



OPERATIONS COMMITTEE

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Agenda Report

File #: 2023-3358

Agenda Date: 12/14/2023

Agenda Item No: 17.

FROM: Robert Thompson, General Manager
Originator: Mike Dorman, Director of Engineering

SUBJECT:

DIGESTER GAS FACILITIES REPLACEMENT, PROJECT NO. J-124

GENERAL MANAGER'S RECOMMENDATION

RECOMMENDATION:

Approve a contingency increase of \$9,400,000 (79.86%) to the existing Professional Design Services Agreement (PDSA) with Brown and Caldwell for Digester Gas Facilities Replacement, Project No. J-124, for a total contract amount of \$11,770,000 and a new total contingency amount of \$10,577,000 (89.86%).

BACKGROUND

The digester treatment process at both Orange County Sanitation District's (OC San) plants produces a methane-rich digester gas that is compressed and used in the central generation (CenGen) facilities to produce electricity. Flares are utilized to burn the digester gas when CenGen is not operating, or the capacity is limited. The Plant No. 1 facilities were built in 1992 and the Plant No. 2 facilities were built in 1990.

The original scope for this project was to replace the gas compressors and flares at both plants, rehabilitate the existing gas compressor building at Plant No. 1, and construct a new gas compressor building at Plant No. 2.

As this project neared design completion, the construction cost estimate increased significantly. At that time, OC San also created a Heavy Mechanics Group that has become much more proficient at overhauling complex industrial machines like the gas compressors and have completed the overhaul of the existing gas compressors at both plants to maintain proper operation, changing the need to replace them. The project team performed a feasibility study and life cycle costs analysis to determine if replacement or rehabilitation (reuse of the existing gas compressors and replacement of remaining equipment that is at the end of its useful life) would be the most cost effective. The evaluation determined that rehabilitation had a substantially lower construction cost and an overall lower life cycle cost. To proceed with the rehabilitation option and lower the estimated lifecycle cost, additional design effort is needed.

RELEVANT STANDARDS

- Ensure the public's money is wisely spent
- Sound engineering and accounting practices, complying with local, state, and federal laws

PROBLEM

The flares and support equipment associated with the digester gas compressors are near the end of their useful lives. The current PDSA contingency is insufficient to complete the design to rehabilitate the facility and reuse the existing gas compressors.

PROPOSED SOLUTION

Approve a PDSA contract contingency increase for Digester Gas Facilities Replacement, Project No. J-124.

TIMING CONCERNS

Delaying the approval of increasing the PDSA contingency will further delay the project schedule, which could result in the failure of equipment that is at the end of its useful life.

RAMIFICATIONS OF NOT TAKING ACTION

Not increasing the PDSA contract contingency will prevent OC San from modifying the design to rehabilitate the existing gas compressor facilities and replace the flares. Gas compressor support equipment and flares will continue aging with reduced reliability.

PRIOR COMMITTEE/BOARD ACTIONS

November 2017 - Approved a Professional Design Services Agreement with Brown and Caldwell to provide engineering design services for the Digester Gas Facilities Replacement, Project No. J-124, for an amount not to exceed \$11,770,000; and approved a contingency of \$1,177,000.

ADDITIONAL INFORMATION

OC San issued a request for proposal to Brown and Caldwell for a potential amendment to their current PDSA on September 8, 2023. An initial proposal was received on November 1, 2023. Staff conducted negotiation meetings and a field walk with Brown and Caldwell to clarify the requirements of the scope of work, the assumptions used for the estimated level of effort, and the proposed approach to meet the goals and objectives of the project.

Staff has determined that the final negotiated fee of \$8,583,000 is fair and reasonable for the level of effort required for this project. Staff recommends a contingency increase of \$9,400,000 (79.86%) to the existing PDSA with Brown and Caldwell, which includes an additional \$817,000 (9.13%) contingency for future unknowns that may arise during the completion of the detailed design.

CEQA

The project is exempt from CEQA under the Class 1 and 2 categorical exemptions set forth in California Code of Regulations sections 15301 and 15302. A Notice of Exemption was filed with the OC Clerk-Recorder on July 30, 2019.

FINANCIAL CONSIDERATIONS

This request complies with the authority levels of OC San's Purchasing Ordinance. This item has been budgeted (Budget Update, Fiscal Year 2023-2024, Appendix A, Page 8, Digester Gas Facilities Replacement, Project No. J-124) and the budget is sufficient for the recommended action.

ATTACHMENT

The following attachment(s) may be viewed on-line at the OC San website (www.ocsan.gov) with the complete agenda package:

- Presentation

JGD:tk