

Department of Public Works

Bureau of Engineering
Bureau of Sanitation
Joint Report No. 2

December 4, 2024
CD No. 6

SOLE SOURCE PROCUREMENT OF PROCESS EQUIPMENT FOR THE CAPITAL IMPROVEMENT PROJECT 6122 DONALD C. TILLMAN WATER RECLAMATION PLANT PRIMARY TREATMENT UPGRADES (WORK ORDER No. SZD11273)

RECOMMENDING THE BOARD OF PUBLIC WORKS:

1. AUTHORIZE the Director and General Manager of LA Sanitation and Environment (LASAN) to request the City Engineer to sole source the procurement of the following equipment for an amount not-to-exceed \$3,949,587.
 - Brentwood Polychem sludge collection systems for an amount not-to-exceed \$3,902,038.
 - Siemens Milltronics ultrasonic level controllers for an amount not-to-exceed \$47,549.
2. AUTHORIZE the City Engineer to negotiate a price agreement with Brentwood Polychem and Siemens Milltronics for the above-referenced sludge collection systems and ultrasonic level controllers which will be installed by the general contractor awarded the construction project.

Previous Installations

There are currently over 61 Brentwood Polychem sludge collection systems in service at the Donald C. Tillman Water Reclamation Plant (DCTWRP).

There are 56, 17, and 18 Siemens Milltronics ultrasonic level controllers in service at the DCTWRP, the Los Angeles-Glendale Water Reclamation Plant (LAGWRP) and the Hyperion Water Reclamation Plant (HWRP), respectively.

DISCUSSION

Background

The DCTWRP, owned and operated by LASAN, has been operational since 1985. The plant was built in two phases. Phase 1, featuring Primary Tank Nos. 1-9, was designed to handle an average dry weather flow of 40 million gallons per day (MGD). In 1991, Phase 2 added Primary Tank Nos. 10-18 and Equalization Tank Nos. 19-27, effectively doubling the plant's treatment capacity to 80 MGD.

The Capital Improvement Project 6122 DCTWRP Primary Treatment Upgrades (Project) aims to enhance the primary treatment process equipment at the plant. Figure No. 1 shows the locations of Channel No. 1, Primary Tanks, and Equalization Tanks. Wastewater passes through the plant's headworks bar screens and enters Channel No. 1, which has an aeration system to suspend solids in the water. The aeration system, consisting of an air header and air spargers, prevents grit buildup and conveys sludge to the primary tanks for removal. The primary tanks contain the chain and flight sludge

collection equipment that removes the settled sludge from the bottom of the primary tanks for further treatment. This equipment also skims and pushes the floatable material towards helical skimmers that collect and remove the material for further treatment. The Equalization Tanks help manage sewer and wet weather flows to prevent sanitary sewer overflows.



Figure No. 1: Aerial View of Channel No. 1, Phase 1 and Phase 2 Primary Tanks, and Equalization Tanks

The sludge collection equipment is essential for the plant's primary treatment process. It has been in operation for over 35 years, and has exceeded its useful life. Brentwood Polychem sludge collection system, shown in Figure No. 2, will replace the existing system.

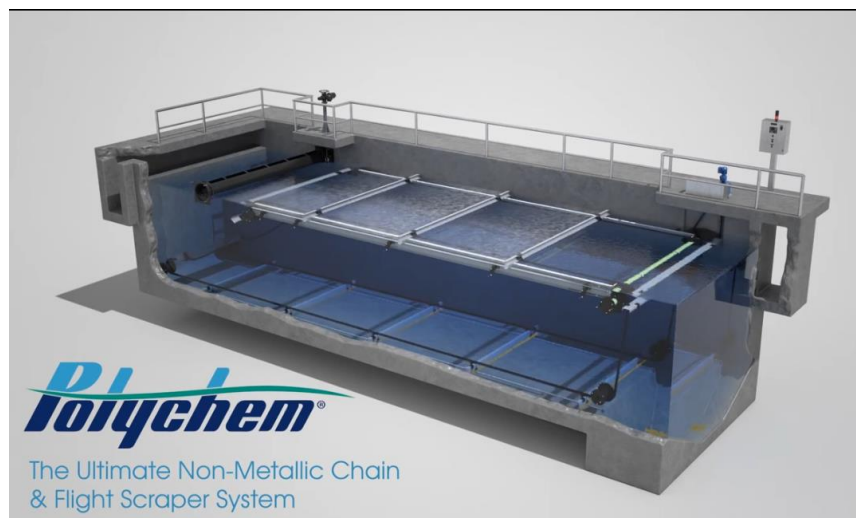


Figure No. 2: 3D Rendering of Brentwood Polychem Sludge Collection System

The Siemens Milltronics ultrasonic level controller, shown in Figure No. 3 below, is used to continuously measure the level and volume of influent flow at the primary tanks. The instrument is critical for plant operations because it monitors the performance of the

primary sludge collection equipment, as well as the upstream process, to prevent overloading the treatment train and overflows.



Figure No. 3: Siemens Milltronics Ultrasonic Level Controller

Sole Source Justification

The following is a summary and justification of the proposed sole sourced equipment for the Project.

Brentwood Polychem Sludge Collection Systems: The LASAN has standardized its operations and maintenance program using the Brentwood Polychem sludge collection Systems throughout the DCTWRP. Continuing to use the same sludge collection equipment manufacturer will ensure consistent repairs, maintenance, spare parts procurement and storage, and operator training. The Brentwood Polychem sludge collection system is non-metallic, which consists of light-weight equipment that is easier to replace, remove, and examine when needed. The unique design of the Brentwood Polychem sludge collection system allows for ease of adjustment and inspection of the chain links. Their reinforced thermoplastic polyester resin chain is much more resistant to high concentrations of H₂S than traditional acetal chains provided by other manufacturers.

Siemens Milltronics Ultrasonic Level Controllers: The DCTWRP staff have used these controllers extensively and the standardization of their usage will ensure efficient operation and maintenance. Similarly, staff at the other plants, the LAGWRP and the HWRP, have also opted for Siemens controllers, which is mutually beneficial for

collaboration on spare parts and assistance in troubleshooting. Additionally, the HWRP have begun to implement the Siemens Milltronics LT500 as their latest go-to Siemens level controller. The DCTWRP has also opted for this latest model, with the same ease of operation as the previous editions.

The sole sourced equipment will be purchased from the vendors shown in Table 1 below:

Table 1: Proposed Sole Sourced Process Equipment					
	Description	No. of Units	Vendor	Total Estimated Cost	Justification
1	Brentwood Polychem, sludge collection systems	18	Brentwood Polychem	\$3,902,038	1. Equipment is sole sourced to match existing equipment. 2. Proven track record, current technology, reduced Operations and Maintenance, spare parts, and training costs.
2	Siemens Milltronics ultrasonic level controllers	18	Siemens Milltronics	\$ 47,549	
Total				\$3,949,587	

City Attorney Review

The City Attorney's Office has reviewed this matter and concurs that it is reasonable and justifiable to award this contract on a sole source basis.

Program Review Committee (PRC)

The PRC approved a total construction budget of \$40,800,000, including contingency, for this project on January 10, 2024. The budget includes costs for the Brentwood Polychem sludge collection system and Siemens Milltronics ultrasonic level controllers.

STATUS OF FUNDING

There is no impact to the General Fund. The total funding for this sole source is not to exceed \$3,949,587. No funding is required at this time. Specific funding information will be provided at the time of approval of the contract award. Funding sources may include, but are not limited to the Fund No. 761, Sewer Capital 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.

The City of Los Angeles' (City)'s liability under this contract shall only be to the extent of

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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 RMK AM)

Report reviewed by:

BOE (ADM) and BOS
(DCTWRP, FMD, and RL)

Report prepared for:

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Respectfully submitted,

A handwritten signature in blue ink, appearing to read "Ted Allen". Above the signature is a faint red stamp that says "ENGINEERING" and "Electronically signed by Ted Allen".

Ted Allen, PE
City Engineer
Bureau of Engineering

A handwritten signature in black ink, appearing to read "Barbara Romero".

Barbara Romero
Director and General Manager
Bureau of Sanitation