

COUNCIL ACTION FORM

SUBJECT: APPROVE A CONTRACT CHANGE ORDER FOR UNIT NO. 8 STEAM GENERATOR WATERWALL PANELS PROJECT FOR POWER PLANT

BACKGROUND:

This project will address ongoing problems in Unit No. 8 by replacing the bottom 50 ft. of tubing in the boiler. This work will be one of the initial projects which the City will be undertaking to address increased maintenance needs at the Plant. This project will also help to improve reliability of Unit 8, and reduce the number of outages due to tube failure. Due to the age of the tubes in the boiler, ruptures and tube failures have become increasingly more common. There were nine separate occurrences of tube leaks which resulted in nine separate forced outages of the boiler in FY 2007/2008. The condition of the boiler tubes has become a major reliability factor.

On April 28, 2009, City Council awarded a contract to Boiler Tube Company of America (BTA) for Unit No. 8 Steam Generator Waterwall Panels in the amount of \$1,408,355.00, plus applicable sales taxes to be paid directly by the City of Ames to the State of Iowa. The original scope of BTA's supply was to fabricate waterwall panels to replace the four walls of the furnace below the 150 foot elevation on the boiler (the ground floor is 100 feet). During a forced outage in December 2009, additional localized waterwall damage was discovered above the 150 foot elevation. There are two areas of damage that extend up approximately 15 feet from the 150 foot cut line. These localized areas have an aggressive corrosion rate due to the existence of a reducing atmosphere in the combustion zone. Six additional panels are needed to address this damaged area. These six panels equate to a 13% increase in panel material.

The scope of change order number 4 is to have BTA fabricate the six additional panels needed to address the additional damage discussed above.

Three change orders have been approved for this contract so far. Change Order No. 1 for \$16,235.00 was for BTA to split the sidewall panels in half which will make them a more manageable size to assist with the installation. Change Order No. 2 for \$47,833.00 was for BTA to install studding in the burner throats of the waterwall panels in their shop in lieu of having those studs filled installed. Change Order No. 3 was for an extension of the contract time from January 14, 2010, to January 28, 2010. This extension was required in order to allow enough time for BTA to complete the work administered on Change Order No. 2. This change order would be Change Order No. 4 and it would be for the amount of \$208,629.00, a 15% increase in the base bid. The total of the project with Change Order No. 4 will be \$1,681,052.00.

The FY 2009/2010 CIP includes \$4,500,000.00 for Unit No. 8 boiler tube repair. This portion of the project is for the tubing material. The Engineer's estimated cost for this material was \$1,621,000.00, which did not include the additional 15 feet of tubing requested in this change order. The staff feels that the budget for the project is adequate to complete the work with this change order.

ALTERNATIVES:

1. Approve contract Change Order No. 4 in the amount of \$208,629.00 to Boiler Tube Company of America for six additional waterwall panels. This will bring the total contract cost to \$1,681,052.00.
2. Reject contract change order no. 4 and do nothing to address the known damaged waterwall areas in the furnace.

MANAGER'S RECOMMENDED ACTION:

This project will address Unit No. 8 tube problems by replacing the bottom 50 ft. of tubing in the boiler. This change order will provide the City of Ames a more reliable Unit 8 by reducing the need for a future additional forced outage due to furnace waterwall tube leaks in two other areas of the boiler. It will allow for repairs to the two additional spots of tube damage to be addressed while the boiler is already out of service for the larger project.

Therefore, it is the recommendation of the City Manager that the City Council adopt Alternative No. 1, thereby approving contract Change Order No. 4 in the amount of \$208,629.00 to Boiler Tube Company of America for six additional waterwall panels. This will bring the total contract cost to \$1,681,052.00.