



## Agenda Report

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**FROM:** James D. Herberg, General Manager  
Originator: Riaz Moinuddin, Director of Operations & Maintenance

**SUBJECT:**

**PLANT NO. 2 OXYGEN REACTOR PURGE VALVE AND ACTUATOR ASSEMBLIES REPLACEMENT**

### **GENERAL MANAGER'S RECOMMENDATION**

#### RECOMMENDATION:

- A. Approve a Sole Source Purchase Order to Integrated Process Technologies for the purchase of four DeZurik 20" 316 SST Oxygen Cleaned Purge Air Control Valves and Limitorque Actuator assemblies for the Plant No. 2 Activated Sludge Plant in an amount not to exceed \$200,597; and
- B. Approve a contingency of \$20,059 (10%).

### **BACKGROUND**

Orange County Sanitation District (OC San) Plant No. 2 operates an Activated Sludge Plant that uses high-purity oxygen. High-purity oxygen is introduced to the sealed vapor space above the biological reactors and mixed into the water and biomass. Combustible gases are created in the biological reactor and can accumulate in the vapor space above the mixed liquid. Safety purge systems are used to prevent an unsafe mixture of gases. The purge systems consist of combustible gas analyzers, valves, and purge fans. When the analyzers detect a high level of combustible gases, the oxygen feed system is stopped, the purge valves open, and the fans are started to purge the vapor space above the biological reactor with air. There are purge air systems to serve both the East and West biological reactors. Each purge air system includes two purge fans and two purge air control valves.

### **RELEVANT STANDARDS**

- 24/7/365 treatment plant reliability
- 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**

The Plant No. 2 Activated Sludge Plant utilizes four Dezurik/Limatorque purge valve and actuator sets. The purge valves and actuators were installed in 1983, are obsolete, deteriorating, and beyond their useful life.

## **PROPOSED SOLUTION**

Staff recommends a sole source purchase of four direct replacement Limatorque LT120 MOV actuators and four 20" stainless steel oxygen clean DeZurik high performance butterfly valves from the original equipment manufacturer (OEM) to ensure that the existing purge air system functions in accordance with original design function. The actuator and valve assembly parameters will be factory set by Integrated Process Technologies prior to shipment.

## **TIMING CONCERNS**

The Activated Sludge Plant at Plant No. 2 is a critical facility and without the needed replacements of the purge valves and actuators, the Activated Sludge Plant may be unavailable for an extended period due to the long lead time to procure these components.

## **RAMIFICATIONS OF NOT TAKING ACTION**

Failure to replace the obsolete valve and actuator assemblies increases the safety risk of the purge air system failing to perform its intended function of purging combustible gases in the Activated Sludge Plant reactors and impacting the operation of Plant No. 2.

## **PRIOR COMMITTEE/BOARD ACTIONS**

N/A

## **ADDITIONAL INFORMATION**

Integrated Process Technologies is the OEM for Limatorque and the only authorized distributor within OC San's geographical region that can configure the valve and actuator sets. A 10% contingency is requested in the event of pricing changes due to tariffs, delays in placing the order, or other unforeseeable changes.

## **CEQA**

N/A

## **FINANCIAL CONSIDERATIONS**

This request complies with authority levels of OC San's Purchasing Ordinance. This item has been budgeted in the Adopted Budget Update Fiscal Year 2021-2022, Plant No. 2 Maintenance, page 44 and the budget is sufficient for the recommended action.

<u>Date of Approval</u>	<u>Contract Amount</u>	<u>Contingency</u>
05/25/2022	\$200,597	\$20,059 (10%)

**ATTACHMENT**

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

N/A