

Department of Public Works

Bureau of Engineering
Report No. 2

January 27, 2025
CD No. 11

BPW-2025-0055
ADOPTED BY THE BOARD
PUBLIC WORKS OF THE CITY
of Los Angeles California

JAN 27 2025


Executive Officer
Board of Public Works

CAPITAL IMPROVEMENT PROJECT 2493 HYPERION WATER RECLAMATION PLANT DIGESTER GAS MIXING SYSTEM DEMONSTRATION - AUTHORIZATION TO INCREASE PROJECT BUDGET FOR CONSTRUCTION SERVICES CONTRACT (WORK ORDER NO. SZH12058)

RECOMMENDING THE BOARD OF PUBLIC WORKS (BOARD):

1. AUTHORIZE \$1,485,000 in additional budget and APPROVE a revised budget of \$3,245,000 for the Capital Improvement Project (CIP) 2493 Hyperion Water Reclamation Plant (HWRP) Digester Gas Mixing System Demonstration (Project).
2. AUTHORIZE the City Engineer to use the Construction Services Contract (CiSCo) and issue task work orders to the contractor for an amount not-to-exceed \$3,245,000 for the Project.

TRANSMITTAL

Copy of the Bureau of Engineering and Bureau of Sanitation Joint Report No. 1, dated January 5, 2022.

DISCUSSION

Background

The LA Sanitation and Environment (LASAN) operates and maintains 20 digesters at the HWRP. See existing egg-shaped digesters in Figure No. 1 below.



Figure No. 1 - Existing Digesters at the HWRP

Each digester is equipped with an internal draft tube mixer and motor, located on top of the gas dome. Because mixers have reached the end of their service life, the HWRP often has three to four digesters out of service caused by mixer failures. This loss of mixing capacity results in the digesters being removed from service for approximately 45 calendar days, for drawdown, cleaning, mixer replacement/repair and return to service.

After considering several options as an addition or replacement, the Landia GasMix System was the most cost-effective option, and is a straightforward retrofit. The Landia GasMix System has no moving parts inside the digester, so it is very easy to maintain.

Proposed Project

The purpose of this project is to demonstrate this innovative approach to mixing biosolids in the digesters by adding an automated Landia GasMix System on 6D1 primary digester to improve sludge mixing with concentration of up to 8 percent of total solids. A Landia GasMix System schematic and a reference installation is shown in Figure No. 2 below.

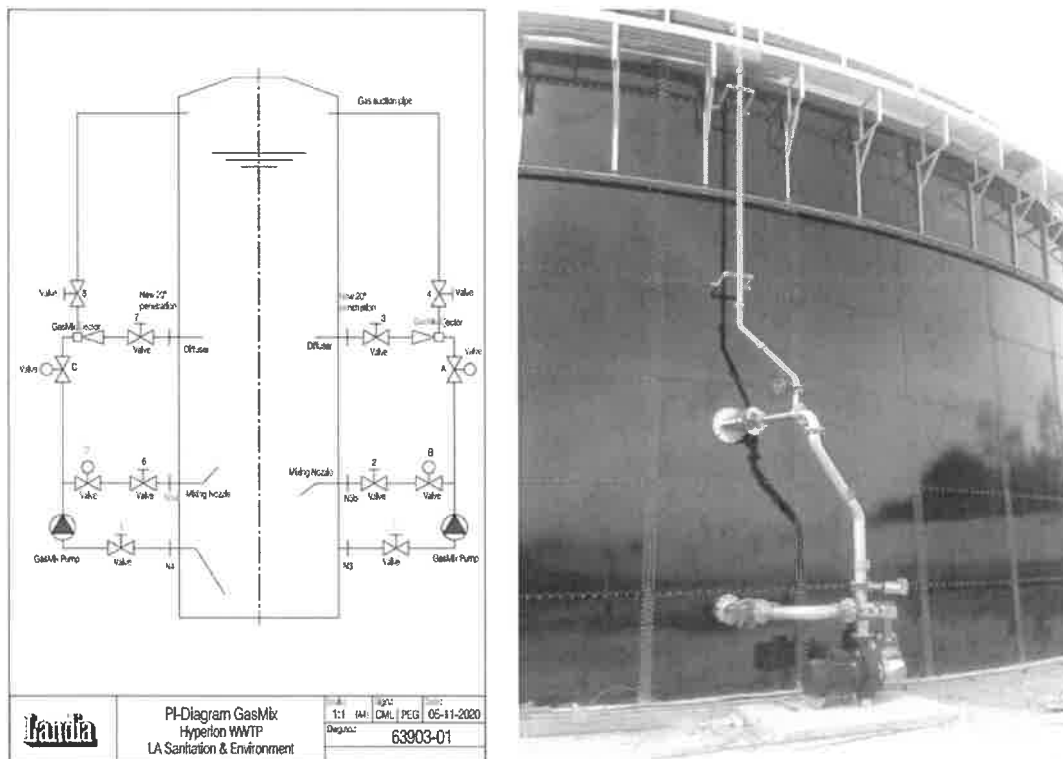


Figure No. 2: Landia GasMix System Schematic and Reference Installation

This project, if successful, will lead to implementation of Landia GasMix System on all digesters under CIP 2485 Digester Feed Distribution and Pumping System Upgrade.

CiSCo Justification

Using the CiSCo contract is recommended for this complicated project due to the unique operational challenges and technical requirements involved. The project scope of work requires the use of specialty subcontractors and the flexibility to schedule the work and make adjustments to the work schedule as allowed by the operational needs of the HWRP. This approach ensures a more efficient and effective completion of complex work compared to the regular bid and award project delivery method.

Justification for Budget Increase

On January 5, 2022, the Board authorized the use of the CiSCo contract and issuance of task work orders for an amount not-to-exceed \$1,760,000 for the Project (Transmittal).

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Since the Board approval, the construction cost for the project has increased from \$1,760,000 to \$3,245,000. The cost increase is due to the following reasons:

- a) Additional piping and support to provide safe access for improvements.
- b) Site impact and construction delays due to the impacts of July 2021 and February 2024 flooding events.
- c) Corrosion abatement of digester that was discovered during construction (Figure No. 3).
- d) The integration with Distributed Control System (DCS) needs to be completed by Honeywell programmers due to complexity of the existing plant DCS controls.



Figure No. 3: Corroded Digester Plate Discovered During Construction

Recommendation

It is recommended that the Board authorize the City Engineer to use the CiSCo and issue task work orders to the CiSCo contractor for an amount not-to-exceed \$3,245,000, including contingency.

Program Review Committee (PRC) Approval

The project budget was approved by the PRC on August 14, 2024, in the amount of \$3,245,000, including contingency for the Project.

STATUS OF FUNDING

There is no impact to the General Fund. The total funding for this project is not-to-exceed \$3,245,000. Funding in the amount of \$117,810 is available in Fund No. 761, the Sewer Capital Fund, Department No. 50, Appropriation Unit No. 50ADBE, HWRP Gas Mixing System Demonstration. The remaining funding will be budgeted within the Sewer Construction and Maintenance Fund.

Future funds and appropriations are not yet identified, and existing appropriations may change based on available cash balances. Therefore, funds and appropriations will be determined by the Director of LASAN.

Funding as of the date of this board report has been verified and approved by the Director of the Office of Accounting, subject to terms and conditions and cash availability described above.

The City of Los Angeles' (City)'s liability under this contract shall only be to the extent of the present City appropriation to fund the contract. However, if the City shall appropriate funds for any succeeding years, the City's liability shall be extended to the extent of such appropriation, subject to the terms and conditions of the contract.

(EBW VCA AM)

Report reviewed by:

BOE (ADM) and BOS (FMD)

Report prepared by:

Environmental Engineering Division

Ethan B. Wong, PE, CCM, ENV SP
Division Engineer
Phone No. (310) 648-6120

Respectfully submitted,



Ted Allen, PE
City Engineer

Statement as to funds approved by:



Miguel De La Peña, Director
Office of Accounting
Fund Ref. 761/50ADBE/\$117,810
Date: 12/13/2024

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Questions regarding this report
may be referred to:

Nadir Shah, PE, ENV SP
Sr. Civil Engineer
Phone No. (310) 648-6197
Email: nadir.shah@lacity.org
and/or

Slavica D. Hammond, PhD, PE, BCEE, ENV SP
Phone No. (310) 648-6204
Email: slavica.hammond@lacity.org