RESOLUTION
REGARDING
PURCHASE OF A RUBBER-TIRED WHEEL LOADER FOR THE MID-CONNECTICUT WASTE PROCESSING FACILITY

RESOLVED: That the President is hereby authorized to execute an agreement for the purchase of a Rubber-Tired Wheel Loader from Tyler Equipment Co. to be used at the Mid-Connecticut Waste Processing Facility, substantially as presented and discussed at this meeting.

CONTRACT SUMMARY

For Contract Entitled

AGREEMENT FOR PURCHASE OF A RUBBER-TIRED WHEEL LOADER FOR THE MID-CONNECTICUT WASTE PROCESSING FACILITY

Presented to the CRRA Board:	May 27, 2010
Vendor/Contractor(s):	Tyler Equipment Co.
Effective Date:	Upon Execution
Term:	120 Days from issuance of the “Notice to Proceed”
Term Extensions:	N/A
Contract Type/Subject matter:	Equipment Supply
Facility(ies)/Project(s) Affected:	Mid-Connecticut Waste Processing Facility
Original Contract:	N/A
Contract Dollar Value:	$ 366,145.00
Amendment(s):	N/A
Scope of Services:	Provide one new Volvo L150F Rubber-Tired Wheel Loader, including a 3 year preventative maintenance service program
Bid Security:	Provided at 10 % of Bid Price
Budget Status:	This purchase was included in the FY10 Mid-Connecticut budget

MID-CONNECTICUT PROJECT
PURCHASE OF A RUBBER TIRED WHEEL LOADER

May 27, 2010

Executive Summary

This is to request approval of the CRRA Board of Directors for the President to enter into an agreement with Tyler Equipment Company ("Tyler") for the purchase of a Volvo Rubber-Tired Wheel Loader to be used at the Mid-Connecticut Waste Processing Facility. The purchase includes a three-year preventative maintenance program.

Discussion

The Metropolitan District ("MDC") operates and maintains a fleet of seven rubber-tired wheel loaders for use in processing waste at the Waste Processing Facility ("WPF"). The particular loader that is the subject of this proposed purchase is used at the WPF in either the Municipal Solid Waste ("MSW") or the Refuse Derived Fuel ("RDF") areas of the facility for pushing, stacking and/or feeding waste materials onto the processing lines. The new loader would replace the John Deere loader which has historically had high maintenance costs and currently requires major maintenance and reconditioning work estimated at approximately $198,000. Instead of undertaking this maintenance and reconditioning work, CRRA management proposes purchase of a new loader.

The Request for Bids for the new loader was published in the following publications on Sunday, January 31, 2010, or the next published edition:

Hartford Courant
Manchester Journal Inquirer
Torrington Register Citizen
Waterbury Republican American
LaVoz Hispania de Connecticut
Northeast Minority News

The project was also posted on the CRRA and the State of Connecticut Department of Administrative Services ("DAS") website.

RFB Results

Sealed bids were received through March 2, 2010. Bids were received from three vendors. The following table indicates the vendors that submitted bids, the type of equipment that they bid, the bid price and whether or not the equipment that was bid complied with the technical specifications in the RFB Package Documents.

Vendor	Model	Bid Price	Compliance with Technical Specifications
H.O.Penn Machinery	Caterpillar 966H	$473,310.00	Yes, with 1 change
Tyler Equipment	Volvo L150F	$366,145.00	Yes, with 13 changes
W.I. Clark Co., The	John Deere 744K	$417,425.00	Yes, with 17 changes

None of the loaders that were bid met all of the technical specifications, but, in all cases, the alternatives proposed by the bidders were acceptable (i.e., it was determined that the alternatives would not have a detrimental impact on the performance of the loader). Therefore, all three of the bids were deemed to be qualified bids.

Life Cycle Cost Analysis

To identify the loader that would be the best value for CRRA, staff performed a life-cycle cost analysis on each of the three loaders considering maintenance, operational and fuel costs.

Maintenance Costs

The normal service life of a loader operating in the WPF environment is approximately 42,000 hours. During that period, the transmission and engine need to be rebuilt or reconditioned every 10,000 to 12,000 hours or about once every two years. Therefore, each unit is completely rebuilt three times during its operating life. The Caterpillar 966H would be rebuilt by Caterpillar using rebuilt components, whereas both the Volvo L150F and the John Deere 744K would be rebuilt by Volvo and John Deere, respectively, using remanufactured components.

The following table compares the maintenance costs for the three loaders. The prices included in the table are the total price of the service components (e.g., the transmission) of a rebuild and do not include the cost of labor for which none of the manufacturers would provide an estimate.

Vendor and Model	Price of Major Service Components per Rebuild	Number of Rebuilds	Life-Cycle Maintenance Cost
H.O. Penn Machinery Caterpillar 966H	$25,748	3	$77,244
Tyler Equipment Volvo L150F	$33,600	3	$100,800
W.I. Clark Co. John Deere 744K	$36,430	3	$109,290

Operational Costs

The current fleet of loaders at the WPF includes Caterpillar 966H loaders and John Deere 744K loaders. In the following table, the operational costs for these two loaders are based on CRRA's actual experience with these units. The operational cost for the Volvo L150F is based on the manufacturer's estimate.

The following table compares the operational costs for the three loaders.

Vendor and Model	Hourly Operational Cost	Number of Hours	Life-Cycle Operational Cost
H.O. Penn Machinery Caterpillar 966H	$25.64	42,000	$1,076,880
Tyler Equipment Volvo L150F	$26.00	42,000	$1,092,000
W.I. Clark Co. John Deere 744K	$37.30	42,000	$1,566,600

Fuel Costs

In the following table, the fuel consumption rates for the Caterpillar 966H and the John Deere 744K are based on CRRA's actual experience with these loaders. The fuel consumption rate for the Volvo L150F is based on the manufacturer's estimate.

The following table compares the fuel costs for the three loaders.

Vendor and Model	Gallons per Hour	Price per Gallon	Number of Hours	Life-Cycle Fuel Cost
H.O. Penn Machinery Caterpillar 966H	4.63	$3.50	42,000	$680,610
Tyler Equipment Volvo L150F	4.75	$3.50	42,000	$698,250
W.I. Clark Co. John Deere 744K	4.82	$3.50	42,000	$708,540

Summary

The following table summarizes the life-cycle costs for the three loaders.

Vendor and Model	Purchase Price	Life-Cycle Maintenance Cost	Life-Cycle Operational Cost	Life-Cycle Fuel Cost	Total Life-Cycle Cost
H.O. Penn Machinery Caterpillar 966H	$473,310	$77,244	$1,076,880	$680,610	$2,308,044
Tyler Equipment Volvo L150F	$366,145	$100,800	$1,092,000	$698,250	$2,257,195
W.I. Clark Co. John Deere 744K	$417,425	$109,290	$1,566,600	$708,540	$2,801,855

Recommendation

To analyze the sensitivity of the life-cycle analysis, the impact of changes in three variables was examined: operational cost, gallons per hour and price per gallon of fuel. The hourly operational cost of the Volvo would have to increase to approximately $27.25 (a 5% increase) before the Caterpillar would have the better life-cycle cost. The fuel consumption rate of the Volvo would have to increase to approximately 5.05 gallons per hour (a 6% increase before the Caterpillar would have a better life-cycle cost. The price of fuel would have to increase to over $13.00 per gallon (a 270% increase) before the Caterpillar would have a better life-cycle cost.

Based on the total life-cycle costs of the three loaders and the sensitivity analysis, CRRA management recommends the purchase of the Volvo L150F from Tyler Equipment. The total life-cycle cost of the Volvo L150F is $50,849 less than for the Caterpillar 966H and $544,660 less than the John Deere 744K.

As a point of information, the bids included a three-year preventative maintenance service program. Therefore, for the first three years of the operation of the recommended loader,

regular maintenance will be performed by Tyler Equipment, rather than by the MDC or any possible successor operator of the WPF.

Financial Summary

The purchase of one new Volvo L150F Rubber-Tired Wheel Loader from Tyler Equipment will be funded from the WPF Rolling Stock Reserve as adopted in the Fiscal Year 2010 Mid-Connecticut budget.