



OPERATIONS COMMITTEE

Headquarters
18480 Bandilier Circle
Fountain Valley, CA 92708
(714) 593-7433

Agenda Report

File #: 2024-3955

Agenda Date: 11/20/2024

Agenda Item No: 13.

FROM: Robert Thompson, General Manager
Originator: Mike Dorman, Director of Engineering

SUBJECT:

DIGESTER REPLACEMENT AT PLANT NO. 2, PROJECT NO. P2-128

GENERAL MANAGER'S RECOMMENDATION

RECOMMENDATION:

Approve a Contingency increase of \$6,288,000 (16%) to the existing Professional Design Services Agreement with Brown and Caldwell for the Digester Replacement at Plant No. 2, Project No. P2-128, for a new total contingency amount of \$10,218,000 (26%).

BACKGROUND

The Orange County Sanitation District (OC San) is replacing some of the digesters at Plant No. 2 due to condition and seismic vulnerability.

In 2017, OC San completed a comprehensive Biosolids Master Plan (BMP) that recommended upgrading the existing digester complex by adding Temperature Phased Anaerobic Digestion (TPAD) facilities including new thermophilic digesters, batch tanks, and replacing some existing digesters. The TPAD facilities would be capable of creating Class A biosolids, rather than the current Class B biosolids which could provide greater reuse opportunities.

In 2020, a Professional Design Services Agreement (PDSA) was awarded to Brown and Caldwell to complete the design of the TPAD digesters and associated facilities. As the project design progressed, the construction cost increased significantly, and OC San staff began evaluating cost saving options. Staff and the project team determined that the biosolids market has changed little since the BMP and the need to produce a higher grade biosolid was not needed at this time. It also makes sense to wait to see the outcome of the supercritical water oxidation research project.

In early 2024, the project team decided the best approach was to construct the TPAD facilities in two phases: Phase 1 would construct new mesophilic digesters, and if needed, Phase 2 could convert the digesters to thermophilic operation by constructing necessary support facilities. This allows staff to continue to monitor the biosolids market, monitor legislation on chemicals of emerging concern, and research and track future technology concerning biosolids reuse. In March 2024, staff informed the OC San Board of this new project direction.

RELEVANT STANDARDS

- Use all practical and effective means for resource recovery
- Ensure the public's money is wisely spent
- Sound engineering and accounting practices, complying with local, state, and federal laws

PROBLEM

The existing PDSA needs to be amended to design Phase 1 for mesophilic digestion with provisions for Phase 2 (thermophilic digestion and support facilities). To complete the revised scope, additional design effort is needed. The current PDSA contingency amount is insufficient to complete the redesign.

PROPOSED SOLUTION

Approve a contingency increase to redesign the project.

TIMING CONCERNS

The existing digesters are undergoing significant rehabilitation to last until the new digesters are online. Delaying the approval to increase the PDSA contingency will further delay the P2-128 schedule, which could push the availability of the new digesters past the useful life of the existing digesters, requiring additional maintenance or rehabilitation of the existing digesters.

RAMIFICATIONS OF NOT TAKING ACTION

The project will not be able to proceed, and a future replacement project will be required since some of the digesters are nearing the end of their useful life. Seismic vulnerability in the existing digesters will remain.

PRIOR COMMITTEE/BOARD ACTIONS

July 2020 - Approved a Professional Design Services Agreement with Brown and Caldwell to provide engineering services for Temperature Phased Anaerobic Digestion (TPAD) Digester Facility at Plant No. 2, Project No. P2-128, for an amount not to exceed \$39,300,000; and approved a contingency of \$3,930,000 (10%).

ADDITIONAL INFORMATION

N/A

CEQA

The project is included in the Addendum to the Final Program Environmental Impact Report for Biosolids Master Plan, State Clearinghouse No. 2017071026.

FINANCIAL CONSIDERATIONS

This request complies with the authority levels of OC San's Purchasing Ordinance. This item has been budgeted (Budget FY 2024-25 and 2025-26, Section 8, Page 70, Digester Replacement at Plant No. 2, Project P2-128) and the budget is sufficient for the recommended action.

<u>Date of Approval</u>	<u>Contract Amount</u>	<u>Contingency</u>
07/22/2020	\$ 39,300,000	\$ 3,930,000 (10%)
11/20/2024		\$ 6,288,000 (16%)

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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