitude
-PRELIMINARY AND CONFIDENTIAL-

Estimate No.: XXXX
Project No.: 09476-018
Date: 9/4/03
Run Date: 9/4/03
Preparer: GBB/SM
Reviewer:

Cost Type:
Est=Estimated
B=Bid
OPB=Other Project Bid
Q=Vendor Quote

Acct. No.	Description	Scope Definition	Cost Type	Quantity	Unit of Measure	Unit Equip./ Mat. Cost	Total Equipment or Material Cost	Total Construction & Erection Cost	Sub-Contracts	DOR (Furnish)	DOR (Install)	Total Projected Cost	Sub-Totals
	ROTARY DUMPER AR PLANT - 2,500 TPH												
	Contractor's General & Administrative Costs	Based 5% of Equip, Material, and Labor						486,000				486,000	
	Contractor's Profit	Based 10% of Equip, Material, and Labor						972,000				972,000	
	Total Equipment, Material and Labor Costs						12,348,000	11,179,530				23,527,530	23,527,530
	Freight, Duties, Taxes, Etc.												0
	Freight-ExWorks To Site	Included in Material & Equipment Costs										Included in Material & Equipment Costs	
	Taxes - Sales/Use/VAT/Business/Etc.	Not Included										Not Included	
	Total Direct Project Costs						12,348,000	11,179,530				23,527,530	23,527,530
	Indirect Costs												2,404,620
	Insurance												
	Builders Risk											Not Included	
	Engineering/Procurement											1,646,927	
	Tampa Electric Interface with A/E	Project Mgmnt, Eng and Construction Support										164,693	
	Tampa Electric Management of EPC Contractor	Two men for 2 yrs @ $75K.										300,000	
	Permits and Fees	Tampa										293,000	

38

EXHIBIT NO. _____ (JBS-10)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 37 OF 107

CONFIDENTIAL

EXHIBIT: 2D-1
Sargent & Lundy LLC
Chicago

Tampa Electric
Polk Station
Rail Delivery
Order of Magnitude
-PRELIMINARY AND CONFIDENTIAL-

Estimate No.: XXXX
Project No.: 09476-019
Date: 9/4/03
Run Date: 9/4/03
Preparer: GBB/SM
Reviewer:

Cost Type:
Est=Estimated
B=Bid
OPB=Other Project Bid
Q=Vendor Quote

Acct. No.	Description	Scope Definition	Cost Type	Quantity	Unit of Measure	Unit Equip / Mat. Cost	Total Equipment or Material Cost	Total Construction & Erection Cost	Sub-Contracts	DOR (Furnish)	DOR (Install)	Total Projected Cost	Sub-Totals
	ROTARY DUMPER AR PLANT - 2,500 TPH												
	Total Indirect Project Costs											2,404,620	
	Escalation	Not Included										Not Included	0
	EPC Costs											3,423,256	3,423,256
	General & Adminstrative (G&A) @ 5% of Dirct Costs											1,176,377	
	Efficacy Insurance @ .8% of Direct Costs											188,220	
	Fee @ 8% of Direct Costs	Profit and Home Office Overhead										1,882,202	
	Performance Bond @ .75% of Direct Costs											176,456	
	Contingency												5,871,081
	Contingency	20% of overall cost										5,871,081	
	Interest During Construction (AFUDC)	Not Included										Not Included	0
	Total Project Cost											35,226,487	35,226,487

39

EXHIBIT NO. ______ (JBS-10)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 38 OF 107

TAMPA ELECTRIC COMPANY
DOCKET NO. 031033-EI
CSXT'S SIXTH REQUEST
FOR PRODUCTION OF DOCUMENTS

EXHIBIT 20-2

$ S&L Estimate

Fall Bottom Dump E

CONFIDENTIAL

DOCKET NO. 031033-EI
CSXT'S SIXTH REQUEST
FOR PRODUCTION OF DOCUMENTS

EXHIBIT NO. _____ (JBS-10)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 40 OF 107

41

EXHIBIT: 2D-2
Sargent & Lundy[LLC]
Chicago

Tampa Electric
Polk Station
Rail Delivery
Order of Magnitude
-PRELIMINARY AND CONFIDENTIAL-

Estimate No.: XXXX
Project No.: 09476-019
Date: 9/4/03
DRAFT
Run Date: 9/4/03
Preparer: GBB/SM
Reviewer:

Cost Type:
Est=Estimated
B=Bid
OPB=Other Project Bid
Q=Vendor Quote

Acct. No.	Description	Scope Definition	Cost Type	Quantity	Unit of Measure	Unit Equip / Mat. Cost	Total Equipment or Material Cost	Total Construction & Erection Cost	Sub-Contracts	DOR (Furnish)	DOR (Install)	Total Projected Cost	Sub-Totals
	BOTTOM DUMPER AT PLANT - 1,500 TPH												
	Equipment To Unload Trains												11,674,000
	Excavation for track hopper pit foundation		Est	1	LS	0.00	0	500,000				500,000	
	Concrete work for track hopper		Est	1	LS	400,000.00	400,000	160,000				560,000	
	Track hopper building		Est	1	LS	120,000.00	120,000	48,000				168,000	
	Car shaker / support steel		Est	1	LS	80,000.00	60,000	24,000				84,000	
	Hopper and grizzly		Est	1	LS	150,000.00	150,000	60,000				210,000	
	Track hopper dust suppression		Est	1	LS	100,000.00	100,000	40,000				140,000	
	Belt feeders	2 EACH	Est	1	LS	120,000.00	120,000	48,000				168,000	
	Concretework for conveyor / tunnel		Est	1	LS	180,000.00	150,000	60,000				210,000	
	Belt conveyor, 48" wide, 500 ft long		Est	1	LS	800,000.00	800,000	480,000				1,080,000	
	Storage dome, 15,000 tons		Est	1	LS	150,000.00	150,000	60,000				210,000	
	Foundation for storage dome		Est	1	LS	200,000.00	200,000	80,000				280,000	
	Lowering well inside dome		Est	1	LS	100,000.00	100,000	40,000				140,000	
	Excavation for reclaim hopper pit foundation		Est	1	LS	0.00	0	300,000				300,000	
	Concrete work for reclaim hopper		Est	1	LS	300,000.00	300,000	120,000				420,000	
	Hopper and grizzly		Est	1	LS	150,000.00	150,000	60,000				210,000	
	Belt feeder	2 EACH	Est	1	LS	120,000.00	120,000	48,000				168,000	
	Concretework for conveyor / tunnel		Est	1	LS	100,000.00	100,000	40,000				140,000	
	Belt conveyor, 36" wide, 1000 ft long		Est	1	LS	1,000,000.00	1,000,000	400,000				1,400,000	
	Diverter gate on top of silos		Est	1	LS	30,000.00	30,000	12,000				42,000	
	Transfer conveyor on top of silos, 36" wide, 80 ft		Est	1	LS	100,000.00	100,000	40,000				140,000	
	Modification on top of the silo		Est	1	LS	50,000.00	50,000	20,000				70,000	
	Foundation work for conveyors		Est	1	LS	30,000.00	30,000	24,000				54,000	
	Dust suppression for belt conveyors		Est	1	LS	200,000.00	200,000	80,000				280,000	
	Fire protection for conveyors		Est	1	LS	75,000.00	75,000	75,000				150,000	
	HVAC for dumper pit and transfer house		Est	1	LS	200,000.00	200,000	80,000				280,000	
	Sump pump system		Est	1	LS	50,000.00	50,000	20,000				70,000	
	Hoists and trolleys		Est	1	LS	50,000.00	50,000	20,000				70,000	
	Loop track cost	8000 LF	Est	1	LS	800,000.00	800,000	800,000				1,600,000	
	Loader / dozer		Est	1	LS	750,000.00	750,000	0				750,000	
	Temporary Coffer Dam		Est	1	LS	500,000.00	500,000	1,042,000				1,542,000	
	Dewatering		Est	1	LS	2,000.00	2,000	236,000				238,000	
	Electrical - Aux. Power - 13.8 KV												1,787,000
	Vacuum Circuit Breaker and Cubicles		Est	2	EA	25,000.00	50,000	3,000				53,000	

EXHIBIT: 2D-2
Sargent & Lundy LLC
Chicago

Tampa Electric
Polk Station
Rail Delivery
Order of Magnitude
-PRELIMINARY AND CONFIDENTIAL-

Estimate No.: XXXX
Project No.: 09476-019
Date: 9/4/03
DRAFT
Run Date: 9/4/03
Preparer: GBB/SM
Reviewer:

Cost Type:
Est=Estimated
B=Bid
OPB=Other Project Bid
Q=Vendor Quote

Acct. No.	Description	Scope Definition	Cost Type	Quantity	Unit of Measure	Unit Equip./ Mat. Cost	Total Equipment or Material Cost	Total Construction & Erection Cost	Sub-Contract	DOR (Furnish)	DOR (Install)	Total Projected Cost	Sub-Totals
	BOTTOM DUMPER AT PLANT - 1,500 TPH												
	480 V Transformer	Includes Switchgear	Est	2	Ea	150,000.00	300,000	28,000				328,000	
	MCC	480 V (50 Motors)	Est	4	EA	40,000.00	160,000	42,000				202,000	
	Trays	Trays (Transformer Feed)	Est	2,000	LF	30.00	60,000	58,000				118,000	
	Conduits	Conduits (500 LF typ per motor feed)	Est	25,000	LF	3.00	75,000	216,000				291,000	
	Transformer Feeder Cable	MV-90	Est	2,000	LF	8.00	16,000	40,000				56,000	
	MV Wiring	3/C #2 - 500 LF per motor	Est	25,000	LF	5.00	125,000	398,000				523,000	
	Transformer Firewalls	2 Transf.	Est	1	LT	30,000.00	30,000	9,000				39,000	
	Electrical Building - Pre Fabricated - Complete	Includes foundations	Est	1	LS	110,000.00	110,000	22,000				132,000	
	Conveyor Lighting	1900 LF	Est	1	LS	21,000.00	21,000	24,000				45,000	
	Control & Instrumentation												406,000
	DCS Upgrages	6 I/O's per Motor	Est	1	LS	175,000.00	175,000	175,000				350,000	
	DCS BOP Equipment		Est	1	LS	25,000.00	25,000	25,000				50,000	
	Locally Mounted Instruments		Est	1	LS	1,500.00	2,000	4,000				6,000	
	BOP Items												472,030
	Fire Protection Upgrade	500 LF	Est	1	LS	47,500.00	48,000	42,000				90,000	
	Stormwater/Coal Runoff Grading Upgrades	1900 LF	Est	1	LS	1,000.00	1,000	6,000				7,000	
	Relocation of Wetlands	9 Acres	Est	1	LS	5,000.00	5,000	135,000				140,000	
	Underground Utility Identification and Relocation	Tampa - Allowance	Est	1	LS	12,500.00	13,000	12,000				25,000	
	General Services Interconnection (water & air, etc.)	Allowance	Est	1	LS	25,000.00	25,000	25,000				50,000	
	Adjustment for FL Building Code												
	Steel @ 7%	Applies to Estimated Steel Cost	Est	1	LS		0	86,170				86,170	
	Concrete @ 10%	Applies to Estimated Concrete Cost	Est	1	LS		0	73,860				73,860	
	Sub-Total						**7,898,000**	**6,441,030**				**14,339,030**	
	Other Costs/Adjustments												**966,000**

H:\BID\DWP\PROJECTS\GIBSON FGD\Polk Direct Bottom Dump 1900 xls.ntsCSXT Estime Review
9/4/03

Page 2 of 4

Not required for cast coil dry-type transformers.

42

EXHIBIT NO. _____ (JBS-10)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 41 OF 107

EXHIBIT: 2D-2
Sargent & Lundy LLC
Chicago

Tampa Electric
Polk Station
Rail Delivery
Order of Magnitude
-PRELIMINARY AND CONFIDENTIAL-

Estimate No.: XXXX
Project No.: 09476-619
Date: 9/4/03
DRAFT
Run Date: 9/4/03
Preparer: GBB/SM
Reviewer:

Cost Type:
Est=Estimated
B=Bid
OPB=Other Project Bid
QuVendor Quote

Acct. No.	Description	Scope Definition	Cost Type	Quantity	Unit of Measure	Unit Equip./ Mat. Cost	Total Equipment or Material Cost	Total Construction & Erection Cost	Sub-Contracts	DOR (Furnish)	DOR (Install)	Total Projected Cost	Sub-Totals
	BOTTOM DUMPER AT PLANT - 1,500 TPH												
	Contractor's General & Administrative Costs	Based 5% of Equip, Material, and Labor						322,000				322,000	
	Contractor's Profit	Based 10% of Equip, Material, and Labor						644,000				644,000	
	Total Equipment, Material and Labor Costs						7,898,000	7,407,030				15,305,030	15,305,030
	Freight, Duties, Taxes, Etc.												0
	Freight-ExWorks To Site	Included in Material & Equipment Costs										Included in Material & Equipment Costs	
	Taxes - Sales/Use/VAT/Business/Etc.	Not Included										Not Included	
	Total Direct Project Costs						7,898,000	7,407,030				15,305,030	15,305,030
	Indirect Costs												1,771,487
	Insurance												
	Builders Risk											Not Included	
	Engineering/Procurement											1,071,352	
	Tampa Electric Interface with A/E	Project Mgmnt, Eng and Construction Support										107,135	
	Tampa Electric Management of EPC Contractor	Two men for 2 yrs @ $75K										300,000	
	Permits and Fees	Tampa										293,000	
	Total Indirect Project Costs											1,771,487	

H:\INFODIV\PROJECTS\GIBSON FGD\Polk Direct Bottom Dump 1500 stn.xls\CSXT Estimate Review
9/4/03

CONFIDENTIAL

EXHIBIT: 2D-2

Sargent & Lundy [LLC]
Chicago

Tampa Electric
Polk Station
Rail Delivery
Order of Magnitude
-PRELIMINARY AND CONFIDENTIAL-

Cost Type:
Est=Estimated
B=Bid
OPB=Other Project Bid
Q=Vendor Quote

Estimate No.: XXXX
Project No.: 09478-019
Date: 9/4/03
DRAFT
Run Date: 9/4/03
Preparer: GBB/SM
Reviewer:

Acct. No.	Description	Scope Definition	Cost Type	Quantity	Unit of Measure	Unit Equip./ Mat. Cost	Total Equipment or Material Cost	Total Construction & Erection Cost	Sub-Contracts	DOR (Furnish)	DOR (Install)	Total Projected Cost	Sub-Totals
	BOTTOM DUMPER AT PLANT - 1,500 TPH												
	Escalation	Not Included											
												Not Included	0
	EPC Costs												
	General & Adminstrative (G&A) @ 5% of Dirct Costs											2,226,882	2,226,882
	Efficacy Insurance @ .8% of Direct Costs											765,252	
	Fee @ 8% of Direct Costs	Profit and Home Office Overhead										122,440	
	Performance Bond @ .75% of Direct Costs											1,224,402	
												114,788	
	Contingency												
	Contingency	20% of overall cost											3,860,680
												3,860,680	
	Interest During Construction (AFUDC)	Not Included											
												Not Included	0
	Total Project Cost												
												23,164,079	23,164,079

44

EXHIBIT NO. ______ (JBS-10)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 43 OF 107

TAMPA ELECTRIC COMPANY
DOCKET NO. 031033-EI
CSXT'S SIXTH REQUEST
FOR PRODUCTION OF DOCUMENTS

Second Draft
marked copy

Tampa Electric Company
Big Bend and Polk Generating Stations

CSX Transportation
Alternate Method of Coal Delivery

SL-008160

September 4, 2003

Prepared By: P. Guletsky, S. Madan, G. Bowater

Reviewed By: P. Guletsky

Approved By: B. H. Yee

\\dms\tampaelectric\09476-019\SL-008160.doc

EXHIBIT NO. _____ (JBS-10)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 44 OF 107

Tampa Electric Company
Big Bend and Polk Generating Stations
CSX Transportation
Alternate Method of Coal Delivery

SL-008160
Project No. 09476-019
September 4, 2003

TABLE OF CONTENTS

EXHIBITS

EXHIBIT NO. _____ (JBS-10)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 45 OF 107

Sargent & Lundy

Tampa Electric Company
Big Bend and Polk Generating Stations
CSX Transportation
Alternate Method of Coal Delivery

SL-008160
Project No. 09476-019
September 4, 2003

I. Executive Summary

Sargent & Lundy L.L.C. has reviewed the proposal issued to Tampa Electric by CSX Transportation for alternate method of coal delivery to the Big Bend and Polk Generating Stations. The proposal, dated August 11, 2003, offers conceptual design and cost information to bring coal to the stations by rail direct rather than by the traditional barge transport.

The purpose of the S&L review is to validate the capital cost for each option proposed, to provide operating cost estimates for each, and to provide assessment of assumptions made which qualify the bid. The Tampa Electric Fuels Strategy Group will use the results of the S&L analysis to evaluate this option against the other coal transportation bids received.

Although CSXT has done an admirable job in their conceptual plan, in some cases the concept provided would not be feasible in its proposed form. Where possible, we have made the necessary adjustments to the design and have provided costs for the adjusted plan. Specific examples include:

- The limestone unloading facility at Big Bend will not be used for unloading coal by rail. Contamination of the limestone with coal would present several process obstacles with the WFGDS and gypsum byproduct.
- New track placement interferes with existing facilities in some areas. The track has been rerouted where necessary to accommodate existing operations.
- The conveyor belt sizing for the 2 –5.5 MM ton Big Bend Option is marginal. The estimate provided increases the belt width to 60 inches. A 60-inch conveyor is appropriate for the duty rating expected.

Each case is discussed more fully in the following section of the report.

The cost information provided with the proposal appears to be low in all cases. The costs provided appear to include material for new equipment only. Therefore, the installation cost and costs associated with modification to existing facilities need to be added. The capital cost estimate comparison for each scenario is as follows:

	CSXT Estimate	S&L Estimate
Big Bend 2 to 5.5 Million Ton Build In	$ 10,846,000	$41,294,000
Big Bend 1 to 2 Million Ton Build In	$6,798,000	$30,497,000
Polk Build In Shuttle Train Unload	$ 2,318,000	$15,418,000
Polk Direct Delivery – Rotary Dump	$ 6,502,000	$36,434,000
Polk Direct Delivery – Bottom Dump	$ 4,520,000	$24,371,000

EXHIBIT NO. _____ (JBS-10)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 46 OF 107

The estimates provided in the rail delivery bids do not take into account the additional operating costs required at each station. Fixed operating cost increases will be required for most of the options included in the bid package because of the additional operating staff that will be required to manage the coal unloading and storage. Variable operating costs will also increase at each station as a result of the additional equipment. Increased electrical load and equipment maintenance costs make up the majority of the variable operating cost estimate.

	Yearly Estimated Operating Cost
Big Bend 2 to 5.5 Million Ton Build In	$2.2MM to $2.7MM
Big Bend 1 to 2 Million Ton Build In	$1.4MM to $1.5 MM
Polk Build-In Shuttle Train Unload	$1.1 MM
Polk Direct Delivery – Rotary Dump	$1.3 MM
Polk Direct Delivery – Bottom Dump	$1.97 MM

The proposal options offered by CSXT have identified the demurrage rate assumed in each case. In some instances, we believe that the rates provided are more aggressive than can be reasonably achieved. These discrepancies can either be used as a point of negotiation or as a probable cost to Tampa Electric. We have not included demurrage fees in the operating cost estimates but rather provide the data for your use and evaluation during your contract negotiations.

	Demurrage Allowed in Bid	Estimated Unload Time Required
Big Bend 2 to 5.5 Million Ton Build In	4 hour	6 hour
Big Bend 1 to 2 Million Ton Build In	24 hour	9 hour
Polk Build In Shuttle Train Unload	(Sam) 8	(Sam) 3
Polk Direct Delivery – Rotary Dump	(Sam)	(Sam) 9
Polk Direct Delivery – Bottom Dump	(Sam)	(Sam) 9

Same ? or Same ?

Environmental considerations that need to be addressed in the full evaluation of these coal transportation options include wetlands reconstruction, coal pile runoff, and noise abatement. These issues are discussed later in this report.

II. Bid Analysis

A. Big Bend 2 to 5.5 Million Ton Build In

The conceptual design that is proposed for this option requires three alterations:

Sargent & Lundy

Tampa Electric Company
Big Bend and Polk Generating Stations
CSX Transportation
Alternate Method of Coal Delivery

SL-008160
Project No. 09476-019
September 4, 2003

1. The use of the limestone unloading facility for coal unloading is not desirable. Although introducing small amounts of limestone to the coal supply is not a particular problem, introducing small amounts of coal to the limestone supply is indeed a problem. Coal introduced through the FGD system will adversely effect its process design. First, the coal will contaminate the gypsum byproduct that is currently being sold for wallboard manufacture. Second, the coal will contaminate the water reclaimed from the FGD system and will therefore concentrate in the process loop. This will increase the suspended solids in the reclaim water, which is used for mist eliminator washing. Higher suspended solids can result in plugging of the wash nozzles, headers and piping, and in erosion of the mist eliminator vanes. For these reasons, it is not common practice to share unloading of coal with limestone supplies for FGD. The estimate provided herein included provisions to install a new separate coal unloading station due west of the existing limestone unloading station and directly south of the existing FGDs.

2. The 45-car rail spur identified in the proposal for use at the new railcar load-out which transfers coal to be sent to the Polk Station is located within the boundaries of the existing desalinization plant which is owned and operated by Others. It is suggested that this rail spur be moved to the south side of the rail loading facility. This change has been incorporated into the estimate. It represents a minor cost impact.

3. CSXT proposal included 54" wide belt conveyors for unloading. The 54" wide conveyors would have to operate at a fairly high belt speed (~ 700 fpm) for handling the required capacity. At this high belt speed, we would expect a high potential of coal spillage and dusting problems; therefore, we would recommend 60" wide conveyor bolts for the new train unloading belts. The 60" wide conveyors would require a slower (580 gpm) belt speed for handling the required tonnage.

The capital cost estimate that is provided with this option appears to be quite low. As illustrated in the executive summary, we would expect the installed cost for this scope of work to be more than double the proposed amount. Although the basis of the estimate is not identified specifically, it would appear that the estimate provided by CSXT in the proposal represents the capital cost for the engineered equipment for coal transport only. Exhibits 2A-1 and 2A-2 are the respective CSXT and S&L cost estimates for Big Bend 2-5.5 MM Ton Rail Coal delivery option.

S&L has assumed that hooded conveyors will be acceptable and permitable for the new conveyors except the transfer conveyor that travels over the intake canal. The transfer conveyor is totally enclosed from the blending bin to the proposed transfer tower. Should environmental permitting require all of the conveyor to be totally enclosed, then the increase to the capital estimate will be approximately $2,000,000.

In addition to the new equipment and installation costs, S&L has included costs for the following support tasks required to complete the scope work:

EXHIBIT NO. _____ (JBS-10)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 48 OF 107

- Fire Loop Extension
- Dust Suppression System
- Repair to Existing On-Site Track
- Modifications to Transfer House T2
- Demo/Reconstruct Storm Storage Area
- Re-Grading for Storm Water and Runoff
- Underground Utility Identification and Relocation
- Installation of Rail Bridge Over Water Lines on East Side of Property
- Conveyor Lighting
- Blending Bin Modifications
- Adjustments for High Water Table
- Adjustment for FL Building Code
- Transformers for Electrical Supply
- Double End Bus Substation
- PLC
- Electrical Interconnect
- I/C Interconnect
- Services Interconnect (Instrument Air, Service Air, Water)
- Environmental Permitting Evaluation
- Contractor G&A and Fee
- Tampa Electric Overheads

The overhead costs include engineering oversight by the Owner's AE, construction oversight, and Tampa Electric internal project costs.

Operating cost considerations to be included in the overall bid evaluation are tabulated in Exhibit 2A-3. The combined fixed and variable operating costs for this option range from $2,167,200 to $2,697,500 per year depending on the quantity of coal handled.

B. Big Bend 1 to 2 Million Ton Build In

The conceptual design proposed by CSXT requires a new coal unloading station for coal as described above. We have made the same adjustment to this option as described in the 2 to 5.5 MM Ton Rail Delivery Option described above.

This option introduces some operating constraints that do not otherwise exist. This option provides a radial stacker to stack the coal and does not tie into the existing conveyor systems. This arrangement limits coal storage to one of the three existing

EXHIBIT NO. _____ (JBS-10)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 49 OF 107

coal storage bays. Coal pile management will therefore be more complicated and require more labor to maintain.

The capital cost estimate provided with the CSXT proposal is provided in Exhibit 2B-1. Again, the capital costs provided are low compared to the independent total installed cost estimate prepared as part of this evaluation. Exhibit 2B-2 provides the details of the independent estimate prepared by S&L.

In addition to the new equipment and installation costs, S&L has included costs for the following support tasks required to complete the scope work:

- Fire Loop Extension
- Dust Suppression System
- Repair to Existing On-Site Track
- Demo/Reconstruct Storm Storage Area
- Re-Grading for Storm Water and Runoff
- Underground Utility Identification and Relocation
- Installation of Rail Bridge Over Water Lines on East Side of Property
- Conveyor Lighting
- Adjustments for High Water Table
- Adjustment for FL Building Code
- Transformers for Electrical Supply
- Double End Bus Substation
- PLC
- Electrical Interconnect
- I/C Interconnect
- Services Interconnect (Instrument Air, Service Air, Water)
- Environmental Permitting Evaluation
- Contractor G&A and Fee
- Tampa Electric Overheads

No modifications to the T2 transfer tower and blending bin are required for this option and we have assumed hooded conveyors are acceptable. The estimated increased cost for totally enclosed conveyors should they be required is $1,250,000

Operating cost considerations to be included in the overall bid evaluation are tabulated in Exhibit 2B-3. The combined fixed and variable operating costs for this option range from $1,411,000 to $1,492,000 per year.

EXHIBIT NO. _____ (JBS-10)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 50 OF 107

C. *Polk Build In Shuttle Train Unload*

This design option provided in the CSXT proposal for the Polk Plant is the least expensive and the least intrusive to the current plant operations.

The independent, estimated total installed cost for this option is $15,418,000 which is over six times higher than the capital cost identified in the CSXT proposal. Exhibit 2C-1 and Exhibit 2C-2 provide the details of the CSXT and S&L capital estimates respectively.

In addition to the new equipment and installation costs, S&L has included, in the independent estimate, costs for the following support tasks required to complete the scope of work.

- Underground Reclaim Hopper
- Bulldozer
- Fire Loop Extension
- Dust Suppression
- Repair to Existing On-Site Track
- Modifications to Existing Coal Silo
- Grading for Stormwater/Coal Runoff
- Underground Utility Identification and Relocation
- Wetlands Relocation
- Conveyor Lighting
- Adjustment for FL Building Code
- Adjustments for the High Water Table
- Transformers
- Double End Bus Substation
- I/O Blocks
- Electrical Interconnect
- DCS Interconnect
- Services Interconnect
- Environmental Permitting
- Contractor G&A and Fee
- Tampa Electric Overheads

Operating cost considerations to be included in the overall bid evaluation of this option are tabulated in Exhibit 2C-3. The combined fixed and variable operating costs for this option are $1,130,000 per year.

EXHIBIT NO. _____ (JBS-10)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 51 OF 107

D. *Polk Direct Delivery – Rotary Dump and Bottom Dump Scenarios*

The conceptual design of this option proposed by CSXT introduces coal storage to the Polk station. The domed storage facility minimizes the environmental impact to the station. The loop track provides sufficient storage to prevent obstruction of other plant operations.

The proposal provided by CSXT includes two scenarios for this option. The first uses a rotary car dumper; the second is similar but uses a bottom dump rail car. We have included a car shaker with the bottom dump rail car estimate. The independent estimates prepared for this option are included as Exhibit 2D-1 and Exhibit 2D-2. The CSXT proposal estimate, again lower than the estimated installed costs prepared by S&L, is provided as Exhibit 2D-3.

Items included in the independent total installed cost, in addition to the new equipment, are:

- Underground Reclaim Hopper
- Bulldozer
- Fire Loop Extension
- Dust Suppression
- Repair to Existing On-Site Track
- Modifications to Existing Coal Silo
- Grading, Stormwater/Coal Runoff Modification
- Underground Utility Identification and Relocation
- Conveyor Lighting
- Adjustment for FL Building Code
- Adjustment for High Water Table
- Transformers
- Double End Bus Substation
- I/O Blocks
- Electrical Interconnect
- DCS Interconnect
- Services Interconnect
- Environmental Permitting
- Wetland Relocation
- Contractor G&A and Fee
- Tampa Electric Overheads

EXHIBIT NO. _____ (JBS-10)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 52 OF 107

Tampa Electric Company
Big Bend and Polk Generating Stations
CSX Transportation
Alternate Method of Coal Delivery

SL-008160
Project No. 09476-019
September 4, 2003

Operating cost considerations to be included in the overall bid evaluation of this option are tabulated in Exhibit 2D-4. The combined fixed and variable operating costs for this option are $1,349,000 per year for the rotary dumper and $972,000 per year for the bottom dump rail car scenario.

III. **Assumptions**

- No additional real estate purchase is required for track or relocation of facilities and wetlands.
- No track upgrade or repair is required outside of the plant real estate boundaries.
- Tampa Electric has no provisions for holding second train for CSX.
- Coal unloading is to be performed during day shifts only.
- Primary power for new equipment is available at each of the stations.
- No allowances or provisions have been included in the cost estimate for schedule constraints (labor overtimes, double shifts, accelerated shipment of equipment or commodities, etc.).
- Project contingency of 20% is required to mitigate the risk on costs due to the short evaluation period.
- The current barge unloading facility will remain operational at the Big Bend Station.
- The current truck transfer station will remain operational at the Big Bend Station.
- The current truck unloading facility will remain operational at the Polk Station.

IV. **Issues for Further Consideration**

Coal unloading by rail at the Big Bend Station will necessitate blocking Gate 32 for several periods of time during the day. For the 2 – 5.5 MM ton scenario, we estimate that approximately two trains a day will be received during the week. We would expect that for each train Gate 32 will be blocked about 15 minutes while the train is entering the site, 45 minutes during the unloading of each of the two 45 car segments, and another 15 minutes during the train re-assembly and exit from the plant. This equates to Gate 32 being blocked from access approximately 17% of the day.

SAM, please provide similar input regarding access constraints for each option.

Low frequency noise will be emitted from the locomotives operating on the site. This type of noise is not easily mitigated nor can it be dampened with the construction of berms. If this proposal is considered further, S&L recommends that a noise study be performed for each station.

EXHIBIT NO. _____ (JBS-10)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 53 OF 107

Sargent & Lundy

Tampa Electric Company
Big Bend and Polk Generating Stations
CSX Transportation
Alternate Method of Coal Delivery

SL-008160
Project No. 09476-019
September 4, 2003

EXHIBIT 2A-1

BIG BEND CAPITAL COST 2 - 5.5 MM TONS

CSXT COST ESTIMATE

Big Bend 2 - 5.5 mm TPY Option (Rapid Discharge Cars)

System Rated at 2500 TPH

Rapid Discharge System	$1,600,000
Long Conveyor 3300 ft	$3,100,000
Short Conveyor 500 ft	$650,000
Transfer Station	$230,000
Three 45 Car Tracks	$1,200,000
Truck Dump and Conveyor	$350,000
Total	$7,130,000

Equipment to Load Shuttle Trains

Conveyors and Transfer Station	$2,250,000
250 Ton Batch Silo	$1,066,000
New 45 Car Track	$400,000
Total	$3,716,000
Grand Total	$10,846,000

EXHIBIT NO. _____ (JBS-10)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 54 OF 107

Tampa Electric Company
Big Bend and Polk Generating Stations
CSX Transportation
Alternate Method of Coal Delivery

SL-008160
Project No. 09476-019
September 4, 2003

EXHIBIT 2A-2

S&L COST ESTIMATE FOR
BIG BEND 2 - 5.5 MM TON
RAIL COAL DELIVERY OPTION

Preliminary Draft

EXHIBIT NO. _____ (JBS-10)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 55 OF 107

CONFIDENTIAL

EXHIBIT: 2A-2

Sargent & Lundy LLC
Chicago

Tampa Electric
Big Bend
Rail Delivery
Order of Magnitude
-PRELIMINARY AND CONFIDENTIAL-

Estimate No.: XXXX
Project No.: 09478-019
Date: 9/5/03
DRAFT
Run Date: 9/5/03
Preparer: GBB/SM
Reviewer:

Cost Type:
Est=Estimated
B=Bid
OPB=Other Project Bid
Q=Vendor Quote

Acct. No.	Description	Scope Definition	Cost Type	Quantity	Unit of Measure	Unit Equip./ Mat. Cost	Total Equipment or Material Cost	Total Construction & Erection Cost	Sub-Contracts	DOR (Furnish)	DOR (Install)	Total Projected Cost	Sub-Totals
	2 - 5.5 MM TPY OPTION WITH RAPID DISCHARGE CARS												
	Equipment To Unload Trains @ 2500 TPH												15,360,000
	Excavation for track hopper pit foundation		Est	1	LS	0.00	0	1,000,000				1,000,000	
	Concrete work for track hopper		Est	1	LS	800,000.00	800,000	320,000				1,120,000	
	Track hopper building		Est	1	LS	150,000.00	150,000	60,000				210,000	
	Hopper and grizzly		Est	1	LS	200,000.00	200,000	80,000				280,000	
	Track hopper dust suppression		Est	1	LS	100,000.00	100,000	40,000				140,000	
	Belt feeders	2 Each	Est	1	LS	200,000.00	200,000	80,000				280,000	
	Concrete work for conveyor / tunnel		Est	1	LS	200,000.00	200,000	80,000				280,000	
	Belt conveyor, 60" wide, 250 ft long		Est	1	LS	500,000.00	600,000	400,000				900,000	
	Transfer house		Est	1	LS	100,000.00	100,000	40,000				140,000	
	Foundation for transfer house		Est	1	LS	50,000.00	50,000	20,000				70,000	
	Belt conveyor, 60" wide, 3200 ft long, hooded conveyor		Est	1	LS	480,000.00	480,000	3,840,000				4,320,000	
	Transfer house		Est	1	LS	300,000.00	300,000	240,000				540,000	
	Foundation for transfer house		Est	1	LS	60,000.00	50,000	20,000				70,000	
	Belt conveyor to existing transfer house, 60" wide, 500 ft long		Est	1	LS	750,000.00	750,000	600,000				1,350,000	
	Existing transfer house modification house modification		Est	1	LS	100,000.00	100,000	80,000				180,000	
	Foundation work for conveyors		Est	1	LS	100,000.00	100,000	80,000				180,000	
	Dust suppression for belt conveyors		Est	1	LS	200,000.00	200,000	80,000				280,000	
	Fire protection for conveyors		Est	1	LS	160,000.00	160,000	160,000				320,000	
	HVAC for track hopper pit and transfer houses		Est	1	LS	200,000.00	200,000	80,000				280,000	
	Sump pump system at track hopper		Est	1	LS	50,000.00	50,000	20,000				70,000	
	Hoists and trolleys		Est	1	LS	50,000.00	50,000	20,000				70,000	
	Track work modification - add three 45 car tracks	7500 LF	Est	1	LS	750,000.00	750,000	750,000				1,500,000	
	Temporary Coffer Dam					500,000.00	500,000	1,042,000				1,542,000	
	Dewatering					2,000.00	2,000	238,000				238,000	
	Equipment To load Shuttle Trains												6,546,000
	Modification at existing bin		Est	1	LS	50,000.00	50,000	20,000				70,000	
	Belt feeder		Est	1	LS	60,000.00	60,000	24,000				84,000	
	Belt Conveyor to transfer house, 1000 tph, 42" wide, 1200 ft long, enclosed conveyor		Est	1	LS	1,700,000.00	1,700,000	680,000				2,380,000	
	Transfer house		Est	1	LS	60,000.00	50,000	20,000				70,000	
	Foundation for transfer house		Est	1	LS	60,000.00	50,000	20,000				70,000	
	Belt conveyor to load out station, 1000 tph, 42" wide, 700 ft long enclosed conveyor		Est	1	LS	1,000,000.00	1,000,000	400,000				1,400,000	

H:\INFODIV\PROJECTS\GIBSON FGD\BigBend_2-56 TYP Option.xls\CSXT Estimate Review
9/3/03

57

EXHIBIT NO. ______ (JBS-10)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 56 OF 107

DOCKET NO. 031033-EI
CSXT'S SIXTH REQUEST
FOR PRODUCTION OF DOCUMENTS

CONFIDENTIAL

TAMPA ELECTRIC COMPANY
DOCKET NO. 031033-EI
CSXT'S SIXTH REQUEST
FOR PRODUCTION OF DOCUMENTS

EXHIBIT NO. _____ (JBS-10)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 57 OF 107

58

EXHIBIT: 2A-2

Sargent & Lundy LLC
Chicago

Tampa Electric
Big Bend
Rail Delivery
Order of Magnitude
-PRELIMINARY AND CONFIDENTIAL-

Cost Type:
Est=Estimated
B=Bid
OPB=Other Project Bid
Q=Vendor Quote

Estimate No.: XXXX
Project No.: 09476-019
Date: 9/5/03
DRAFT
Run Date: 9/5/03
Preparer: OBB/SM
Reviewer:

Acct. No.	Description	Scope Definition	Cost Type	Quantity	Unit of Measure	Unit Equip./Mat. Cost	Total Equipment or Material Cost	Total Construction & Erection Cost	Sub-Contracts	DOR (Furnish)	DOR (Install)	Total Projected Cost	Sub-Totals
	Loadout bin structure		Est	1	LS	750,000.00	750,000	300,000				1,050,000	
	Foundation work for conveyors		Est	1	LS	100,000.00	100,000	80,000				180,000	
	Dust suppression for belt conveyors		Est	1	LS	200,000.00	200,000	80,000				280,000	
	Fire protection for conveyors		Est	1	LS	200,000.00	200,000	80,000				280,000	
	HVAC for transfer house and loadout station		Est	1	LS	50,000.00	50,000	20,000				70,000	
	Sump pump system at loadout station		Est	1	LS	50,000.00	50,000	20,000				70,000	
	Hoists and trolleys		Est	1	LS	30,000.00	30,000	12,000				42,000	
	Track work modification,, add one 45 car track	2500 LF	Est	1	LS	250,000.00	250,000	250,000				500,000	
	Electrical - Aux. Power												
	Vacuum Circuit Breaker and Cubicles		Est	2	EA	25,000.00	50,000	3,000	$			53,000	2,287,000
	480 V Transformer	Includes Switchgear	Est	2	Ea	135,000.00	270,000	28,000				298,000	
	MCC	480 V (66 Motors)	Est	5	EA	40,000.00	200,000	53,000				253,000	
	Trays	Trays (Transformer Feed)	Est	2,000	LF	30.00	60,000	58,000				118,000	
	Conduits	Conduits (500 LF typ per motor feed)	Est	33,000	LF	3.00	99,000	285,000				384,000	
	Transformer Feeder Cable	MV-90	Est	2,000	LF	8.00	16,000	40,000				56,000	
	MV Wiring	3/C #2 - 500 LF per motor	Est	33,000	LF	5.00	165,000	525,000				690,000	
	Electrical Building - Pre Fabricated - Complete	Elevated supports and foundations	Est	1	LS	200,000.00	200,000	60,000				260,000	
	Conveyor Lighting	5850 LF	Est	1	LS	81,900.00	82,000	93,000				175,000	
	Control & Instrumentation												
	DCS Upgrades	6 I/O's per Motor	Est	1	LS	250,000.00	250,000	250,000				500,000	556,000
	DCS BOP Equipment		Est	1	LS	25,000.00	25,000	25,000				50,000	
	Locally Mounted Instruments		Est	1	LS	1,500.00	2,000	4,000				6,000	
	BOP Items												
	Fire Protection Upgrade - underground	1000 LF	Est	1	LS	95,000.00	95,000	84,000				179,000	773,640
	Demo/Reconstruction of Storage Area	Elevated at +15' (98,000 CY)	Est	2	LS	0.00	0	30,000				30,000	
	Stormwater/Coal Runoff Grading Upgrades	3000 LF	Est	1	LS	2,000.00	2,000	6,000				8,000	
	Underground Utility Identificaiton and Relocation	Tampa - Allowance	Est	1	LS	25,000.00	25,000	25,000				50,000	
	Rail Bridge Over Water Lines	2 - 20" lines	Est	1	LS	80,000.00	50,000	80,000				130,000	
	General Services Interconnection (water & air, etc.)	Allowance	Est	1	LS	50,000.00	50,000	50,000				100,000	
	Adjustment for FL Building Code												
	Steel @ 7%	Applied to Estimated Steel Cost	Est	1	LS		0	148,960				148,960	
	Concrete @ 10%	Applied to Estimated Concrete Cost	Est	1	LS		0	127,680				127,680	

H:\NFOD\PROJECTS\GIBSON FGD\BigBend_2-65 TYP Option.xls\CSXT Estimate Review
9/5/03

CONFIDENTIAL

EXHIBIT: 2A-2
Sargent & Lundy LLC
Chicago

Tampa Electric
Big Bend
Rail Delivery
Order of Magnitude
-PRELIMINARY AND CONFIDENTIAL-

Cost Type:
Est=Estimated
B=Bid
OPB=Other Project Bid
Q=Vendor Quote

Estimate No.: XXXX
Project No.: 09478-019
Date: 9/5/03
DRAFT
Run Date: 9/5/03
Preparer: GBB/SM
Reviewer:

Acct. No.	Description	Scope Definition	Cost Type	Quantity	Unit of Measure	Unit Equip./ Mat. Cost	Total Equipment or Material Cost	Total Construction & Erection Cost	Sub-Contracts	DOR (Furnish)	DOR (Install)	Total Projected Cost	Sub-Totals
	Sub-Total						12,173,000	13,349,640				25,522,640	
	Other Costs/Adjustments												2,002,000
	Contractor's General & Administrative Costs	Based 5% of Equip, Material, and Labor						667,000				667,000	
	Contractor's Profit	Based 10% of Equip, Material, and Labor						1,335,000				1,335,000	
	Total Equipment, Material and Labor Costs						12,173,000	15,351,640				27,524,640	27,524,640
	Freight, Duties, Taxes, Etc.												0
	Freight-ExWorks To Site	Included in Material & Equipment Costs										Included in Material & Equipment Costs	
	Taxes - Sales/Use/VAT/Business/Etc.	Not Included										Not Included	
	Total Direct Project Costs						12,173,000	15,351,640				27,524,640	27,524,640
	Indirect Costs												2,882,397
	Insurance												
	Builders Risk											Not Included	
	Engineering/Procurement											1,926,725	
	Tampa Electric Interface with A/E	Project Mgmnt, Eng and Construction Support										192,672	
	Tampa Electric Management of EPC Contractor	Four men for 2 yrs @ $75K.										600,000	
	Permits and Fees	Tampa										163,000	

59

EXHIBIT NO. ______ (JBS-10)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 58 OF 107

TAMPA ELECTRIC COMPANY
DOCKET NO. 031033-EI
CSXT'S SIXTH REQUEST
FOR PRODUCTION OF DOCUMENTS

CONFIDENTIAL

EXHIBIT: 2A-2
Sargent & Lundy LLC
Chicago

Tampa Electric
Big Bend
Rail Delivery
Order of Magnitude
-PRELIMINARY AND CONFIDENTIAL-

Cost Type:
Est=Estimated
B=Bid
OPB=Other Project Bid
Q=Vendor Quote

Estimate No.: XXXX
Project No.: 09478-019
Date: 9/5/03
DRAFT
Run Date: 9/5/03
Preparer: GBB/SM
Reviewer:

Acct. No.	Description	Scope Definition	Cost Type	Quantity	Unit of Measure	Unit Equip./ Mat. Cost	Total Equipment or Material Cost	Total Construction & Erection Cost	Sub-Contracts	DOR (Furnish)	DOR (Install)	Total Projected Cost	Sub-Totals
	Total Indirect Project Costs											2,882,397	
	Escalation	Not Included										Not Included	0
	EPC Costs											4,004,835	4,004,835
	General & Adminstrative (G&A) @ 5% of Dirct Costs											1,376,232	
	Efficacy Insurance @ .8% of Direct Costs											220,197	
	Fee @ 8% of Direct Costs	Profit and Home Office Overhead										2,201,971	
	Performance Bond @ .75% of Direct Costs											206,435	
	Contingency												6,882,374
	Contingency	20% of overall cost										6,882,374	
	Interest During Construction (AFUDC)	Not Included										Not Included	0
	Total Project Cost											41,294,247	41,294,247

Sargent & Lundy

Tampa Electric Company
Big Bend and Polk Generating Stations
CSX Transportation
Alternate Method of Coal Delivery

SL-008160
Project No. 09476-019
September 4, 2003

EXHIBIT 2A-3

OPERATING COST ESTIMATE FOR
2 - 5.5 MILLION TON RAIL DELIVERY OF COAL
BIG BEND STATION

Variable		
Power[1]	$68,000 - $128,000	
Surfactant	$97,000 - $266,000	
Labor	$301,308 - $903,925	
Fixed		
Labor	$301,308	
Lease for Locomotive	Not Available	
Taxes and Insurance (2.085% Installed Capital Cost)	$575,900	
Maintenance (3% of Installed Cost)	$825,720	
Total Operating Cost Per Year	$2,167,200	$2,697,500

[1]Calculated on replacement fuel cost only.

EXHIBIT NO. _____ (JBS-10)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 60 OF 107

Tampa Electric Company
Big Bend and Polk Generating Stations
CSX Transportation
Alternate Method of Coal Delivery

Sargent & Lundy

SL-008160
Project No. 09476-019
September 4, 2003

EXHIBIT 2B-1

BIG BEND CAPITAL COST 1- 2 MM TON

CSXT ESTIMATE

Big Bend 1 - 2 MM TPY Option (Standard Coal Hoppers)

System Rated at 1500 TPH

Modify Limestone Pit	$250,000
Long Conveyor	$1,953,000
Transfer Station	$230,000
Short Conveyor	$280,000
Three 45 Car Tracks	$1,200,000
200' Radial Stacker	$250,000
Truck Dump and Conveyor	$350,000
Total	$4,513,000

Equipment to Load Shuttle Trains

Reclaim Hopper with Feed to Batch Silo	$469,000
250 Ton Batch Silo	$1,066,000
Loader/Dozer	$750,000
Total	$2,285,000

Grand Total	$10,846,000

EXHIBIT NO. _____ (JBS-10)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 61 OF 107

Tampa Electric Company
Big Bend and Polk Generating Stations
CSX Transportation
Alternate Method of Coal Delivery

SL-008160
Project No. 09476-019
September 4, 2003

EXHIBIT 2B-2

BIG BEND 1 TO 2 MILLION TON BUILD IN

S&L INDEPENDENT ESTIMATE

Preliminary Draft

EXHIBIT NO. _____ (JBS-10)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 62 OF 107

EXHIBIT: 2B-2
Sargent & Lundy LLC
Chicago

Tampa Electric
Big Bend
Rail Delivery
Order of Magnitude
-PRELIMINARY AND CONFIDENTIAL-

Cost Type:
Est=Estimated
B=Bid
OPB=Other Project Bid
Q=Vendor Quote

Estimate No.: XXXX
Project No.: 09478-019
Date: 9/5/03
DRAFT
Run Date: 9/5/03
Preparer: GEB/SM
Reviewer:

Acct. No.	Description	Scope Definition	Cost Type	Quantity	Unit of Measure	Unit Equip./Mat. Cost	Total Equipment or Material Cost	Total Construction & Erection Cost	Sub-Contracts	DOR (Furnish)	DOR (Install)	Total Projected Cost	Sub-Totals
	1 - 2 MM TPY OPTION WITH RAPID DISCHARGE CARS												
	Equipment To Unload Trains @ 1500 TPH												10,965,000
	Excavation for track hopper pit foundation		Est	1	LS	0.00	0	500,000				500,000	
	Concrete work for track hopper		Est	1	LS	400,000.00	400,000	160,000				560,000	
	Track hopper buiding		Est	1	LS	120,000.00	120,000	48,000				168,000	
	Car shaker / support steel		Est	1	LS	60,000.00	60,000	24,000				84,000	
	Hopper and grizzly		Est	1	LS	150,000.00	150,000	60,000				210,000	
	Track hopper dust suppression		Est	1	LS	100,000.00	100,000	40,000				140,000	
	Belt feeders		Est	2	LS	60,000.00	120,000	48,000				168,000	
	Concretework for conveyor / tunnel		Est	1	LS	150,000.00	150,000	60,000				210,000	
	Belt conveyor, 48" wide, 250 ft long		Est	1	LS	375,000.00	375,000	150,000				525,000	
	Transfer house		Est	1	LS	80,000.00	80,000	32,000				112,000	
	Foudation for transfer house		Est	1	LS	40,000.00	40,000	16,000				56,000	
	Belt conveyor, 48" wide, 1,500 ft long, hooded conveyor		Est	1	LS	1,800,000.00	1,800,000	720,000				2,520,000	
	Transfer house		Est	1	LS	200,000.00	200,000	160,000				360,000	
	Foudation for transfer house		Est	1	LS	50,000.00	50,000	20,000				70,000	
	Belt conveyor to radial stacker, 48" wide, 400 ft long, hooded conveyor		Est	1	LS	500,000.00	500,000	200,000				700,000	
	Transfer house at radial stacker		Est	1	LS	100,000.00	100,000	80,000				180,000	
	Foudation for transfer house		Est	1	LS	40,000.00	40,000	16,000				56,000	
	Radial stacker, 48" wide, 200 ft long		Est	1	LS	250,000.00	250,000	200,000				450,000	
	Fondation work for conveyors		Est	1	LS	100,000.00	100,000	80,000				180,000	
	Dust suppression for belt conveyors		Est	1	LS	200,000.00	200,000	80,000				280,000	
	Fire protection for conveyors		Est	1	LS	118,000.00	118,000	118,000				236,000	
	HVAC for track hopper pit and transfer houses		Est	1	LS	200,000.00	200,000	80,000				280,000	
	Sump pump system at track hopper		Est	1	LS	50,000.00	50,000	20,000				70,000	
	Hoists and trolleys		Est	1	LS	50,000.00	50,000	20,000				70,000	
	Track work midification, add one 45 car track	2500 LF	Est	1	LS	250,000.00	250,000	750,000				1,000,000	
	Temporary Coffer Dam		Est	1	LS	500,000.00	500,000	1,042,000				1,542,000	
	Dewatering		Est	1	LS	2,000.00	2,000	236,000				238,000	
	Equipment To load Shuttle Trains												4,304,000
	Excavation for reclaim hopper pit foundation		Est	1	LS	0.00	0	300,000				300,000	
	Concrete work for RECLAIM hopper		Est	1	LS	300,000.00	300,000	120,000				420,000	
	Hopper and grizzly		Est	1	LS	150,000.00	150,000	60,000				210,000	
	Belt feeder	2 Each	Est	1	LS	120,000.00	120,000	48,000				168,000	
	Concretework for conveyor / tunnel		Est	1	LS	100,000.00	100,000	40,000				140,000	

EXHIBIT: 2B-2						Tampa Electric					Estimate No.:	XXXX	
Sargent & Lundy LLC						Big Bend					Project No.:	09476-019	
Chicago						Rail Delivery					Date:	9/3/03	
		Cost Type:				Order of Magnitude						DRAFT	
		Est=Estimated				-PRELIMINARY AND CONFIDENTIAL-							
		B=Bid									Run Date:	9/3/03	
		OPB=Other Project Bid									Preparer:	GBB/SM	
		Q=Vendor Quote									Reviewer:		

Acct. No.	Description	Scope Definition	Cost Type	Quantity	Unit of Measure	Unit Equip./ Mat. Cost	Total Equipment or Material Cost	Total Construction & Erection Cost	Sub-Contracts	DOR (Furnish)	DOR (Install)	Total Projected Cost	Sub-Totals
	Belt conveyor, 48" wide, 500 ft long		Est	1	LS	500,000.00	500,000	200,000				700,000	
	Loadout bin structure		Est	1	LS	750,000.00	750,000	300,000				1,050,000	
	Fondation work for conveyors		Est	1	LS	30,000.00	30,000	24,000				54,000	
	Dust suppression for belt conveyors		Est	1	LS	200,000.00	200,000	80,000				280,000	
	Fire protection for conveyors		Est	1	LS	25,000.00	25,000	25,000				50,000	
	HVAC forreclaim hopperr, loadout station		Est	1	LS	50,000.00	50,000	20,000				70,000	
	Sump pump system at reclaim hopper and loadout station		Est	1	LS	50,000.00	50,000	20,000				70,000	
	Hoists and trolleys		Est	1	LS	30,000.00	30,000	12,000				42,000	
	Loader / dozer		Est	1	LS	750,000.00	750,000	0				750,000	
	Electrical - Aux. Power												**2,329,000**
	Vacuum Circuit Breaker and Cubicles		Est	2	EA	25,000.00	50,000	3,000				53,000	
	480 V Transformer	Includes Switchgear	Est	2	Ea	135,000.00	270,000	28,000				298,000	
	MCC	480 V (71 Motors)	Est	6	EA	40,000.00	240,000	63,000				303,000	
	Trays	Trays (Transformer Feed)	Est	2,000	LF	30.00	60,000	58,000				118,000	
	Conduits	Conduits (500 LF typ per motor feed)	Est	35,500	LF	3.00	107,000	306,000				413,000	
	Transformer Feeder Cable	MV-60	Est	2,000	LF	8.00	16,000	40,000				56,000	
	MV Wiring	3/C #2 - 500 LF per motor	Est	35,500	LF	5.00	178,000	564,000				742,000	
	Electrical Building - Pre Fabricated - Complete	Elevated supports and foundations	Est	1	LS	200,000.00	200,000	60,000				260,000	
	Conveyor Lighting	2850 LF	Est	1	LS	40,000.00	40,000	46,000				86,000	
	Control & Instrumentation												**656,000**
	DCS Upgrages	6 I/O's per Motor	Est	1	LS	300,000.00	300,000	300,000				600,000	
	DCS BOP Equipment		Est	1	LS	25,000.00	25,000	25,000				50,000	
	Locally Mounted Instruments		Est	1	LS	1,500.00	2,000	4,000				6,000	
	BOP Items												**685,846**
	Fire Protection Upgrade	1000 LF	Est	1	LS	95,000.00	95,000	84,000				179,000	
	Demo/Reconstruction of Storage Area	Elevated at +15' (98,000 CY)	Est	2	LS	0.00	0	30,000				30,000	
	Stormwater/Coal Runoff Grading Upgrades	3000 LF	Est	1	LS	2,000.00	2,000	6,000				8,000	
	Underground Utility Identificaiton and Relocation	Tampa - Allowance	Est	1	LS	25,000.00	25,000	25,000				50,000	
	Rail Bridge Over Water Lines	2 - 20" lines	Est	1	LS	50,000.00	50,000	80,000				130,000	
	General Services Interconnection (water & air, etc.)	Allowance	Est	1	LS	50,000.00	50,000	50,000				100,000	
	Adjustment for FL Building Code												

CONFIDENTIAL

EXHIBIT: 2B-2
Sargent & Lundy [LLC]
Chicago

Tampa Electric
Big Bend
Rail Delivery
Order of Magnitude
-PRELIMINARY AND CONFIDENTIAL-

Cost Type:
Est=Estimated
B=Bid
OPB=Other Project Bid
Q=Vendor Quote

Estimate No.: XXXX
Project No.: 09476-019
Date: 9/5/03
DRAFT
Run Date: 9/5/03
Preparer: GBB/SM
Reviewer:

Acct. No.	Description	Scope Definition	Cost Type	Quantity	Unit of Measure	Unit Equip./ Mat. Cost	Total Equipment or Material Cost	Total Construction & Erection Cost	Sub-Contracts	DOR (Furnish)	DOR (Install)	Total Projected Cost	Sub-Totals
	Steel @ 7%	Applies to Estimated Steel Cost	Est	1	LS		0	188,846				188,846	
	Concrete @ 10%	Applies to Estimated Concrete Cost	Est	1	LS		0	161,868				161,868	
	Sub-Total						**10,770,000**	**8,169,846**				**18,939,846**	
	Other Costs/Adjustments												**1,225,000**
	Contractor's General & Administrative Costs	Based 5% of Equip, Material, and Labor						408,000				408,000	
	Contractor's Profit	Based 10% of Equip, Material, and Labor						817,000				817,000	
	Total Equipment, Material and Labor Costs						**10,770,000**	**9,394,846**				**20,164,846**	**20,164,846**
	Freight, Duties, Taxes, Etc.												**0**
	Freight-ExWorks To Site	Included in Material & Equipment Costs										Included in Material & Equipment Costs	
	Taxes - Sales/Use/VAT/Business/Etc.	Not Included										Not Included	
	Total Direct Project Costs						**10,770,000**	**9,394,846**				**20,164,846**	**20,164,846**
	Indirect Costs												**2,315,693**
	Insurance												
	Builders Risk											Not Included	
	Engineering/Procurement											1,411,539	
	Tampa Electric Interface with A/E	Project Mgmnt, Eng and Construction Support										141,154	
	Tampa Electric Management of EPC Contractor	Four men for 2 yrs @ $75K.										600,000	

66

EXHIBIT NO. _____ (JBS-10)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 65 OF 107

TAMPA ELECTRIC COMPANY
DOCKET NO. 031033-EI
CSXT'S SIXTH REQUEST
FOR PRODUCTION OF DOCUMENTS

CONFIDENTIAL

EXHIBIT: 2B-2						Tampa Electric					Estimate No.:	XXXX	
Sargent & Lundy LLC						Big Bend					Project No.:	09476-019	
Chicago						Rail Delivery					Date:	9/5/03	
		Cost Type:				Order of Magnitude						DRAFT	
		Est=Estimated				-PRELIMINARY AND CONFIDENTIAL-							
		B=Bid									Run Date:	9/5/03	
		OPB=Other Project Bid									Preparer:	GBB/SM	
		Q=Vendor Quote									Reviewer:		

Acct. No.	Description	Scope Definition	Cost Type	Quantity	Unit of Measure	Unit Equip./ Mat. Cost	Total Equipment or Material Cost	Total Construction & Erection Cost	Sub-Contracts	DOR (Furnish)	DOR (Install)	Total Projected Cost	Sub-Totals
	Permits and Fees	Tampa										163,000	
	Total Indirect Project Costs											2,315,693	
	Escalation	Not Included										Not Included	0
	EPC Costs											2,933,985	2,933,985
	General & Administrative (G&A) @ 5% of Dirct Costs											1,008,242	
	Efficacy Insurance @ .8% of Direct Costs											161,319	
	Fee @ 8% of Direct Costs	Profit and Home Office Overhead										1,613,188	
	Performance Bond @ .75% of Direct Costs											151,236	
	Contingency												5,082,905
	Contingency	20% of overall cost										5,082,905	
	Interest During Construction (AFUDC)	Not Included										Not Included	0
	Total Project Cost											30,497,429	30,497,429

67

EXHIBIT NO. ______ (JBS-10)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 66 OF 107

TAMPA ELECTRIC COMPANY
DOCKET NO. 031033-EI
CSXT'S SIXTH REQUEST
FOR PRODUCTION OF DOCUMENTS

Tampa Electric Company
Big Bend and Polk Generating Stations
CSX Transportation
Alternate Method of Coal Delivery

SL-008160
Project No. 09476-019
September 4, 2003

EXHIBIT 2B-3

BIG BEND 1 TO 2 MILLION TON BUILD IN

OPERATING COST CONSIDERATIONS

Variable		
	Power	$34,000 - $68,000
	Surfactant	$50,000 - $97,000
	Labor	$301,908
Fixed		
	Lease for Locomotive	Not Available
	Taxes and Insurance (2.085% of Capital)	$420,400
	Maintenance (3% of Capital)	$605,000
Total		$1,491,000

EXHIBIT NO. _____ (JBS-10)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 67 OF 107

Tampa Electric Company
Big Bend and Polk Generating Stations
CSX Transportation
Alternate Method of Coal Delivery

Sargent & Lundy

SL-008160
Project No. 09476-019
September 4, 2003

EXHIBIT 2C-1

TECO BID POLK CAPITAL COSTS

CSXT ESTIMATE

Shuttle Train Unload System

Bottom Dump with Conveyor to Silos 1500 TPH.....	$1,818,000
2500' of Track at $200 foot.....	$500,000
Total.....	$2,318,000

EXHIBIT NO. _____ (JBS-10)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 68 OF 107

Tampa Electric Company
Big Bend and Polk Generating Stations
CSX Transportation
Alternate Method of Coal Delivery

Sargent & Lundy

SL-008160
Project No. 09476-019
September 4, 2003

EXHIBIT 2C-2

POLK BUILD IN SHUTTLE TRAIN UNLOAD

S&L CAPITAL ESTIMATES

Preliminary Draft

EXHIBIT NO. _____ (JBS-10)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 69 OF 107

CONFIDENTIAL

EXHIBIT: 2C-2
Sargent & Lundy LLC
Chicago

Tampa Electric
Polk Station
Rail Delivery
Order of Magnitude
-PRELIMINARY AND CONFIDENTIAL-

Estimate No.: XXXX
Project No.: 09476-019
Date: 9/5/03
DRAFT
Run Date: 9/5/03
Preparer: GBB/SM
Reviewer:

Cost Type:
Est=Estimated
B=Bid
OPB=Other Project Bid
Q=Vendor Quote

Acct. No.	Description	Scope Definition	Cost Type	Quantity	Unit of Measure	Unit Equip./ Mat. Cost	Total Equipment or Material Cost	Total Construction & Erection Cost	Sub-Contracts	DOR (Furnish)	DOR (Install)	Total Projected Cost	Sub-Totals
	SHUTTLE TRAIN UNLOADING SYSTEM												
	Equipment To Unload Trains @ 1500 TPH												6,737,500
	Excavation for track hopper pit foundation		Est	1	LS	0.00	0	500,000				900,000	
	Concrete work for track hopper		Est	1	LS	400,000.00	400,000	160,000				280,000	
	Track hopper building		Est	1	LS	120,000.00	120,000	48,000				108,000	
	Car shaker / support steel		Est	1	LS	60,000.00	60,000	24,000				174,000	
	Hopper and grizzly		Est	1	LS	150,000.00	150,000	60,000				160,000	
	Track hopper dust suppression		Est	1	LS	100,000.00	100,000	40,000				160,000	
	Belt feeders	2 EACH	Est	1	LS	120,000.00	120,000	48,000				198,000	
	Concretework for conveyor / tunnel		Est	1	LS	150,000.00	150,000	60,000				780,000	
	Belt conveyor, 48" wide, 600 ft long		Est	1	LS	720,000.00	720,000	576,000				606,000	
	Diverter gate on top of silos		Est	1	LS	30,000.00	30,000	12,000				112,000	
	Transfer conveyor on top of silos, 36" wide, 50 ft		Est	1	LS	100,000.00	100,000	40,000				90,000	
	Modification on top of the silo		Est	1	LS	50,000.00	50,000	20,000				50,000	
	Foundation work for conveyors		Est	1	LS	30,000.00	30,000	24,000				224,000	
	Dust suppression for belt conveyors		Est	1	LS	200,000.00	200,000	80,000				113,000	
	Fire protection for conveyors		Est	1	LS	32,500.00	33,000	32,500				232,500	
	HVAC for track hopper pit, electrical bldg		Est	1	LS	200,000.00	200,000	80,000				130,000	
	Sump pump system		Est	1	LS	50,000.00	50,000	20,000				70,000	
	Hoists and trolleys		Est	1	LS	50,000.00	50,000	20,000				70,000	
	Track work cost	2500 LF	Est	1	LS	250,000.00	250,000	250,000				500,000	
	Temporary Coffer Dam		Est	1	LS	500,000.00	500,000	1,042,000				1,542,000	
	Dewatering		Est	1	LS	2,000.00	2,000	236,000				238,000	
	Electrical - Aux. Power - 13.8 KV												1,510,000
	Vacuum Circuit Breaker and Cubicles		Est	2	EA	25,000.00	50,000	3,000				53,000	
	480 V Transformer	Includes Switchgear	Est	2	Ea	150,000.00	300,000	28,000				328,000	
	MCC	480 V (40 Motors)	Est	3	EA	40,000.00	120,000	32,000				152,000	
	Trays	Trays (Transformer Feed)	Est	2,000	LF	30.00	60,000	58,000				118,000	
	Conduits	Conduits (500 LF typ per motor feed)	Est	20,000	LF	3.00	60,000	173,000				233,000	
	Transformer Feeder Cable	MV-90	Est	2,000	LF	8.00	16,000	40,000				56,000	
	MV Wiring	3/C #2 - 500 LF per motor	Est	20,000	LF	5.00	100,000	318,000				418,000	
	Electrical Building - Pre Fabricated - Complete	Includes foundation	Est	1	LS	110,000.00	110,000	22,000				132,000	

CONFIDENTIAL

EXHIBIT: 2C-2						Tampa Electric					Estimate No.:	XXXX	
Sargent & Lundy LLC						Polk Station					Project No.:	09476-019	
Chicago						Rail Delivery					Date:	9/5/03	
		Cost Type:				Order of Magnitude						DRAFT	
		Est=Estimated				-PRELIMINARY AND CONFIDENTIAL-							
		B=Bid									Run Date:	9/5/03	
		OPB=Other Project Bid									Preparer:	GBB/SM	
		Q=Vendor Quote									Reviewer:		
Acct. No.	**Description**	**Scope Definition**	**Cost Type**	**Quantity**	**Unit of Measure**	**Unit Equip./ Mat. Cost**	**Total Equipment or Material Cost**	**Total Construction & Erection Cost**	**Sub-Contracts**	**DOR (Furnish)**	**DOR (Install)**	**Total Projected Cost**	**Sub-Totals**
	Conveyor Lighting	850 LF	Est	1	LS	9,100.00	9,000	11,000				20,000	
	Control & Instrumentation												**333,000**
	DCS Upgrages	6 I/O's per Motor	Est	1	LS	140,000.00	140,000	140,000				280,000	
	DCS BOP Equipment		Est	1	LS	25,000.00	25,000	25,000				50,000	
	Locally Mounted Instruments		Est	1	LS	750.00	1,000	2,000				3,000	
	BOP Items												**736,125**
	Fire Protection Upgrade	500 LF	Est	1	LS	47,500.00	48,000	42,000				90,000	
	Stormwater/Coal Runoff Grading Upgrades	1500 LF	Est	1	LS	1,000.00	1,000	6,000				7,000	
	Relocation of Wetlands	23 Acres	Est	1	LS	115,000.00	115,000	376,000				491,000	
	Underground Utility Identificaiton and Relocation	Tampa - Allowance	Est	1	LS	12,500.00	13,000	12,000				25,000	
	General Services Interconnection (water & air, etc.)	Allowance	Est	1	LS	25,000.00	25,000	25,000				50,000	
	Adjustment for FL Building Code												
	Steel @ 7%	Applies to Estimated Steel Cost	Est	1	LS		0	39,375				39,375	
	Concrete @ 10%	Applies to Estimated Concrete Cost	Est	1	LS		0	33,750				33,750	
	Sub-Total						**4,508,000**	**4,724,875**				**9,316,625**	
	Other Costs/Adjustments												**708,000**
	Contractor's General & Administrative Costs	Based 5% of Equip, Material, and Labor						236,000				236,000	
	Contractor's Profit	Based 10% of Equip, Material, and Labor						472,000				472,000	
	Total Equipment, Material and Labor Costs						**4,508,000**	**5,432,875**				**10,024,625**	**10,024,625**
	Freight, Duties, Taxes, Etc.												**0**

72

EXHIBIT NO. ______ (JBS-10)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 71 OF 107

TAMPA ELECTRIC COMPANY
DOCKET NO. 031033-EI
CSXT'S SIXTH REQUEST
FOR PRODUCTION OF DOCUMENTS

CONFIDENTIAL

EXHIBIT: 2C-2
Sargent & Lundy LLC
Chicago

Tampa Electric
Polk Station
Rail Delivery
Order of Magnitude
-PRELIMINARY AND CONFIDENTIAL-

Cost Type:
Est=Estimated
B=Bid
OPB=Other Project Bid
Q=Vendor Quote

Estimate No.: XXXX
Project No.: 09476-019
Date: 9/5/03
DRAFT
Run Date: 9/5/03
Preparer: GBB/SM
Reviewer:

Acct. No.	Description	Scope Definition	Cost Type	Quantity	Unit of Measure	Unit Equip./ Mat. Cost	Total Equipment or Material Cost	Total Construction & Erection Cost	Sub-Contracts	DOR (Furnish)	DOR (Install)	Total Projected Cost	Sub-Totals
	Freight-ExWorks To Site	Included in Material & Equipment Costs										Included in Material & Equipment Costs	
	Taxes - Sales/Use/VAT/Business/Etc.	Not Included										Not Included	
	Total Direct Project Costs						4,508,000	5,432,875				10,024,625	10,024,625
	Indirect Costs												1,364,896
	Insurance												
	Builders Risk											Not Included	
	Engineering/Procurement											701,724	
	Tampa Electric Interface with A/E	Project Mgmnt, Eng and Construction Support										70,172	
	Tampa Electric Management of EPC Contractor	Two men for 2 yrs @ $75K.										300,000	
	Permits and Fees	Tampa										293,000	
	Total Indirect Project Costs											1,364,896	
	Escalation	Not Included										Not Included	0
	EPC Costs											1,458,583	1,458,583
	General & Adminstrative (G&A) @ 5% of Dirct Costs											501,231	
	Efficacy Insurance @ .8% of Direct Costs											80,197	
	Fee @ 8% of Direct Costs	Profit and Home Office Overhead										801,970	
	Performance Bond @ .75% of Direct Costs											75,185	
	Contingency												2,569,621
	Contingency	20% of overall cost										2,569,621	

73

EXHIBIT NO. _____ (JBS-10)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 72 OF 107

DOCKET NO. 031033-EI
CSXT'S SIXTH REQUEST
FOR PRODUCTION OF DOCUMENTS

CONFIDENTIAL

EXHIBIT: 2C-2
Sargent & Lundy LLC
Chicago

Cost Type:
Est=Estimated
B=Bid
OPB=Other Project Bid
Q=Vendor Quote

Tampa Electric
Polk Station
Rail Delivery
Order of Magnitude
-PRELIMINARY AND CONFIDENTIAL-

Estimate No.: XXXX
Project No.: 09475-019
Date: 9/5/03
DRAFT
Run Date: 9/5/03
Preparer: GBB/SM
Reviewer:

Acct. No.	Description	Scope Definition	Cost Type	Quantity	Unit of Measure	Unit Equip./ Mat. Cost	Total Equipment or Material Cost	Total Construction & Erection Cost	Sub-Contract $	DOR (Furnish)	DOR (Install)	Total Projected Cost	Sub-Totals
	Interest During Construction (AFUDC)	Not Included											
												Not Included	0
	Total Project Cost											15,417,725	15,417,725

H:\INFODIV\PROJECTS\GIBSON FGD\Polk Shuttle Train.xls\CSXT Estimate Review
9/5/03

EXHIBIT NO. ______ (JBS-10)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 73 OF 107

TAMPA ELECTRIC COMPANY
DOCKET NO. 031033-EI
CSXT'S SIXTH REQUEST
FOR PRODUCTION OF DOCUMENTS

Tampa Electric Company
Big Bend and Polk Generating Stations
CSX Transportation
Alternate Method of Coal Delivery

SL-008160
Project No. 09476-019
September 4, 2003

EXHIBIT 2C-3

OPERATING COST ESTIMATE FOR
POLK BUILD IN SHUTTLE DELIVERY

Variable

Power[1]	$20,000
Chemical for Dust Control	$50,000

Fixed

Labor	$601,088
Maintenance (3% Capital Cost)	$300,700
Lease on Locomotive	Not Available
Taxes and Insurance (1.58% Capital Cost)	$158,400
Total Operating Cost Per Y	,130,000

[1]Calculated on replacement fuel cost only.

Tampa Electric Company
Big Bend and Polk Generating Stations
CSX Transportation
Alternate Method of Coal Delivery

SL-008160
Project No. 09476-019
September 4, 2003

EXHIBIT 2D-1

POLK DIRECT DELIVERY - ROTARY DUMP SCENARIOS

INDEPENDENT ESTIMATES

Preliminary

Draft

CONFIDENTIAL

DOCKET NO. 031033-EI
CSXT'S SIXTH REQUEST
FOR PRODUCTION OF DOCUMENTS

EXHIBIT: 2D-1						Tampa Electric					Estimate No.:	XXXX	
Sargent & Lundy LLC						Polk Station					Project No.:	09478-019	
Chicago						Rail Delivery					Date:	9/5/03	
		Cost Type:				Order of Magnitude							
		Est=Estimated				-PRELIMINARY AND CONFIDENTIAL-							
		B=Bid									Run Date:	9/5/03	
		OPB=Other Project Bid									Preparer:	GBB/SM	
		Q=Vender Quote									Reviewer:		

Acct. No.	Description	Scope Definition	Cost Type	Quantity	Unit of Measure	Unit Equip./ Mat. Cost	Total Equipment or Material Cost	Total Construction & Erection Cost	Sub-Contracts	DOR (Furnish)	DOR (Install)	Total Projected Cost	Sub-Totals
	ROTARY DUMPER AR PLANT - 2,500 TPH												
	Equipment To Unload Trains												**19,294,000**
	Excavation for rotary car dumper foundation		Est	1	LS	0.00	0	1,300,000				1,300,000	
	Concrete work for rotary car dumper / positioner		Est	1	LS	1,700,000.00	1,700,000	680,000				2,380,000	
	Dumper building including control room		Est	1	LS	400,000.00	400,000	160,000				560,000	
	Hopper and grizzly		Est	1	LS	200,000.00	200,000	80,000				280,000	
	Dumper dust suppression		Est	1	LS	100,000.00	100,000	40,000				140,000	
	Rotary car dumper		Est	1	LS	1,100,000.00	1,100,000	990,000				2,090,000	
	Positioner		Est	1	LS	1,100,000.00	1,100,000	500,000				1,600,000	
	Belt feeders		Est	2	LS	200,000.00	400,000	80,000				480,000	
	Concretework for conveyor / tunnel		Est	1	LS	400,000.00	400,000	160,000				560,000	
	Belt conveyor, 60" wide, 500 ft long		Est	1	LS	750,000.00	750,000	600,000				1,350,000	
	Storage dome, 15,000 tons		Est	1	LS	150,000.00	150,000	60,000				210,000	
	Foundation for storage dome		Est	1	LS	200,000.00	200,000	80,000				280,000	
	Lowering well inside dome		Est	1	LS	100,000.00	100,000	40,000				140,000	
	Excavation for reclaim hopper pit foundation		Est	1	LS	0.00	0	300,000				300,000	
	Concrete work for reclaim hopper		Est	1	LS	300,000.00	300,000	120,000				420,000	
	Hopper and grizzly		Est	1	LS	150,000.00	150,000	60,000				210,000	
	Belt feeder	2 Each	Est	1	LS	120,000.00	120,000	48,000				168,000	
	Concretework for conveyor / tunnel		Est	1	LS	100,000.00	100,000	40,000				140,000	
	Belt conveyor, 48" wide, 1000 ft long		Est	1	LS	1,000,000.00	1,000,000	400,000				1,400,000	
	Diverter gate on top of silos		Est	1	LS	30,000.00	30,000	12,000				42,000	
	Transfer conveyor on top of silos, 48" wide, 50 ft		Est	1	LS	100,000.00	100,000	40,000				140,000	
	Modification on top of the silo		Est	1	LS	50,000.00	50,000	20,000				70,000	
	Foundation work for conveyors		Est	1	LS	30,000.00	30,000	24,000				54,000	
	Dust suppression for belt conveyors		Est	1	LS	200,000.00	200,000	80,000				280,000	
	Fire protection for conveyors		Est	1	LS	75,000.00	75,000	75,000				150,000	
	HVAC for dumper pit and transfer house		Est	1	LS	200,000.00	200,000	80,000				280,000	
	Sump pump system		Est	1	LS	50,000.00	50,000	20,000				70,000	
	Hoists and trolleys		Est	1	LS	50,000.00	50,000	20,000				70,000	
	Loop track cost	6000 LF	Est	1	LS	600,000.00	600,000	600,000				1,600,000	
	Loader / dozer		Est	1	LS	750,000.00	750,000	0				750,000	
	Temporary Coffer Dam		Est	1	LS	500,000.00	500,000	1,042,000				1,542,000	
	Dewatering		Est	1	LS	2,000.00	2,000	236,000				238,000	
	Electrical - Aux. Power - 13.8 KV												**1,748,000**

77

EXHIBIT NO. _____ (JBS-10)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 76 OF 107

CONFIDENTIAL

EXHIBIT: 2D-1
Sargent & Lundy LLC
Chicago

Tampa Electric
Polk Station
Rail Delivery
Order of Magnitude
-PRELIMINARY AND CONFIDENTIAL-

Estimate No.: XXXX
Project No.: 09475-019
Date: 9/5/03
Run Date: 9/5/03
Preparer: GBB/SM
Reviewer:

Cost Type:
Est=Estimated
B=Bid
OPB=Other Project Bid
Q=Vendor Quote

Acct. No.	Description	Scope Definition	Cost Type	Quantity	Unit of Measure	Unit Equip / Mat. Cost	Total Equipment or Material Cost	Total Construction & Erection Cost	Sub-Contracts	DOR (Furnish)	DOR (Install)	Total Projected Cost	Sub-Totals
	Vacuum Circuit Breaker and Cubicles		Est	2	EA	25,000.00	50,000	3,000				53,000	
	480 V Transformer	Includes Switchgear	Est	2	Ea	150,000.00	300,000	28,000				328,000	
	MCC	480 V (50 Motors)	Est	4	EA	40,000.00	160,000	42,000				202,000	
	Trays	Trays (Transformer Feed)	Est	2,000	LF	30.00	60,000	58,000				118,000	
	Conduits	Conduits (500 LF typ per motor feed)	Est	25,000	LF	3.00	75,000	216,000				291,000	
	Transformer Feeder Cable	MV-90	Est	2,000	LF	8.00	16,000	40,000				56,000	
	MV Wiring	3/C #2 - 500 LF per motor	Est	25,000	LF	5.00	125,000	398,000				523,000	
	Electrical Building - Pre Fabricated - Complete	Includes foundations	Est	1	LS	110,000.00	110,000	22,000				132,000	
	Conveyor Lighting	1500 LF	Est	1	LS	21,000.00	21,000	24,000				45,000	
	Control & Instrumentation												**406,000**
	DCS Upgrades	6 I/O's per Motor	Est	1	LS	175,000.00	175,000	175,000				350,000	
	DCS BOP Equipment		Est	1	LS	25,000.00	25,000	25,000				50,000	
	Locally Mounted Instruments		Est	1	LS	1,500.00	2,000	4,000				6,000	
	BOP Items												**1,360,530**
	Fire Protection Upgrade	500 LF	Est	1	LS	47,800.00	48,000	42,000				90,000	
	Stormwater/Coal Runoff Grading Upgrades	1500 LF	Est	1	LS	1,000.00	1,000	6,000				7,000	
	Relocation of Wetlands	43 Acres	Est	1	LS	215,000.00	215,000	703,000				918,000	
	Underground Utility Identificaiton and Relocation	Tampa - Allowance	Est	1	LS	12,800.00	13,000	12,000				25,000	
	General Services Interconnection (water & air, etc.)	Allowance	Est	1	LS	25,000.00	25,000	25,000				50,000	
	Adjustment for FL Building Code												
	Steel @ 7%	Applies to Estimated Steel Cost	Est	1	LS		0	145,670				145,670	
	Concrete @ 10%	Applies to Estimated Concrete Cost	Est	1	LS		0	124,860				124,860	
	Sub-Total						**12,528,000**	**10,280,530**				**22,808,530**	
	Other Costs/Adjustments												**1,542,000**
	Contractor's General & Administrative Costs	Based 5% of Equip, Material, and Labor						514,000				514,000	

DOCKET NO. 031033-EI
CSXT'S SIXTH REQUEST
FOR PRODUCTION OF DOCUMENTS

EXHIBIT NO. ______ (JBS-10)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 77 OF 107

78

CONFIDENTIAL

TAMPA ELECTRIC COMPANY
DOCKET NO. 031033-EI
CSXT'S SIXTH REQUEST
FOR PRODUCTION OF DOCUMENTS

EXHIBIT: 2D-1

Sargent & Lundy LLC
Chicago

Tampa Electric
Polk Station
Rail Delivery
Order of Magnitude
-PRELIMINARY AND CONFIDENTIAL-

Estimate No.: XXXX
Project No.: 09476-019
Date: 9/5/03
Run Date: 9/5/03
Preparer: GBB/BM
Reviewer:

Cost Type:
Est=Estimated
B=Bid
OPB=Other Project Bid
Q=Vendor Quote

Acct. No.	Description	Scope Definition	Cost Type	Quantity	Unit of Measure	Unit Equip./ Mat. Cost	Total Equipment or Material Cost	Total Construction & Erection Cost	Sub-Contract $	DOR (Furnish)	DOR (Install)	Total Projected Cost	Sub-Totals
	Contractor's Profit	Based 10% of Equip, Material, and Labor						1,028,000				1,028,000	
	Total Equipment, Material and Labor Costs						12,528,000	11,822,530				24,350,530	24,350,530
	Freight, Duties, Taxes, Etc.												0
	Freight-ExWorks To Site	Included in Material & Equipment Costs										Included in Material & Equipment Costs	
	Taxes - Sales/Use/VAT/Business/Etc.	Not Included										Not Included	
	Total Direct Project Costs						12,528,000	11,822,530				24,350,530	24,350,530
	Indirect Costs												2,467,991
	Insurance Builders Risk											Not Included	
	Engineering/Procurement											1,704,537	
	Tampa Electric Interface with A/E	Project Mgmnt, Eng and Construction Support										170,454	
	Tampa Electric Management of EPC Contractor	Two men for 2 yrs @ $75K.										300,000	
	Permits and Fees	Tampa										293,000	
	Total Indirect Project Costs											2,467,991	
	Escalation	Not Included										Not Included	0
	EPC Costs											3,543,002	3,543,002
	General & Administrative (G&A) @ 5% of Dirct Costs											1,217,527	

EXHIBIT NO. ____ (JBS-10)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 78 OF 107

EXHIBIT: 2D-1
Sargent & Lundy LLC
Chicago

Tampa Electric
Polk Station
Rail Delivery
Order of Magnitude
-PRELIMINARY AND CONFIDENTIAL-

Estimate No.: XXXX
Project No.: 09476-019
Date: 9/5/03
Run Date: 9/5/03
Preparer: GBB/SM
Reviewer:

Cost Type:
Est=Estimated
B=Bid
OPB=Other Project Bid
Q=Vendor Quote

Acct. No.	Description	Scope Definition	Cost Type	Quantity	Unit of Measure	Unit Equip./Mat. Cost	Total Equipment or Material Cost	Total Construction & Erection Cost	Sub-Contracts	DOR (Furnish)	DOR (Install)	Total Projected Cost	Sub-Totals
	Efficacy Insurance @ .8% of Direct Costs											194,804	
	Fee @ 8% of Direct Costs	Profit and Home Office Overhead										1,948,042	
	Performance Bond @ .75% of Direct Costs											182,629	
	Contingency												6,072,305
	Contingency	20% of overall cost										6,072,305	
	Interest During Construction (AFUDC)	Not included										Not included	0
	Total Project Cost											36,433,828	36,433,828

H:\WP\FOOD\PROJECTS\...\Polk Direct Rotary Dumper 2500.xls\CSXT Estimate Review 9/5/03

80

Tampa Electric Company
Big Bend and Polk Generating Stations
CSX Transportation
Alternate Method of Coal Delivery

Sargent & Lundy

SL-008160
Project No. 09476-019
September 4, 2003

EXHIBIT 2D-2

POLK DIRECT DELIVERY - BOTTOM DUMP SCENARIOS

INDEPENDENT ESTIMATES

EXHIBIT NO. _____ (JBS-10)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 80 OF 107

CONFIDENTIAL

EXHIBIT: 2D-2						Tampa Electric					Estimate No.:	XXXX	
Sargent & Lundy [LLC]						Polk Station					Project No.:	09476-019	
Chicago						Rail Delivery					Date:	9/5/03	
		Cost Type:				Order of Magnitude						DRAFT	
		Est=Estimated				-PRELIMINARY AND CONFIDENTIAL-							
		B=Bid									Run Date:	9/5/03	
		OPB=Other Project Bid									Preparer:	GBB/SM	
		Q=Vendor Quote									Reviewer:		

Acct. No.	Description	Scope Definition	Cost Type	Quantity	Unit of Measure	Unit Equip./ Mat. Cost	Total Equipment or Material Cost	Total Construction & Erection Cost	Sub-Contracts	DOR (Furnish)	DOR (Install)	Total Projected Cost	Sub-Totals
	BOTTOM DUMPER AT PLANT - 1,500 TPH												
	Equipment To Unload Trains												11,674,000
	Excavation for track hopper pit foundation		Est	1	LS	0.00	0	500,000				500,000	
	Concrete work for track hopper		Est	1	LS	400,000.00	400,000	160,000				560,000	
	Track hopper building		Est	1	LS	120,000.00	120,000	48,000				168,000	
	Car shaker / support steel		Est	1	LS	80,000.00	60,000	24,000				84,000	
	Hopper and grizzly		Est	1	LS	150,000.00	150,000	60,000				210,000	
	Track hopper dust suppression		Est	1	LS	100,000.00	100,000	40,000				140,000	
	Belt feeders	2 EACH	Est	1	LS	120,000.00	120,000	48,000				168,000	
	Concretework for conveyor / tunnel		Est	1	LS	150,000.00	150,000	60,000				210,000	
	Belt conveyor, 48" wide, 500 ft long		Est	1	LS	600,000.00	600,000	480,000				1,080,000	
	Storage dome, 15,000 tons		Est	1	LS	150,000.00	150,000	60,000				210,000	
	Foundation for storage dome		Est	1	LS	200,000.00	200,000	80,000				280,000	
	Lowering well inside dome		Est	1	LS	100,000.00	100,000	40,000				140,000	
	Excavation for reclaim hopper pit foundation		Est	1	LS	0.00	0	300,000				300,000	
	Concrete work for reclaim hopper		Est	1	LS	300,000.00	300,000	120,000				420,000	
	Hopper and grizzly		Est	1	LS	150,000.00	150,000	60,000				210,000	
	Belt feeder	2 EACH	Est	1	LS	120,000.00	120,000	48,000				168,000	
	Concretework for conveyor / tunnel		Est	1	LS	100,000.00	100,000	40,000				140,000	
	Belt conveyor, 36" wide, 1000 ft long		Est	1	LS	1,000,000.00	1,000,000	400,000				1,400,000	
	Diverter gate on top of silos		Est	1	LS	30,000.00	30,000	12,000				42,000	
	Transfer conveyor on top of silos, 36" wide, 50 ft		Est	1	LS	100,000.00	100,000	40,000				140,000	
	Modification on top of the silo		Est	1	LS	50,000.00	50,000	20,000				70,000	
	Foundation work for conveyors		Est	1	LS	30,000.00	30,000	24,000				54,000	
	Dust suppression for belt conveyors		Est	1	LS	200,000.00	200,000	80,000				280,000	
	Fire protection for conveyors		Est	1	LS	75,000.00	75,000	75,000				150,000	
	HVAC for dumper pit and transfer house		Est	1	LS	200,000.00	200,000	80,000				280,000	
	Sump pump system		Est	1	LS	50,000.00	50,000	20,000				70,000	
	Hoists and trolleys		Est	1	LS	50,000.00	50,000	20,000				70,000	
	Loop track cost	8000 LF	Est	1	LS	800,000.00	800,000	800,000				1,600,000	
	Loader / dozer		Est	1	LS	750,000.00	750,000	0				750,000	
	Temporary Coffer Dam		Est	1	LS	500,000.00	500,000	1,042,000				1,542,000	
	Dewatering		Est	1	LS	2,000.00	2,000	236,000				238,000	
	Electrical - Aux. Power - 13.8 KV												1,748,000
	Vacuum Circuit Breaker and Cubicles		Est	2	EA	25,000.00	50,000	3,000				53,000	
	480 V Transformer	Includes Switchgear	Est	2	Ea	150,000.00	300,000	28,000				328,000	

82

EXHIBIT NO. ______ (JBS-10)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 81 OF 107

DOCKET NO. 031033-EI
CSXT'S SIXTH REQUEST
FOR PRODUCTION OF DOCUMENTS

EXHIBIT: 2D-2

Sargent & Lundy LLC

Chicago

Tampa Electric
Polk Station
Rail Delivery
Order of Magnitude
-PRELIMINARY AND CONFIDENTIAL-

Estimate No.: XXXX
Project No.: 09475-019
Date: 9/5/03
DRAFT
Run Date: 9/5/03
Preparer: GBB/BM
Reviewer:

Cost Type:
Est=Estimated
B=Bid
OPB=Other Project Bid
Q=Vendor Quote

Acct. No.	Description	Scope Definition	Cost Type	Quantity	Unit of Measure	Unit Equip./ Mat. Cost	Total Equipment or Material Cost	Total Construction & Erection Cost	Sub-Contracts	DOR (Furnish)	DOR (Install)	Total Projected Cost	Sub-Totals
	MCC	480 V (50 Motors)	Est	4	EA	40,000.00	160,000	42,000				202,000	
	Trays	Trays (Transformer Feed)	Est	2,000	LF	30.00	60,000	58,000				118,000	
	Conduits	Conduits (500 LF typ per motor feed)	Est	25,000	LF	3.00	75,000	216,000				291,000	
	Transformer Feeder Cable	MV-90	Est	2,000	LF	8.00	16,000	40,000				56,000	
	MV Wiring	3/C #2 - 500 LF per motor	Est	25,000	LF	5.00	125,000	398,000				523,000	
	Electrical Building - Pre Fabricated - Complete	Includes foundations	Est	1	LS	110,000.00	110,000	22,000				132,000	
	Conveyor Lighting	1500 LF	Est	1	LS	21,000.00	21,000	24,000				45,000	
	Control & Instrumentation												406,000
	DCS Upgrages	6 I/O's per Motor	Est	1	LS	175,000.00	175,000	175,000				350,000	
	DCS BOP Equipment		Est	1	LS	25,000.00	25,000	25,000				50,000	
	Locally Mounted Instruments		Est	1	LS	1,500.00	2,000	4,000				6,000	
	BOP Items												1,250,030
	Fire Protection Upgrade	500 LF	Est	1	LS	47,500.00	48,000	42,000				90,000	
	Stormwater/Coal Runoff Grading Upgrades	1500 LF	Est	1	LS	1,000.00	1,000	6,000				7,000	
	Relocation of Wetlands	43 Acres	Est	1	LS	215,000.00	215,000	703,000				918,000	
	Underground Utility Identification and Relocation	Tampa - Allowance	Est	1	LS	12,500.00	13,000	12,000				25,000	
	General Services Interconnection (water & air, etc.)	Allowance	Est	1	LS	25,000.00	25,000	25,000				50,000	
	Adjustment for FL Building Code												
	Steel @ 7%	Applies to Estimated Steel Cost	Est	1	LS		0	86,170				86,170	
	Concrete @ 10%	Applies to Estimated Concrete Cost	Est	1	LS		0	73,860				73,860	
	Sub-Total						8,078,000	7,000,030				15,078,030	
	Other Costs/Adjustments												1,050,000
	Contractor's General & Administrative Costs	Based 5% of Equip, Material, and Labor						350,000				350,000	
	Contractor's Profit	Based 10% of Equip, Material, and Labor						700,000				700,000	

H:\NFDDV\PROJECTS\NOBSON FS\DVPolk Direct Bottom Dump 1500Lbs.xls\CSXT Estimo Review
9/5/03

EXHIBIT NO. _____ (JBS-10)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 82 OF 107

CONFIDENTIAL

EXHIBIT: 2D-2

Sargent & Lundy LLC
Chicago

Tampa Electric
Polk Station
Rail Delivery
Order of Magnitude
-PRELIMINARY AND CONFIDENTIAL-

Estimate No.: XXXX
Project No.: 05476-019
Date: 9/5/03
DRAFT
Run Date: 9/5/03
Preparer: GBB/SM
Reviewer:

Cost Type:
Est=Estimated
B=Bid
OPB=Other Project Bid
Q=Vendor Quote

Acct No.	Description	Scope Definition	Cost Type	Quantity	Unit of Measure	Unit Equip./ Mat. Cost	Total Equipment or Material Cost	Total Construction & Erection Cost	Sub-Contracts	DOR (Furnish)	DOR (Install)	Total Projected Cost	Sub-Totals
	Total Equipment, Material and Labor Costs						8,078,000	8,050,030				16,128,030	16,128,030
	Freight, Duties, Taxes, Etc.												0
	Freight-ExWorks To Site	Included in Material & Equipment Costs										Included in Material & Equipment Costs	
	Taxes - Sales/Use/VAT/Business/Etc.	Not Included										Not Included	
	Total Direct Project Costs						8,078,000	8,050,030				16,128,030	16,128,030
	Indirect Costs												1,834,858
	Insurance												
	Builders Risk											Not Included	
	Engineering/Procurement											1,128,962	
	Tampa Electric Interface with A/E	Project Mgmnt, Eng and Construction Support										112,896	
	Tampa Electric Management of EPC Contractor	Two men for 2 yrs @ $75K.										300,000	
	Permits and Fees	Tampa										293,000	
	Total Indirect Project Costs											1,834,858	
	Escalation	Not Included										Not Included	0
	EPC Costs											2,346,628	2,346,628
	General & Administrative (G&A) @ 5% of Dirct Costs											806,402	
	Efficacy Insurance @ .8% of Direct Costs											129,024	
	Fee @ 8% of Direct Costs	Profit and Home Office Overhead										1,290,242	
	Performance Bond @ .75% of Direct Costs											120,960	

H:\INFODIV\PROJECTS\ROBSON FGD\Polk Direct Rail\Dump 1600 cb.xls\CSXT Estimate Review
9/5/03

EXHIBIT NO. _____ (JBS-10)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 83 OF 107

TAMPA ELECTRIC COMPANY
DOCKET NO. 031033-EI
CSXT'S SIXTH REQUEST
FOR PRODUCTION OF DOCUMENTS

CONFIDENTIAL

DOCKET NO. 031033-EI
CSXT'S SIXTH REQUEST
FOR PRODUCTION OF DOCUMENTS

EXHIBIT: 2D-2
Sargent & Lundy LLC
Chicago

Tampa Electric
Polk Station
Rail Delivery
Order of Magnitude
-PRELIMINARY AND CONFIDENTIAL-

Estimate No.: XXXX
Project No.: 09476-019
Date: 9/5/03
DRAFT
Run Date: 9/5/03
Preparer: GBB/SM
Reviewer:

Cost Type:
Est=Estimated
B=Bid
OPB=Other Project Bid
Q=Vendor Quote

Acct. No.	Description	Scope Definition	Cost Type	Quantity	Unit of Measure	Unit Equip./ Mat. Cost	Total Equipment or Material Cost	Total Construction & Erection Cost	Sub-Contracts	DOR (Furnish)	DOR (Install)	Total Projected Cost	Sub-Totals
	Contingency												**4,061,903**
	Contingency	20% of overall cost										4,061,903	
	Interest During Construction (AFUDC)	Not Included										Not Included	0
	Total Project Cost											**24,371,420**	**24,371,420**

85

EXHIBIT NO. ______ (JBS-10)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 84 OF 107

Tampa Electric Company
Big Bend and Polk Generating Stations
CSX Transportation
Alternate Method of Coal Delivery

Sargent & Lundy

SL-008160
Project No. 09476-019
September 4, 2003

EXHIBIT 2D-3

POLK DIRECT DELIVERY

CSXT ESTIMATE

Build In Strategy

Item	Cost
Scenario #1 Rotary Dump at Plant	
Loop Track	$1,102,000
Rotary Dumper with Conveyor to Silo 2500 tph	$1,800,000
New 15,000 Ton Dome	$1,600,000
Total	$6,502,000
Scenario #2 Bottom Dump at Plant	
Loop Track	$1,102,000
Bottom Dump with Conveyor to Silo 1500 tph	$1,818,000
New 15,000 Ton Dome	$1,600,000
Total	$4,520,000

EXHIBIT NO. _____ (JBS-10)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 85 OF 107

Tampa Electric Company
Big Bend and Polk Generating Stations
CSX Transportation
Alternate Method of Coal Delivery

Sargent & Lundy

SL-008160
Project No. 09476-019
September 4, 2003

EXHIBIT 2D-4

OPERATING COST ESTIMATE FOR POLK DIRECT RAIL DELIVERY

Variable	
Power[1]	$25,000
Surfactant	$50,000
Fixed	
Labor	$157,440
Maintenance (3% Capital Cost)	$240,000 / $484,000
Lease on Locomotive	Not Available
Taxes and Insurance (1.584% Capital Cost)	$385,700/$255,500
Total	$849,000/$972,000

[1]Calculated on replacement fuel cost only.

EXHIBIT NO. _____ (JBS-10)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 86 OF 107

SARGENT & LUNDY, LLC
55 East Monroe St
Chicago, IL 60603

FAX COVER SHEET

Date:	September 5, 2003	**Project No.:**	
To:	**Ralph Painter**	**Fax No.:**	813-641-5281
Company:		**Phone No.:**	813-641-5224
From:	Kathy Corgan	**Phone No.:**	312-269-3905
Re:			
CC:	Report		

Number of pages including cover sheet: 95

EXHIBIT NO. _____ (JBS-10)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 87 OF 107

Sargent & Lundy LLC

Tampa Electric Company
Big Bend and Polk Generating Stations

CSX Transportation
Alternate Method of Coal Delivery

SL-008160

September 4, 2003

Prepared By: P. Guletsky, S. Madan, G. Bowater

Reviewed By: P. Guletsky

Approved By: B. H. Yee

EXHIBIT NO. _____ (JBS-10)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 88 OF 107

\\dns\tampaelectric\09476-019\SL-008160.doc

Sargent & Lundy LLC

Tampa Electric Company
Big Bend and Polk Generating Stations
CSX Transportation
Alternate Method of Coal Delivery

SL-008160
Project No. 09476-019
September 4, 2003

I. Executive Summary

Sargent & Lundy L.L.C. has reviewed the proposal issued to Tampa Electric by CSX Transportation for alternate method of coal delivery to the Big Bend and Polk Generating Stations. The proposal, dated August 11, 2003, offers conceptual design and cost information to bring coal to the stations by rail direct rather than by the traditional barge transport.

The purpose of the S&L review is to validate the capital cost for each option proposed, to provide operating cost estimates for each, and to provide assessment of assumptions made which qualify the bid. The Tampa Electric Fuels Strategy Group will use the results of the S&L analysis to evaluate this option against the other coal transportation bids received.

Although CSXT has done an admirable job in the conceptual plan, in some cases the concept provided would not be feasible in its proposed form. Where possible, we have made the necessary adjustments to the design and have provided costs for the adjusted plan. Specific examples include:

- The limestone unloading facility at Big Bend will not be used for unloading coal by rail. Contamination of the limestone with coal would present several process obstacles with the FGDS and gypsum byproduct.
- New track placement interferes with existing facilities in some areas. The track has been repositioned where necessary to accommodate existing operations.
- The conveyor belt sizing for the 2 –5.5 MM ton Big Bend Option is marginal. The estimate provided increases the belt width to 60 inches. A 60-inch conveyor is appropriate for the duty rating expected.

Each case is discussed more fully in the following section of the report.

The cost information provided with the proposal appears to be low in all cases. The costs provided appear to include material for new equipment only. Therefore, the installation cost and costs associated with modification to existing facilities need to be added. The capital cost estimate comparison for each scenario is as follows:

	CSXT Estimate	S&L Estimate
Big Bend 2 to 5.5 Million Ton Build In	$ 10,846,000	$41,294,000
Big Bend 1 to 2 Million Ton Build In	$6,798,000	$30,497,000
Polk Build In Shuttle Train Unload	$ 2,318,000	$15,418,000
Polk Direct Delivery – Rotary Dump	$ 6,502,000	$36,434,000
Polk Direct Delivery – Bottom Dump	$ 4,520,000	$24,371,000

EXHIBIT NO. _____ (JBS-10)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 89 OF 107

The estimates provided in the rail delivery bids do not take into account the additional operating costs required at each station. Fixed operating cost increases will be required for most of the options included in the bid package because of the additional operating staff that will be required to manage the coal unloading and storage. Variable operating costs will also increase at each station as a result of the additional equipment. Increased electrical load and equipment maintenance costs make up the majority of the variable operating cost estimate.

	Yearly Estimated Operating Cost
Big Bend 2 to 5.5 Million Ton Build In	$2.2MM to $2.7MM
Big Bend 1 to 2 Million Ton Build In	$1.4MM to $1.5 MM
Polk Build In Shuttle Train Unload	$1.1 MM
Polk Direct Delivery – Rotary Dump	$1.3 MM
Polk Direct Delivery – Bottom Dump	$0.97 MM

The proposal options offered by CSXT have identified the demurrage rate assumed in each case. In some instances, we believe that the rates provided are more aggressive than can be reasonably achieved. These discrepancies can either be used as a point of negotiation or as a probable cost to Tampa Electric. We have not included demurrage fees in the operating cost estimates but rather provide this data for your use and evaluation during your contract negotiations.

	Demurrage Allowed in Bid	Estimated Unload Time Required
Big Bend 2 to 5.5 Million Ton Build In	4 hour	6 hour
Big Bend 1 to 2 Million Ton Build In	24 hour	9 hour
Polk Build In Shuttle Train Unload	(Sam)	(Sam)
Polk Direct Delivery – Rotary Dump	(Sam)	(Sam)
Polk Direct Delivery – Bottom Dump	(Sam)	(Sam)

Environmental considerations that need to be addressed in the full evaluation of these coal transportation options include wetlands reconstruction, coal pile runoff, and noise abatement. These issues are discussed later in this report.

II. Bid Analysis

A. Big Bend 2 to 5.5 Million Ton Build In

The conceptual design that is proposed for this option requires three alterations:

EXHIBIT NO. _____ (JBS-10)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 90 OF 107

Sargent & Lundy

Tampa Electric Company
Big Bend and Polk Generating Stations
CSX Transportation
Alternate Method of Coal Delivery

SL-008160
Project No. 09476-019
September 4, 2003

1. The use of the limestone unloading facility for coal unloading is not desirable. Although introducing small amounts of limestone to the coal supply is not a particular problem, introducing small amounts of coal to the limestone supply is indeed a problem. Coal introduced through the FGD system will adversely effect its process design. First, the coal will contaminate the gypsum byproduct that is currently being sold for wallboard manufacture. Second, the coal will contaminate the water reclaimed from the FGD system and will therefore concentrate in the process loop. This will increase the suspended solids in the reclaim water, which is used for mist eliminator washing. Higher suspended solids can result in plugging of the wash nozzles, headers and piping, and in erosion of the mist eliminator vanes. For these reasons, it is not common practice to share unloading of coal with limestone supplies for FGD. The estimate provided herein included provisions to install a new separate coal unloading station due west of the existing limestone unloading station and directly south of the existing FGD's.

2. The 45 car rail spur identified in the proposal for use at the new railcar load- out which transfers coal to be sent to the Polk Station is located within the boundaries of the existing desalinization plant which is owned and operated by Others. It is suggested that this rail spur be moved to the south side of the rail loading facility. This change has been incorporated into the estimate. It represents a minor cost impact.

3. CSXT proposal included 54" wide belt conveyors for unloading. The 54" wide conveyors would have to operate at a fairly high belt speed (~ 700 fpm) for handling the required capacity. At this high belt speed, we would expect a high potential of coal spillage and dusting problems; therefore, we would recommend 60" wide conveyor bolts for the new train unloading belts. The 60" wide conveyors would require a slower (580 gpm) belt speed for handling the required tonnage.

The capital cost estimate that is provided with this option appears to be quite low. As illustrated in the executive summary, we would expect the installed cost for this scope of work to be more than double the proposed amount. Although the basis of the estimate is not identified specifically, it would appear that the estimate provided by CSXT in the proposal represents the capital cost for the engineered equipment for coal transport only. Exhibits 2A-1 and 2A-2 are the respective CSXT and S&L cost estimates for Big Bend 2-5.5 MM Ton Rail Coal delivery option.

S&L has assumed that hooded conveyors will be acceptable and permitable for the new conveyors except the transfer conveyor that travels over the intake canal. The transfer conveyor is totally enclosed from the blending bin to the proposed transfer tower. Should environmental permitting require all of the conveyor to be totally enclosed, then the increase to the capital estimate will be approximately $2,000,000.

In addition to the new equipment and installation costs, S&L has included costs for the following support tasks required to complete the scope work:

EXHIBIT NO. _____ (JBS-10)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 91 OF 107

Sargent & Lundy

Tampa Electric Company
Big Bend and Polk Generating Stations
CSX Transportation
Alternate Method of Coal Delivery

SL-008160
Project No. 09476-019
September 4, 2003

C. *Polk Build In Shuttle Train Unload*

This design option provided in the CSXT proposal for the Polk Plant is the least expensive and the least intrusive to the current plant operations.

The independent, estimated total installed cost for this option is $15,418,000 which is over six times higher than the capital cost identified in the CSXT proposal. Exhibit 2C-1 and Exhibit 2C-2 provide the details of the CSXT and S&L capital estimates respectively.

In addition to the new equipment and installation costs, S&L has included, in the independent estimate, costs for the following support tasks required to complete the scope of work.

- Underground Reclaim Hopper
- Bulldozer
- Fire Loop Extension
- Dust Suppression
- Repair to Existing On-Site Track
- Modification to Existing Coal Silo
- Grading for Stormwater/Coal Runoff
- Underground Utility Identification and Relocation
- Wetlands Relocation
- Conveyor Lighting
- Adjustment for FL Building Code
- Adjustments for the High Water Table
- Transformers
- Double End Bus Substation
- I/O Blocks
- Electrical Interconnect
- DCS Interconnect
- Services Interconnect
- Environmental Permitting
- Contractor G&A and Fee
- Tampa Electric Overheads

Operating cost considerations to be included in the overall bid evaluation of this option are tabulated in Exhibit 2C-3. The combined fixed and variable operating costs for this option are $1,130,000 per year.

EXHIBIT NO. _____ (JBS-10)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 92 OF 107

Sargent & Lundy

Tampa Electric Company
Big Bend and Polk Generating Stations
CSX Transportation
Alternate Method of Coal Delivery

SL-008160
Project No. 09476-019
September 4, 2003

D. *Polk Direct Delivery – Rotary Dump and Bottom Dump Scenarios*

The conceptual design of this option proposed by CSXT introduces coal storage to the Polk station. The domed storage facility minimizes the environmental impact to the station. The loop track provides sufficient storage to prevent obstruction of other plant operations.

The proposal provided by CSXT includes two scenarios for this option. The first uses a rotary car dumper; the second is similar but uses a bottom dump rail car. We have included a car shaker with the bottom dump rail car estimate. The independent estimates prepared for this option are included as Exhibit 2D-1 and Exhibit 2D-2. The CSXT proposal estimate, again lower than the estimated installed costs prepared by S&L, is provided as Exhibit 2D-3.

Items included in the independent total installed cost, in addition to the new equipment, are:

- Underground Reclaim Hopper
- Bulldozer
- Fire Loop Extension
- Dust Suppression
- Repair to Existing On-Site Track
- Modifications to Existing Coal Silo
- Grading, Stormwater/Coal Runoff Modification
- Underground Utility Identification and Relocation
- Conveyor Lighting
- Adjustment for FL Building Code
- Adjustment for High Water Table
- Transformers
- Double End Bus Substation
- I/O Blocks
- Electrical Interconnect
- DCS Interconnect
- Services Interconnect
- Environmental Permitting
- Wetland Relocation
- Contractor G&A and Fee
- Tampa Electric Overheads

EXHIBIT NO. _____ (JBS-10)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 93 OF 107

Sargent & Lundy

Tampa Electric Company
Big Bend and Polk Generating Stations
CSX Transportation
Alternate Method of Coal Delivery

SL-008160
Project No. 09476-019
September 4, 2003

V. **References**

1) CSX Transportation July 30, 2003 Proposal
2) CSX Transportation August 11, 2003 Proposal
3) TECO Memorandum, August 29, 2003, D. Konstas
4) TECO Email (Painter), Electrical Input, 9/2/03
5) TECO Email (Alfonso), I&C Inputs, 9/2/03
6) TECO Email (Barrette), Reference Drawings, 9/2/03
7) TECO Email (Painter), Big Bend/Unloading Labor, 9/3/03
8) TECO Email (Painter), Revised Capital Cost Factors, 9/3/03
9) TECO Email (Painter), Polk/Coal Unloading Labor, 9/3/03
10) TECO Email (Painter), Insurance and Tax Rates, 9/2/03

EXHIBIT NO. _____ (JBS-10)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 94 OF 107

Sargent & Lundy

Tampa Electric Company
Big Bend and Polk Generating Stations
CSX Transportation
Alternate Method of Coal Delivery

SL-008160
Project No. 09476-019
September 4, 2003

EXHIBIT 2A-1

BIG BEND CAPITAL COST 2 - 5.5 MM TONS

CSXT COST ESTIMATE

Big Bend 2 - 5.5 mm TPY Option (Rapid Discharge Cars)

System Rated at 2500 TPH

Rapid Discharge System	$1,600,000
Long Conveyor 3300 ft	$3,100,000
Short Conveyor 500 ft	$650,000
Transfer Station	$230,000
Three 45 Car Tracks	$1,200,000
Truck Dump and Conveyor	$350,000
Total	$7,130,000

Equipment to Load Shuttle Trains

Conveyors and Transfer Station	$2,250,000
250 Ton Batch Silo	$1,066,000
New 45 Car Track	$400,000
Total	$3,716,000

Grand Total	$10,846,000

EXHIBIT NO. _____ (JBS-10)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 95 OF 107

Sargent & Lundy

Tampa Electric Company
Big Bend and Polk Generating Stations
CSX Transportation
Alternate Method of Coal Delivery

SL-008160
Project No. 09476-019
September 4, 2003

EXHIBIT 2A-2

S&L COST ESTIMATE FOR
BIG BEND 2 - 5.5 MM TON
RAIL COAL DELIVERY OPTION

Preliminary

Draft

EXHIBIT NO. _____ (JBS-10)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 96 OF 107

Sargent & Lundy

Tampa Electric Company
Big Bend and Polk Generating Stations
CSX Transportation
Alternate Method of Coal Delivery

SL-008160
Project No. 09476-019
September 4, 2003

EXHIBIT 2A-3

OPERATING COST ESTIMATE FOR 2 - 5.5 MILLION TON RAIL DELIVERY OF COAL BIG BEND STATION

Variable		
Power[1]	$68,000 - $128,000	
Surfactant	$97,000 - $266,000	
Labor	$301,308 - $903,925	
Fixed		
Labor	$301,808	
Lease for Locomotive	Not Available	
Taxes and Insurance (2.085% Installed Capital Cost)	$575,900	
Maintenance (3% of Installed Cost)	$825,720	
Total Operating Cost Per Year	$2,169,260	$2,697,500

[1]Calculated on replacement fuel cost only.

Sargent & Lundy

Tampa Electric Company
Big Bend and Polk Generating Stations
CSX Transportation
Alternate Method of Coal Delivery

SL-008160
Project No. 09476-019
September 4, 2003

EXHIBIT 2B-1

BIG BEND CAPITAL COST 1- 2 MM TON

CSXT ESTIMATE

Big Bend 1 - 2 MM TPY Option (Standard Coal Hoppers)

System Rated at 1500 TPH

Modify Limestone Pit	$250,000
Long Conveyor	$1,953,000
Transfer Station	$230,000
Short Conveyor	$280,000
Three 45 Car Tracks	$1,200,000
200' Radial Stacker	$250,000
Truck Dump and Conveyor	$350,000
Total	$4,513,000

Equipment to Load Shuttle Trains

Reclaim Hopper with Feed to Batch Silo	$469,000
250 Ton Batch Silo	$1,066,000
Loader/Dozer	$750,000
Total	$2,285,000
Grand Total	$10,846,000

EXHIBIT NO. _____ (JBS-10)
JOHN B. STAMBERG - CSXT
DOCKET NO. 031033-EI
PAGE 98 OF 107

Sargent & Lundy

Tampa Electric Company
Big Bend and Polk Generating Stations
CSX Transportation
Alternate Method of Coal Delivery

SL-008160
Project No. 09476-019
September 4, 2003

EXHIBIT 2B-2

BIG BEND 1 TO 2 MILLION TON BUILD IN

S&L INDEPENDENT ESTIMATE

Preliminary

Draft

Sargent & Lundy

Tampa Electric Company
Big Bend and Polk Generating Stations
CSX Transportation
Alternate Method of Coal Delivery

SL-008160
Project No. 09476-019
September 4, 2003

EXHIBIT 2B-3

BIG BEND 1 TO 2 MILLION TON BUILD IN

OPERATING COST CONSIDERATIONS

Variable		
	Power	$34,000 - $68,000
	Surfactant	$50,000 - $97,000
	Labor	$301,308
Fixed		
	Lease for Locomotive	Not Available
	Taxes and Insurance (2.085% of Capital)	$420,400
	Maintenance (3% of Capital)	$605,000
Total		$1,492,000

Sargent & Lundy

Tampa Electric Company
Big Bend and Polk Generating Stations
CSX Transportation
Alternate Method of Coal Delivery

SL-008160
Project No. 09476-019
September 4, 2003

EXHIBIT 2C-1

TECO BID POLK CAPITAL COSTS

CSXT ESTIMATE

Shuttle Train Unload System

Bottom Dump with Conveyor to Silos 1500 TPH	$1,818,000
2500' of Track at $200 foot	$500,000
Total	$2,318,000

Sargent & Lundy

Tampa Electric Company
Big Bend and Polk Generating Stations
CSX Transportation
Alternate Method of Coal Delivery

SL-008160
Project No. 09476-019
September 4, 2003

EXHIBIT 2C-2

POLK BUILD IN SHUTTLE TRAIN UNLOAD

S&L CAPITAL ESTIMATES

Preliminary

Draft

Sargent & Lundy

Tampa Electric Company
Big Bend and Polk Generating Stations
CSX Transportation
Alternate Method of Coal Delivery

SL-008160
Project No. 09476-019
September 4, 2003

EXHIBIT 2C-3

OPERATING COST ESTIMATE FOR POLK BUILD IN SHUTTLE DELIVERY

Variable	
Power[1]	$20,000
Chemical for Dust Control	$50,000
Fixed	
Labor	$601,088
Maintenance (3% Capital Cost)	$300,700
Lease on Locomotive	Not Available
Taxes and Insurance (1.58% Capital Cost)	$158,400
Total Operating Cost Per Year	$1,130,000

[1]Calculated on replacement fuel cost only.

Sargent & Lundy

Tampa Electric Company
Big Bend and Polk Generating Stations
CSX Transportation
Alternate Method of Coal Delivery

SL-008160
Project No. 09476-019
September 4, 2003

EXHIBIT 2D-1

POLK DIRECT DELIVERY - ROTARY DUMP SCENARIOS

INDEPENDENT ESTIMATES

Preliminary

Draft

Sargent & Lundy

Tampa Electric Company
Big Bend and Polk Generating Stations
CSX Transportation
Alternate Method of Coal Delivery

SL-008160
Project No. 09476-019
September 4, 2003

EXHIBIT 2D-2

POLK DIRECT DELIVERY - BOTTOM DUMP SCENARIOS

INDEPENDENT ESTIMATES

Preliminary

Draft

Sargent & Lundy

Tampa Electric Company
Big Bend and Polk Generating Stations
CSX Transportation
Alternate Method of Coal Delivery

SL-008160
Project No. 09476-019
September 4, 2003

EXHIBIT 2D-3

POLK DIRECT DELIVERY

CSXT ESTIMATE

Build In Strategy

Item	Cost
Scenario #1 Rotary Dump at Plant	
Loop Track	$1,102,000
Rotary Dumper with Conveyor to Silo 2000 tph	$3,800,000
New 15,000 Ton Dome	$1,600,000
Total	$6,502,000
Scenario #2 Bottom Dump at Plant	
Loop Track	$1,102,000
Bottom Dump with Conveyor to Silo 1500 tph	$1,818,000
New 15,000 Ton Dome	$1,600,000
Total	$4,520,000

Sargent & Lundy

Tampa Electric Company
Big Bend and Polk Generating Stations
CSX Transportation
Alternate Method of Coal Delivery

SL-008160
Project No. 09476-019
September 4, 2003

EXHIBIT 2D-4

OPERATING COST ESTIMATE FOR POLK DIRECT RAIL DELIVERY

Variable	
Power[1]	$25,000
Surfactant	$50,000
Fixed	
Labor	$157,440
Maintenance (3% Capital Cost)	$730,500 / $484,000
Lease on Locomotive	Not Available
Taxes and Insurance (1.584% Capital Cost)	$385,700/$255,500
Total	$1,349,000/$972,000

[1]Calculated on replacement fuel cost only.