

Orange County Sanitation District



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Agenda Report Details (With Text)

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Title: PLANT NO. 2 TRICKLING FILTER SOLIDS RETURN SECONDARY SLUDGE PUMP REPAIR
Sponsors: Rob Thompson
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| Date | Ver. | Action By | Action | Result |
|-----------|------|--------------------|--------|--------|
| 4/22/2020 | 1 | BOARD OF DIRECTORS | | |

FROM: James D. Herberg, General Manager
Originator: Rob Thompson, Assistant General Manager

SUBJECT:

PLANT NO. 2 TRICKLING FILTER SOLIDS RETURN SECONDARY SLUDGE PUMP REPAIR

GENERAL MANAGER'S RECOMMENDATION

RECOMMENDATION:

- A. Approve a sole source purchase order contract for the repair of ten (10) Return Secondary Sludge pumps at the Plant No. 2 Trickling Filter Clarifiers, for a total amount not to exceed \$194,234, plus applicable shipping and taxes, to Vaughan's Industrial Repair Co., Inc.; and
- B. Approve a contingency of \$19,424 (10%).

BACKGROUND

The trickling filter process is one of two secondary treatment processes at the Orange County Sanitation District's (Sanitation District) Plant No. 2 that remove suspended and dissolved organic material using microorganisms, enabling the Sanitation District to meet ocean discharge permit limits. The other secondary treatment process is pure oxygen activated sludge. The trickling filter process consists of six trickling filter clarifiers, each uses two return secondary sludge (RSS) pumps. The purpose of these pumps is to return the secondary sludge to the solids contact aeration basins to reduce the biochemical oxygen demand of the influent.

RELEVANT STANDARDS

- 24/7/365 treatment plant reliability

- Comply with environmental permit requirements
- Maintain a proactive asset management program

PROBLEM

The RSS pumps are experiencing lower shaft seal failures. Two of the twelve units have been removed, disassembled, diagnosed, and repaired. The other ten pumps are experiencing the same failure symptoms of reduced pumping efficiency which is expected to eventually lead to premature pump failure. It was determined that these pumps need to be rebuilt with higher-grade 660 bronze bushings in order to minimize future corrosion.

PROPOSED SOLUTION

Rebuild the remaining 10 RSS pumps, two pumps at a time, at the Plant No. 2 Trickling Filter Clarifier Pump Rooms through Vaughan's Industrial Repair Co., Inc. (VIRC). VIRC is the manufacturer's sole authorized service center for these types of Fairbanks Morse pumps.

TIMING CONCERNS

These ten pumps are experiencing reduced pumping efficiency.

RAMIFICATIONS OF NOT TAKING ACTION

Failure to repair trickling filter clarifiers RSS pumps would result in the reduction of secondary treatment capacity. Additional pump failures would severely handicap the ability for the trickling filter clarifiers to provide the required secondary sludge to the solids contact basins, with the possibility of not meeting ocean water quality requirements.

PRIOR COMMITTEE/BOARD ACTIONS

August 2019 - Approved the addition of Fairbanks Nijhuis (Fairbanks Morse) as an original equipment manufacturer sole source for pump repairs.

ADDITIONAL INFORMATION

A contingency of 10% is requested to cover additional costs for labor and materials should further damage be discovered once the RSS pumps have been removed and disassembled. The quote was based on the evaluation of two pumps. It is assumed that the same work would be required for the remaining pumps.

CEQA

The repair and replacement of the Trickling Filter RSS pumps is categorically exempt from CEQA under the Class 1 categorical exemptions set forth in California Code of Regulations Section 15301. Section 15301 (Class 1) exempts from CEQA "the operation, repair, maintenance, permitting, leasing, licensing, or minor alteration of existing public or private structures, facilities, mechanical equipment, or topographical features, involving negligible or no expansion of existing or former use," including "(b) Existing facilities of both investor and publicly-owned utilities used to provide electric power, natural gas, sewerage, or other public utility services".

FINANCIAL CONSIDERATIONS

This request complies with authority levels of the Sanitation District's Purchasing Ordinance. This recommendation would be funded under the Repairs and Maintenance line item for Division 880 (Fiscal Years FY 2018-19 and 2019-20 Budget, Section 6, Page 100), and the available funding is sufficient for this action.

| <u>Date of Approval</u> | <u>Contract Amount</u> | <u>Contingency</u> |
|-------------------------|------------------------|--------------------|
| 04/22/2020 | \$194,233.50 | \$19,423.35 |

ATTACHMENT

The following attachment(s) may be viewed on-line at the OCSD website (www.ocsd.com) with the complete agenda package:

N/A