

DATE ISSUED: May 23, 2001

REPORT NO: 01-091

ATTENTION: Honorable Mayor and City Council
Docket of May 29, 2001

SUBJECT: Additional Project Contingency for Point Loma Wastewater Treatment Plant

SUMMARY:

Issue - What action should the City Council take regarding authorization of expenditures for additional contingency for construction improvement projects at the Point Loma Wastewater Treatment Plant?

Manager's Recommendations - Authorize the expenditure of \$1,015,000 for additional project contingency for three capital improvement program (CIP) projects at the Point Loma Wastewater Treatment Plant.

Fiscal Impact - This action will result in an expenditure of \$1,015,000. Funding will come from the CIP projects that funded the original construction contracts. Any further budget adjustments will be reflected in the proposed CIP budget for fiscal year 2002.

BACKGROUND

Since completion of the Point Loma Outfall extension in 1993, the Point Loma Wastewater Treatment Plant (PLWTP) has been undergoing over \$250 million of improvements. The PLWTP was originally constructed in 1963 and has undergone various upgrades and expansions through the years. Today, wastewater flows of 180 million gallons per day (mgd) are treated at the plant. Regularly scheduled upgrade projects are necessary to extend the life of the facility and improve wastewater treatment to meet federal and state standards. The first phase of the improvement program to take the PLWTP to a hydraulic capacity of 240 mgd is about ninety percent complete.

As part of the current effort, thirteen large CIP projects have been completed or are nearly complete. Eleven projects are under construction or will be in the following year. Three additional large projects are currently planned for construction in the coming years.

DISCUSSION

Three construction projects at the PLWTP that are near completion or will be in the coming year require additional contingency funding for construction changes to existing contracts. The scope of these projects include upgrades to the preliminary treatment facilities (headworks), sedimentation basins, odor control, and chemical feed systems at the PLWTP.

The affected construction contracts are the PLWTP Scum Removal, Accelerated Odor Control and Concrete Restoration project, awarded to Nielsen-Dillingham Builders, Inc. (NDB) in June

1997 and currently valued at \$14.30 million; the PLWTP Headworks, Odor Control and Grit Processing Facilities Interim Improvements, awarded to CDM Engineers and Constructors Inc. (CDM) in January 1998 and currently valued at \$9.47 million; and the Chemical Feed Systems Upgrade, awarded to A.O. Reed and Company in January of 2000 and currently valued at \$2.86 million.

These projects are rehabilitation type projects at a facility originally constructed thirty years ago, where continual operation must be maintained. Rehabilitation projects at an operating facility typically experience more cost growth than new construction projects. Much of the cost growth is a result of unforeseen site conditions and the need for continual improvements to maintain or improve wastewater treatment at the plant. Given the number of construction contracts at the PLWTP, in many cases, it has been most cost-effective to add the additional work to area contractors already performing similar work.

The additional work and funding required are as follows:

Scum Removal, Accelerated Odor Control and Concrete Restoration - NDB Contract

This contract provides for extensive concrete restoration to the existing sedimentation basins 1 through 8 and other process improvements in that area. The project encountered considerable unknown deteriorated concrete that was not shown on the original bid documents. This was attributed to the limited ability during design to perform thorough inspections of these large twenty feet deep basins. The need to keep the facility operational and the size of the basins were major factors limiting the inspection. The unknown site conditions have contributed to an overall contract duration of four years and a scheduled project completion in June 2001.

Additional funding of \$75,000 is needed to finalize negotiations for twenty-one items of additional work and closeout of the NDB contract. The additional items are within the scope of work for the project and include additional restoration work, replacement of worn process equipment, small utility repairs, additional control devices and other minor modifications.

Headworks, Odor Control and Grit Processing Facilities Interim Improvements - CDM Contract

This contract provides for process improvements to the preliminary treatment facilities (headworks) and odor control systems. It is scheduled for completion in June 2001.

Replacement of major screening equipment and new odor control upgrades are being installed while maintaining operations. Associated with this work, screen enclosures to contain the odors had to be installed prior to completion of the remaining odor control improvements. As a result the air inside the enclosures is very corrosive, causing additional wear of process equipment which has to be refurbished immediately.

The installed screen equipment is working more efficiently than anticipated. The equipment is removing more material which is a major benefit downstream. However, the material is causing premature wearing of equipment installed by the CDM contract. Additional parts and modifications to the scope of work are necessary to resolve this issue.

To improve the treatment of odors the project also includes the installation of additional automated controls and the change out of the chemical oxidants used for odor treatment. Extra equipment not clearly specified in the bid documents had to be added to the control panels for the odor control systems which delayed their completion. Additional costs for the supply and storage of the chemicals is being incurred. The contractor should be paid for the additional equipment and chemical costs associated with these panel changes.

Additional funding of \$590,000 is needed to complete the added improvements and close out the CDM contract.

Chemical Feed Systems Upgrade - A.O. Reed Contract

This contract provides for improvements to the chemical feed systems which enhance the wastewater treatment and take it to an advanced primary treatment level. The project is about 50 percent complete with completion scheduled in September 2001.

Chemical storage tanks are being replaced as part of this project. During removal of the old tanks, their concrete foundation and the soil below, hazardous materials were found. Coring and material sampling during design was not feasible because the facility was in operation. A majority of the contamination was found below the facility. Therefore, greater disposal costs are being incurred.

Also, additional work must be added to the scope of work for calibration of field instruments being installed by the contractor. Just before the bid opening for the project, work was moved from the contract for the control system provider, Westinghouse, to this project. Shop calibration of devices was included in the bid documents, but field calibration was not. Additional funding is needed to complete this work.

Additional contingency funding of \$350,000 is requested to fund the disposal of hazardous materials, perform field calibrations and cover potential future unknowns or changes to this project.

FISCAL IMPACT

This action will result in an expenditure of \$1,015,000. Funding will come from the CIP projects that funded the original construction contracts. Any further budget adjustments will be reflected in the proposed CIP budget for fiscal year 2002.

CONCLUSION

Additional contingency funding is requested to modify the scope of work for three existing construction contracts at the Point Loma Wastewater Treatment Plant. The work being added to these contracts can be most cost-effectively performed through these contracts and will better insure reliable treatment at the plant.

ALTERNATIVE

Do not approve the additional expenditure. This is not recommended because the work would be delayed and the City would incur additional costs. The additional costs would be associated with the delay impacts, the additional contracts required to perform the work, contractor claims and City administration.

Respectfully submitted,

F.D. Schlesinger
Metropolitan Wastewater Director

Approved: George Loveland
Senior Deputy City Manager

FDS/JAW/oc