

COUNCIL ACTION FORM

SUBJECT: COOLING TOWER BLOWDOWN SANITARY SEWER MODIFICATION – CHANGE ORDER NO. 2

BACKGROUND:

As part of the power generation process, the Power Plant uses water cooling towers to dissipate heat. Periodically the water must be discharged from the cooling tower as mineral concentrations increase due to evaporation (a process called “blowdown”). The Power Plant had a National Pollutant Discharge Elimination System (NPDES) permit to discharge the cooling tower blowdown water into the storm sewer system, which flows to the Skunk River. Recently, the State of Iowa issued an updated NPDES permit which requires a greater degree of treatment to the water at the Power Plant before the blowdown water could be discharged to the storm sewer system.

WHKS assisted Power Plant staff with evaluating discharge options and evaluated the feasibility of directing the Power Plant’s cooling tower blowdown into the City’s sanitary sewer system as a method of disposal. The blowdown water would then be treated at the City’s Water Pollution Control Facility. This approach would involve significantly less cost than the alternative of designing and constructing a separate discharge treatment system at the Power Plant.

In investigating the feasibility of discharging to the sanitary sewer system, Public Works staff requested that a study be performed to ensure that the existing sanitary sewer system could handle the increased flows. **Change Order No. 1 was issued in the amount of \$24,355 to WHKS to collect flow data in the sanitary sewer system near the Power Plant. WHKS was chosen to perform this work via change order rather than a competitive bidding process since WHKS also maintains the sanitary sewer modeling for Public Works.** The data was evaluated to ensure the power plant flows would not cause capacity issues in the sanitary sewer system.

After assessing the potential alternatives, connecting the cooling towers to the sanitary sewer now appears to be the best, low-cost alternative to meet the new permit requirements. The next step is to design the connection. **This engineering service could be sent out for competitive bids. However, staff is requesting City Council approval for WHKS to design the piping modifications needed to discharge the cooling tower blowdown water to the sanitary sewer system for two reasons: 1) WHKS has existing knowledge of the project and a detailed understanding of the Ames sanitary sewer system, and 2) the utility must achieve compliance with the discharge limits in a timely manner, which could be difficult if additional time must be taken for a competitive selection process.**

The current request is to approve Change Order No. 2. This change order will add an additional \$55,500 for design and construction services to accomplish the connection to the sanitary sewer. Costs will be billed based on WHKS' standard hourly rates, which staff has reviewed and has found to be acceptable. This change will bring the total contract amount to \$93,045. This work is part of the engineering for Waste Water Treatment CIP. Funding for this Change Order will come from the CIP which currently has a balance of \$500,000

ALTERNATIVES:

1. Waive the Purchasing Policy requirement for competitive proposals and approve Change Order No. 2 to WHKS & Co, Ames, Iowa, in the amount of \$55,500 for design and construction services for the Cooling Tower Blowdown Sanitary Sewer Modification.
2. Do not approve the change order, and direct staff to evaluate other options to obtain engineering services to discharge the cooling tower blowdown water.

CITY MANAGER'S RECOMMENDED ACTION:

The operation of the cooling towers, and subsequent blowdown discharge, are critical to the operation of the Power Plant. The direct discharge to the sanitary sewer is preferred over installing additional water treatment processes at the Power Plant. City staff believes that WHKS is best situated to perform this work, which could be completed with a change to the existing contract.

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