

OFFICE OF THE CITY MANAGER
DES MOINES, IOWA

ITEM 65G

CITY COUNCIL COMMUNICATION 97-013
JANUARY 6, 1997 AGENDA

SUBJECT:	TYPE:	SUBMITTED BY:
SINGLE BID FOR CHLORINE RESIDUAL ANALYZER MONITOR SYSTEMS AT WASTEWATER RECLAMATION FACILITY	◆ RESOLUTION ORDINANCE RECEIVE/FILE	MARK DURHAM ACTING FINANCE DIRECTOR

SYNOPSIS —

The Engineering Department requested the Purchasing Division to solicit bids for four Chlorine Residual Analyzer Monitor Systems for use in the disinfection process at the Wastewater Reclamation Facility (WRF). Specifications, provided by the WRF, required that water samples be continuously analyzed in an amperometric-type cell and produce a current proportional to the total chlorine residual in the sample. The Invitation to Bid with specifications was advertised and mailed to six potential bidders. The instructions to bidders allowed for questions or clarifications of the specifications from potential bidders prior to the opening of bids. None were received. One bid was received from Capital Controls Co., Inc., Cedar Rapids, Iowa. Other potential bidders indicated that they could not meet the specifications.

FISCAL IMPACT —

Funding for the purchase of four Chlorine Residual Analyzer Monitor Systems totaling \$36,324 come from Engineering WRA WRF Operations, Index Code 055160.

RECOMMENDATION —

Approve the single bid submitted by Capital Controls Co., Inc. c/o Raines and Associates, Inc., Cedar Rapids, Iowa for a total amount of \$36,324.

BACKGROUND —

The WRF has had problems with the original installation of the chlorine residual monitoring systems since 1991. The Iowa Department of Natural Resources has placed an extremely low National Pollution Discharge Elimination Systems permit limitation on the WRF. In order to ensure that it is not violated, on-line instrumentation that provides a continuous reading of the chlorine residual concentration is mandatory for process control. This also leads to a chemical savings in chlorine gas of almost \$6,500 and sulfur dioxide gas of \$7,200 through not having to overdose to ensure effective disinfection.

The WRF staff have researched Total Chlorine Residual measuring analyzers over the past several years. Replacement probes from the original manufacturer and three other probe-type units have been field tested, but none of them proved reliable enough to not require extensive and expensive maintenance. This is due to the fact that the WRF nitrifies—removes ammonia—to an extremely high level which is most beneficial to the Des Moines River and in complying with the State permit, but the probes require the presence of ammonia-nitrogen.

An amperometric unit, as opposed to a probe unit, was finally proposed and successfully tested. The specifications required that the chlorine residual monitoring system be amperometric. Capital Controls Co., Inc. is the only known manufacturer of amperometric systems. A great deal of time has been expended to find a satisfactory system. Staff recommends approval of the single bid.