



Agenda Report

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Originator: Riaz Moinuddin, Director of Operations & Maintenance

SUBJECT:

PLANT NO. 2 TRICKLING FILTER “B” ROTARY DISTRIBUTOR MAST REPLACEMENT

GENERAL MANAGER'S RECOMMENDATION

RECOMMENDATION: Recommend to the Board of Directors to:

- A. Approve a Sole Source Purchase Order Contract to Ovivo USA, LLC (Ovivo) for a direct replacement Center Mast assembly for the Plant No. 2 Trickling Filter B solids contact, Secondary Treatment, in an amount not to exceed \$507,272, plus applicable sales tax and shipping; and
- B. Approve a contingency of \$50,727 (10%).

BACKGROUND

The Orange County Sanitation District (OC San) Trickling Filters at Plant No. 2 consist of three 150-foot diameter rotating assemblies. This trickling filter process provides secondary treatment rated at 60 MGD average during dry weather and approximately 182 MGD during peak wet weather capacities. The trickling filters are engineered to remove the organic content in wastewater utilizing micro-organisms living on the filter media. Each trickling filter is equipped with a motor-operated rotary distributor assembly to uniformly distribute the primary treated flow over the media.

RELEVANT STANDARDS

- Commitment to safety & reducing risk in all operations
- Maintain a proactive asset management program
- Maintain a culture of improving efficiency to reduce the cost to provide the current service level or standard

PROBLEM

During normal operation, Trickling Filter B's 150-foot diameter spinning distributor arms tripped on over-torque. After further investigation, significant damage was found to the Trickling Filter B rotary distributor arm bearing and bearing surface. The failed bearing and upper bearing plate were replaced, and temporary repairs were made to the lower mast bearing surface. The lower mast bearing surface is part of the structure. A permanent solution is needed to maintain the required

secondary treatment capacity and process reliability to support the Plant No. 2 GWRS expansion project.

PROPOSED SOLUTION

Staff recommends a sole source purchase order contract to replace the Trickling Filter B Center Mast Assembly by the original equipment manufacturer (OEM), Ovivo. This multi-ton, spinning, stainless steel unit rests on a support mast bearing surface that must be perfectly level to uniformly distribute water over a 150-foot diameter.

TIMING CONCERNS

The Trickling Filters at Plant No. 2 are critical assets that support secondary treatment requirements. With the temporary repairs made to Trickling Filter B, there exists a higher risk of not being able to reliably provide required secondary treatment at Plant No. 2.

RAMIFICATIONS OF NOT TAKING ACTION

Failure to act increases the risk to provide required secondary treatment at the Plant No. 2 trickling filter process and to provide water to the GWRS final expansion.

PRIOR COMMITTEE/BOARD ACTIONS

June 2022 - Board approved a Sole Source Purchase Order Contract to Ovivo USA, LLC (Ovivo) for a direct replacement Center Mast assembly for the Plant No. 2 Trickling Filter A solids contact, Secondary Treatment, in an amount not to exceed \$461,500, plus applicable sales tax and shipping; and approved a contingency of \$46,150 (10%).

ADDITIONAL INFORMATION

Trickling Filter A is currently out of service awaiting installation of the same Center Mast parts. The structural failure of Trickling Filter A had different causes not involving bearing failure as in Trickling Filter B. Trickling Filter C's bearings were inspected and replaced and the mast structure inspected to reduce its operational risk. In addition, it is important to consider that this trickling filter process will provide all the secondary treatment for the reclaimable water at Plant No. 2 to feed the GWRS when the final expansion project comes on-line in early 2023.

Ovivo is the Board of Directors approved OEM for Plant No. 2 Trickling Filter parts and repairs.

A 10% contingency is requested due to potential delays due to additional unforeseen repairs that may become known. The center mast is covered by the hard filter media so that only the top portion is visible. Additional repairs may be needed once the mast assembly has been removed and further assessments made, which cannot be performed until the mast assembly and filter media is removed.

CEQA

N/A

FINANCIAL CONSIDERATIONS

This request complies with authority levels of OC San's Purchasing Ordinance. This item has been budgeted in the FY's 2022-23 & 23-24 Budget, Plant No. 2 Maintenance 880, Section 6 - Page 92 and the budget is sufficient for the recommended action.

<u>Date of Approval</u>	<u>Contract Amount</u>	<u>Contingency</u>
07/27/2022	\$507,272	\$50,727 (10%)

ATTACHMENT

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

- Presentation

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