

ITEM #: 17
DATE: 12-12-23
DEPT: ELEC

COUNCIL ACTION FORM

SUBJECT: RESOLUTION ACCEPTING COMBUSTION TURBINE1 RETURN TO SERVICE PROJECT AS COMPLETED BY MMC CONTRACTORS NATIONAL INC, OF KANSAS CITY, MO AND APPROVING REDUCTION IN RETAINAGE

BACKGROUND:

Combustion Turbine 1 (CT1) is a 19 megawatt electric generating unit necessary to meet the City's reserve capacity requirement. It is used primarily to alleviate local and regional transmission system stability and reliability problems. The unit entered service in 1972. In July 2013, the first stage compressor of the engine catastrophically failed while operating, which wrecked the engine and caused significant collateral damage. A significant amount of work was performed to return the generating unit to service.

It should be noted that the work to return CT1 to service was divided into three work categories and the bid document was subdivided into the following three separate bids based on these categories. This approach allowed the City flexibility as to how to evaluate and award a contract for these categories.

On August 25, 2015, two contracts were awarded to MMC Contractors National Inc, of Kansas City, MO -- Bid No. 2 Inlet Air System in the amount of \$915,590 and Bid No. 3 Exhaust System in the amount of \$612,900 (both inclusive of Iowa Sales Tax).

There were three change orders to the Inlet Air System contract totaling \$12,821.94.

Change Order No. 1 was for additional work to repair parts of the evaporative cooler flanges in the amount of \$4,798.76.

Change Order No. 2 was for additional material in the amount of \$601.70.

Change Order No. 3 was to cover the cost of equipment storage and a union wage increase in the amount of \$7,421.48.

There were three change orders to the Exhaust System contract totaling \$18,920.74.

Change Order No. 1 was for additional work to clean rust off the power turbine and pit removal from the exhaust in the amount of \$4,027.19.

Change Order No. 2 was for additional labor and materials to install the additional stack flashing in the amount of \$11,239.35.

Change Order No. 3 was to cover the cost of equipment storage and a union wage increase in the amount of \$3,654.20.

RETAINAGE ISSUES:

There were two issues related to the retainage owed MMC for the work on CT1.

The first issue involves the performance of the evaporative cooler after the work was completed. The evaporative cooler performed just outside the requested inlet air cooling measurement per the bid specifications.

The second issue involves the exhaust stack support structure built by MMC which did not allow the engine compartment to be ventilated properly when the unit was operating. This caused the heat emitted from the engine to build up in the compartment to temperatures that were detrimental to the equipment inside the compartment.

After several conversations with MMC, staff was able to reach resolution for both issues.

In the case of the evaporative cooling, staff determined that there was a margin of error in the testing procedures used by the City. With the results of the test falling within this margin of error, staff accepted the performance of the cooler as meeting specifications.

Regarding ventilation issue, it was determined it would be best for Electric staff to hire a structural engineer and a mechanical contractor to perform the modifications on the evaporative cooler and properly support the exhaust stack while providing adequate ventilation to the engine compartment.

Once the work was completed, the funds used to perform this additional work were to be deducted from the retainage held on the two projects with MMC. MMC agreed to this process.

The attached spreadsheet labeled 'GT-1 MMC Closeout' shows the detailed expenditures for both projects. The total retainage withheld between both projects is \$78,011.63. The total expenditures for solving the two remaining issues is \$61,990.23. This leaves a remaining retainage amount of \$16,021.40 which will be returned to MMC.

ALTERNATIVES:

1. A. Accept completion of the CT1 Return to Service Project with MMC Contractors National Inc, of Kansas City, MO, in the amount of \$1,560,232.68.

B. Reduce and release the retainage to MMC Contractors National Inc, of Kansas City, MO, in the amount of \$16,021.40.

2. A. Do not accept the project as complete.

B. Do not reduce or release the retainage.

CITY MANAGER'S RECOMMENDED ACTION:

CT1 combustion turbine is a generating unit necessary for the City's reserve capacity requirements and to alleviate local and regional transmission system stability and reliability problems. The generating unit continues to serve as a vital part of the City of Ames electric system. Staff has developed a plan to resolve a remaining ventilation issue with another contractor.

The project engineer has certified that the project is complete and the reduced retainage of \$16,021.40 can be released. Therefore, it is the recommendation of the City Manager that the City Council adopt Alternative No. 1 as stated above.

ATTACHMENT(S):

[GT-1 MMC Closeout.xlsx](#)

[MMC Contract # 2015-132 Engineer's Statement of Completion.pdf](#)