

COUNCIL ACTION FORM

SUBJECT: OXYGEN ANALYZER SYSTEM FOR UNIT 8 BOILER

BACKGROUND:

This contract is for the purchase of a new Oxygen (O₂) analyzer system for installation on the Unit 8 Boiler at the Power Plant. This system continuously measures the percentage of oxygen in the flue gas exiting the boiler and provides an average reading to the digital control system as a significant part of the overall boiler combustion control. It is also a key factor in achieving the correct and balanced chemical reaction inside the boiler. Too much or too little oxygen provides risk for possible explosions, excessive emissions, damage to tube materials, and inefficiencies.

Staff has reason to believe that the current O₂ analyzer system may not be accurately taking the oxygen reading in the flue gas. If the Power Plant continues to operate with the existing system, there is significant risk of damaging the tube materials inside the boiler and/or burning fuel inefficiently.

On March 21, 2013, the request for proposal (RFP) document was issued to eleven firms for the solicitation of proposals. The RFP was advertised on the Current Bid Opportunities section of the Purchasing webpage and was also sent to one plan room. On April 5, 2013, staff received competitive proposals from three firms. These proposals were then evaluated by a committee consisting of the two Power Plant Engineers and a Instrument and Control Technician.

The committee members independently evaluated and scored all three of the proposals. Each proposal was evaluated based on: 1) specification/RFP compliance; 2) price; 3) system design complexity; 4) accuracy and response time; 5) references; and 6) lead time/delivery.

Based on the matrix, the averaged scores are as follows:

Offerors	Averaged Scores	Price
Power Specialties, Raytown, MO	803	\$60,933.15
Interstate Industrial Instrumentation, Inc., Des Moines, IA	678	\$49,172.00
Cemtrex, Inc., Farmingdale, NY	672	\$35,699.06

Overall, 1,000 possible points were available cumulatively for each firm's written proposal. The overall weighted score was a function of the aforementioned evaluation factors.

Based on the averaged weighted scores and a unanimous decision by the evaluation committee, staff recommends that a contract be awarded to Power Specialties, Raytown, MO, in the amount of \$60,933.15.

There were very specific reasons why Power Specialties stood out as the strongest firm in supplying the oxygen analyzer system for the Unit 8 boiler even though their proposal was not the lowest price. These include the following:

1. Power Specialties proposed a Yokogawa O2 analyzer system. The Power Plant currently has a very similar Yokogawa O2 analyzer system on Unit 7. The system on Unit 7 has proven to be accurate, reliable, and easy to maintain. Operating with both Unit's 7 and 8 having similar O2 analyzers would also allow for easier training, less costs for spare parts, and overall plant efficiencies.
2. Power Specialties suggested probe lengths to be four meters. This length of probe will provide the ability to measure from a center location in the flue gas duct, assuring precise, accurate measurement. The other two proposals suggested probe lengths to be 18 inches. Using 18 inch probes would not allow the sample to be taken from the middle of the duct and could give a measurement that does not represent a true average.
3. Power Specialties has worked with the Power Plant in the past and has proven to be a reliable firm that delivers excellent service.
4. Power Specialties proposed the shortest amount of lead time/delivery of 6 weeks. Cemtrex proposed 8-10 weeks and Interstate Industrial Instrumentation proposed 8-12 weeks.
5. Power Specialties included the longest warranty period of 2 years for all parts proposed. Interstate Industrial Instrumentation proposed a warranty of 12 months and Cemtrex did not mention any warranty information.

The FY 2012/13 operating budget contains \$65,000 for Replacing Unit 8 O2 Analyzer System.

ALTERNATIVES:

1. Award a contract to Power Specialties, Raytown, MO, for the Oxygen Analyzer System for Unit 8 Boiler in the amount of \$60,933.15.
2. Award a contract for oxygen analyzer system to one of the other companies who submitted a proposal.

3. Reject all proposals and delay the purchase of the oxygen analyzer system.

MANAGER'S RECOMMENDED ACTION:

Due to the age and unreliability, the current O2 analyzer system on Unit 8 needs to be replaced. The criticality of this system requires that a quality system be installed. Power Specialties has proposed a system that is very similar to what is on Unit 7 and it has proven, by the Power Plant, to be accurate, reliable, and easy to maintain. In addition, our previous experience with this company has been excellent.

Therefore, it is the recommendation of the City Manager that the City Council adopt Alternative No. 1 as stated above.