

## Agenda Report

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

**SUBJECT:**

**PROTEIN MATRIX DEMONSTRATION STUDY AT PLANT NO. 1, PROJECT NO. RE18-02**

**GENERAL MANAGER'S RECOMMENDATION**

RECOMMENDATION: Recommend to the Board of Directors to:

- A. Ratify the prior Sole Source Purchases to Protein Matrix LLC for the procurement of Protein Matrix Compound PM-4 for Protein Matrix Demonstration Study at Plant No. 1, Project No. RE 18-02, for a total amount of \$148,500; and
- B. Approve a Sole Source Purchase Order to Protein Matrix LLC for the procurement of Protein Matrix Compound PM-4 for Protein Matrix Demonstration Study at Plant No. 1, Project No. RE18-02, for a total amount not to exceed \$150,000.

**BACKGROUND**

The Board-approved budget for the capital improvement program includes a master budget for the Research Program, Project No. M-RESEARCH. Research projects are used to demonstrate technologies, equipment, configurations, and control strategies to improve operational efficiency, reduce costs, improve safety, or fill important information gaps. The results support operations and maintenance and provide information needed for future planning and design work.

Two deliveries of the product have been sole source purchased to date as reported to the Board of Directors in November 2019, Agenda Item No. 15, General Manager Approved Purchases. In July 2019, \$74,250 in Protein Matrix Compound PM-4 was purchased. In September 2019, an additional \$74,250 of the same chemical was purchased to continue testing. Since the two prior purchases total more than the General Manager's purchasing authority of \$100,000, staff is seeking Board ratification of \$148,500 in addition to the proposed \$150,000 purchase.

**RELEVANT STANDARDS**

- 24/7/365 treatment plant reliability
- Comply with OCSD Policy - Purchasing Ordinance No. OCSD-52, Section 1.07.A Sole Source Procurement

## **PROBLEM**

Fats, oils, and grease present in raw wastewater accumulate in flow channels, flow distribution structures, and primary clarifiers requiring significant operational and maintenance efforts for removal and significant wear and tear on the equipment.

## **PROPOSED SOLUTION**

Protein Matrix Demonstration Study at Plant No. 1, Project No. RE18-02, was created to evaluate whether a particular proprietary product has the potential to reduce the accumulation of fats, oil, and grease. This product was chosen for testing because it is the only identified product on the market that claims to modify fats, oils, and grease so that they cannot reform. This product, manufactured by Protein Matrix, LLC, can be easily fed into the Headworks facilities using existing unused storage or feed equipment.

The testing has demonstrated a notable reduction of accumulation in the primary clarifiers where most of the problems have been experienced. Staff proposes purchasing enough additional product to identify the optimum dosage. When the optimum dosage is determined, a conclusion can be made about whether the product is a cost-effective solution.

## **TIMING CONCERNS**

Delaying this work would extend the time to determine if this is a viable solution for the accumulation of fats, oils, and grease in plant facilities.

## **RAMIFICATIONS OF NOT TAKING ACTION**

Not approving this request will prevent the research study from optimizing the dosage of Protein Matrix to determine if this is a viable solution. Since the cost of this material, optimizing the dosage is important to prepare a representative life cycle analysis. Furthermore, implementing the permanent addition of this chemical will require an accurate estimate of dosing for determining operational costs and budgets.

## **CEQA**

N/A

## **FINANCIAL CONSIDERATIONS**

This request complies with authority levels of the Sanitation District's Purchasing Ordinance. This item has been budgeted (Fiscal Year 2019-20 Budget Update, Appendix A, Page A-9, Line Item: Research Program, M-RESEARCH), and the budget is sufficient for the recommended action.

## **ATTACHMENT**

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

N/A