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Department of Utilities
Wastewater Treatment Plant
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TO: Chairperson Joe Martin and Members of the Utilities Committee

CC: Purchasing Manager Jeff Fait

FROM: Utilities Director Chris Shaw

DATE: May 15, 2013

RE: *Recommend a contract amendment award (sole source) for Regulatory Upgrade and Process Improvement Project SCADA Integration to CH₂M Hill in the amount of \$60,000 with a 10 % of contingency of \$6,000 for a project total not to exceed \$66,000*

BACKGROUND:

The Appleton Water Treatment Facility (AWTF) is undergoing improvements in the Regulatory Upgrade and Process Improvement Project (RUPIP). The current engineering contract with CH₂M Hill includes development of a scope of work for a third party integrator to develop standards, program and upgrade the Supervisory Control and Data Acquisition (SCADA) system. The third party integrator would be a subcontractor to the general construction contractor and would begin work when the construction contract is executed, estimated in October 2013.

ALTERNATIVE APPROACH:

The project has reached a 30% design level and project delivery for the SCADA standards development and integration can occur now with the RUPIP design engineer, CH₂M Hill. This alternative approach to creating complex design specifications and engineering oversight to an integrator is used in many projects. The advantages to this mode of project delivery are as follows:

- **Cost Savings.** The estimated cost of executing the SCADA scope of work with a third party integrator is \$90,000. CH₂M Hill is proposing to execute the scope of work for \$60,000. The cost savings come from:

- Less design effort. If CH₂M Hill executes the SCADA scope of work they can reduce the effort in developing specifications for someone else to do the work.
- Less effort during construction. If CH₂M Hill executes the work, they do not have to answer questions and watch over a third party integrator as they try to determine the design intent.
- Better Quality. Increase in quality due to CH₂M Hill's extensive experience with municipal water facilities. A third party integrator that serves a broad market may not have any drinking water plant experience. CH₂M Hill has completed similar work at many water and wastewater facilities including Oshkosh, Oak Creek, Grand Chute and Green Bay.
- Faster Schedule. CH₂M Hill can begin upon approval of a contract amendment. This will help implement critical components of the project early and allow more time for AWTF staff to learn the new system and derive benefits from it. A third party integrator cannot start until the construction is started in the fall, and will require time to get up to speed.
- Single point of responsibility. If CH₂M Hill does the design and SCADA work, they are responsible for making the system work. This avoids different parties not accepting responsibility for their combined work effort, while saving time and money.

PROPOSED SCOPE AND DELIVERABLES:

The purpose of this scope of work is to allow implementation of the AWTF SCADA system improvements including the following:

- Develop SCADA system standards for control functions, data collection, data archival, historian management, and reporting
- Update the operator interface area control panels or human machine interfaces (HMIs), located throughout the AWTF to conform to the new standards
- System process integration for RUIP

Deliverables include: documented SCADA system standards; guidelines in hard copy and electronic format; meeting minutes from workshops, updated software for each HMI; software documentation and drawings and specifications.

RECOMMENDATION:

Based on the proposed scope and advantages to the City of Appleton, I recommend a contract amendment to the existing CH₂M Hill contract awarding sole source Regulatory Upgrade and Process Improvement Project SCADA integration to CH₂M Hill in the amount of \$60,000 with a 5 % of contingency of \$6,000 for a project total not to exceed \$66,000. Funding is from Regulatory Upgrade and Process Improvement Project capital budget. If you have any questions regarding this project please Chris Shaw at ph: 832-5945.