
File #: 2022-2461

Agenda Date: 12/7/2022

Agenda Item No: 2.

FROM: James D. Herberg, General Manager
Originator: Kathy Millea, Director of Engineering

SUBJECT:

VFD REPLACEMENTS AT PLANT NO. 1, PROJECT NO. FR1-0011

GENERAL MANAGER'S RECOMMENDATION

RECOMMENDATION: Recommend to the Board of Directors to:

- A. Receive and file Bid Tabulation and Recommendation for VFD Replacements at Plant No. 1, Project No. FR1-0011;
- B. Award a Construction Contract to ACS Engineering, Inc. for VFD Replacements at Plant No. 1, Project No. FR1-0011, for a total amount not to exceed \$1,214,888; and
- C. Approve a contingency of \$121,488 (10%).

BACKGROUND

The City Water Pump Station, Trickling Filter Pump Station, and Return Activated Sludge (RAS) Pump Station are essential pump stations at Orange County Sanitation District (OC San) Plant No. 1. The City Water Pump Station provides potable water to Plant No. 1, the Trickling Filter Pump Station pumps primary effluent to the top of the Trickling Filters to be treated, and the RAS Pump Station returns process flow to the beginning of the Activated Sludge-1 Facility. The pumps at these stations each have a variable frequency drive (VFD) to allow the pump speeds to fluctuate depending on flow conditions. There are two existing VFDs at the City Water Pump Station, three existing VFDs at the Trickling Filter Pump Station, and one existing VFD at the RAS Pump Station.

RELEVANT STANDARDS

- Comply with California Public Contract Code Section 20103.8, award construction contract to lowest responsive, responsible bidder
- Maintain a proactive asset management program
- 24/7/365 treatment plant reliability

PROBLEM

The existing VFDs are at least 14 years old and are at the end of their useful service life. Replacement parts and manufacturer support services are no longer available, so they can no longer

be worked on, and if they fail, OC San staff will not be able to repair them. When a VFD on a pump fails, the pump cannot be operated and the pump station capacity is reduced, which could reduce the amount of flows OC San can treat at Plant No. 1.

PROPOSED SOLUTION

Award a construction contract for VFD Replacements at Plant No. 1, Project No. FR1-0011, to replace six VFDs to maintain operation and reliability of the three pump stations.

TIMING CONCERNS

Delaying replacement of these VFDs increases the risk that the VFDs may fail, causing the pump stations to not have adequate capacity.

RAMIFICATIONS OF NOT TAKING ACTION

Not replacing these VFDs increases the risk of failure. If failure occurs, an emergency bypass pumping system might be needed to ensure OC San can treat the flows entering the plants.

PRIOR COMMITTEE/BOARD ACTIONS

N/A

ADDITIONAL INFORMATION

OC San advertised for bids on August 18, 2022 and four sealed bids were received on October 4, 2022. A summary of the bid opening follows:

Engineer's Estimate	\$ 1,455,000
<u>Bidder</u>	<u>Amount of Bid</u>
ACS Engineering, Inc.	\$ 1,214,888
Southern Contracting Company	\$ 1,597,000
LEED Electric, Inc.	\$ 1,987,954
Shimmick Construction Company, Inc.	\$ 2,096,000

The bids were evaluated in accordance with OC San's policies and procedures. A notice was sent to all bidders on October 20, 2022, informing them of the intent of OC San to recommend award of a Construction Contract to ACS Engineering, Inc. Staff recommends awarding a Construction Contract to the lowest responsive and responsible bidder, ACS Engineering, Inc., for a total amount not to exceed \$1,214,888.

CEQA

The project is exempt from CEQA under the Class 1 categorical exemptions set forth in California Code of Regulations Section 15301. A Notice of Exemption will be filed with the OC Clerk-Recorder after OC San Board of Directors approval of the Construction Contract.

FINANCIAL CONSIDERATIONS

This request complies with the authority levels of OC San's Purchasing Ordinance. This recommendation will be funded under the Repairs and Maintenance line item for Division 870, Plant No. 1 Maintenance (Adopted Budget, Fiscal Years FY 2022-2023 and 2023-2024, Section 6, Page 92), and the available funding is sufficient for this action.

ATTACHMENT

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

- Construction Contract

RL:tk:sa