Agenda Report

May 16, 2011

TO: Honorable Mayor and City Council

FROM: Water and Power Department

SUBJECT: Amendment to Purchase Order Number 47067 with Control Automation Design Incorporated for the Supervisory Control and Data Acquisition for the Monk Hill Treatment System and Disinfection Facility to Increase the Contract Not-to-Exceed Amount from $50,000 to $109,700

RECOMMENDATION:

It is recommended that the City Council:

1. Find the work by Control Automation Design Incorporated (CAD), consisting of programming, integrating, and testing the supervisory control and data acquisition (SCADA) system was subject to review under the California Environmental Quality Act (CEQA) as part of the Mitigated Negative Declaration adopted by the Hearing Officer on July 10, 2008 and is part of the project approved by the City Council on October 20, 2008 for the construction and operation of a groundwater treatment plant in the Arroyo Seco. SCADA improvements are included in the project scope for the treatment and disinfection facilities. There are no changed circumstances or new information, which would trigger additional environmental review;

2. Authorize the City Manager to amend Purchase Order Number 47067 with CAD to increase the contract by $59,700 for a total not-to-exceed amount of $109,700 for additional work as part of the control and supervisory system for the treatment plant and disinfection facility;

3. Find that competitive bidding is not required pursuant to City Charter Section 1002 (F) Contracts for Professional or Unique Services; and

4. Grant the Proposed contract an exemption from the competitive selection process of the Competitive Bidding and Purchasing Ordinance pursuant to Pasadena Municipal Code Section 4.08.047 (B) contracts for which the City of Pasadena's (City) best interest are served.

BACKGROUND:

Pasadena Water and Power (PWP) has four wells in the proximity of the Jet Propulsion Laboratory (JPL) contaminated with volatile organic chemicals and perchlorate at concentrations exceeding the maximum contaminant levels under California Department of Public Health (CDPH) drinking water regulations. On January 23, 2006, the City and National Aeronautics and Space Administration (NASA) entered into Contract Number 18,989, which provides funding to the City to construct and operate a treatment plant. The construction of the treatment plant began in April 2009 and is managed by NASA. In November 2009, construction for a disinfection facility began, which PWP is financially responsible to manage and implement. NASA, which is responsible for the groundwater cleanup, is also responsible for the electrical and rehabilitation of the four wells. SCADA improvements play an integral component to the well rehabilitation improvements.

The treatment and disinfection facilities require use of SCADA to remotely access, operate, monitor, and control the wells, booster plant, and treatment and disinfection processes. SCADA, which incorporates hardware and software, permits interoperability between infrastructures; thereby, enabling the equipment to make adjustments for flow, pressure, water quality, status condition, and other operational parameters. SCADA also collects and stores operational data that is useful to monitor system performance and scenario testing.

In December 2010, staff contracted with CAD because the company has an extensive knowledge base of the existing water SCADA system and is very familiar with the water operation processes; thereby, providing cost efficiency in lieu of a different company re-engineering the existing control system. There was also the concern with third party integrators creating difficulties with existing warranties and potentially impairing current system reliability. The original scope for CAD included code development, programming, integrating, and testing of the new and existing SCADA systems, developing user interface for monitoring and controlling, documenting wiring diagrams and as-built drawings, training staff, and providing field integration as necessary. This work was estimated for a total not-to-exceed amount of $50,000.

From March 18 to March 28, 2011, the Metropolitan Water District of Southern California (MWD) implemented a shut down of a major pipeline that adversely affected 60% of the City's water supply. It became critical in anticipation of the shut down to fast track the start up of the treatment and disinfection facilities as a contingency for back up water supply. In order to get the plant operational and permitted by CDPH in time, CAD agreed to expand the work scope to assist in wiring connectivity, diagnosing, calibrating, and testing of control units, gauges, meters, sensors, etc., which is typically performed by the electrical contractor, treatment equipment vendor, and staff. CAD also expedited the scheduling of its work. Ideally, SCADA programming would normally occur after control terminal units are in place and tested, but doing so could result in delay of the plant start up. So CAD agreed to begin its work before the system was tested. As a result, however, debugging became more complicated because identifying and isolating the problematic areas were increasingly involved.

Going forward staff has requested that CAD consider additional operational and emergency programming, which were not part of the original scope and is necessary for permit and inspection compliance. The disinfection facility requires numerous changes for safety and emergency capabilities that require SCADA monitoring and interoperability with the overall treatment operations. There is also work related to the original scope yet to be completed. Currently, the treatment facilities cannot operate in a 24/7 mode until the SCADA work is fully completed. A 20% contingency is included to account for unforeseen changes in the work due to variability in water quality over time, the learning curve for staff to operate the new treatment equipments, and provide greater flexibility with operating the system. Each of these factors may have material impact to the SCADA programming and interoperability. The increase in work scope is estimated at $49,750.

As a result of the extra work the purchase order contract will increase the not-to-exceed amount as follows:

Original Work Scope	$50,000
Additional Work	$49,750
Contingency Allowance	$9,950
Total Not-To Exceed Amount	$109,700

COUNCIL POLICY CONSIDERATION:

The SCADA improvements are designed to support the operations of the treatment and disinfection facilities that are necessary to treat the contaminated groundwater to drinking water standards. These facilities are consistent with the General Land Use Designation Objective 18 (Improved Environment), which calls to improve the quality of the environment for the City and the region. These facilities are also consistent with the Land Use Element Policy 18.4 (Water Quality), which requires the City to coordinate with local, regional, state, and federal agencies to continue to define appropriate standards to improve water quality. In addition, these facilities are consistent with Land Use Element Policy 7.4 (Infrastructure Improvements), which encourages improvements related to upgrading the water supply system. Operating the facilities will also support the City's commitment to sustainably and environmental stewardship, and it reinforces the United Nations Urban Environmental Accords Action 20 - protect the ecological integrity of the City's primary drinking water sources.

ENVIRONMENTAL ANALYSIS:

In accordance with the provisions of CEQA, an Initial Study was prepared for the construction and operation of the Monk Hill treatment plant. The Initial Study determined that the project would have a less than significant environmental impact with the incorporation of mitigation measures. A Mitigated Negative Declaration was prepared and adopted for the project by the Hearing Officer on July 10, 2008. The action proposed herein is a contract amendment for SCADA improvements. This activity is covered under the adopted CEQA document and in compliance with Section 15162 which there are no changed circumstances or new information that would require additional environmental review.

FISCAL IMPACT:

Under Contract Number 18,989, NASA will reimburse the City $82,275 for the work related to the treatment plant and well rehabilitation. Sufficient funds are available in the Water Capital Improvement Program Budget Account 1031 – Convert Chlorination Stations to Chloramines to cover the balance of $27,425.00.

Respectfully submitted,

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