

**COMMISSION FILE NO:** 24-103-7 **DATE INTRODUCED:** July 8, 2024

**INTRODUCED BY:** Executive Director (Signature on File in the Office of the Commission)

**REFERRED BY COMMISSION CHAIRPERSON TO:** Operations Committee

**RELATING TO:** Change Order Request, Contract S04038C03, Digesters 4 and 12 Cleaning at South Shore Water Reclamation Facility, and Restore the Executive Director's Original Delegated Authority

**SUMMARY:**

The Commission is requested to authorize the Executive Director to execute a change order to Contract S04038C03, Digesters 4 and 12 Cleaning at South Shore Water Reclamation Facility (SSWRF), with Lee Mechanical, Inc., (Lee), in an amount not to exceed \$124,260 and to restore the Executive Director's original delegated authority.

The wastewater treatment process produces primary sludge at both the Jones Island Water Reclamation Facility and SSWRF. Primary sludge from both water reclamation facilities is pumped to the anaerobic digesters at SSWRF. There are 12 total digesters: six active and six used for storage. The six active digesters reduce the biosolids mass, produce a stable biosolid that is readily dewatered, and generate biogas. The biogas is used to generate electricity at SSWRF. The six storage digesters are used for sludge storage when the sludge volume cannot be contained in the active digesters.

Grit, rags, and other nondigestible material build up over time in the digesters as these materials are not broken down in the digestion process. As the material builds up, the digesters' effective volume and performance decrease gradually. Since storage Digester 4 was last cleaned, it has lost nearly half its effective storage capacity. Active Digester 12 has shown reduced gas production and destruction of volatile solids. The only way to restore digester storage and performance capacity is to remove nondigestible material through digester cleaning.

**ATTACHMENTS:** **BACKGROUND** ☒ **KEY ISSUES** ☐ **RESOLUTION** ☒  
**FISCAL NOTE** ☒ **S/W/MBE** ☐ **OTHER** ☐ \_\_\_\_\_

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**COMMITTEE ACTION:** \_\_\_\_\_ **DATE:** \_\_\_\_\_

**COMMISSION ACTION:** \_\_\_\_\_ **DATE:** \_\_\_\_\_

## **SUMMARY (Cont'd)**

### **Change Order Request, Contract S04038C03, Digesters 4 and 12 Cleaning at South Shore Water Reclamation Facility, and Restore the Executive Director's Original Delegated Authority**

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The cleaning process involves the use of equipment to pump, dewater, and dispose the accumulated nondigestible material. Before the contractor starts work, Veolia Water Milwaukee, LLC, uses SSWRF's existing digester pumps to remove as much sludge as possible from each digester. The plant pumps cannot completely empty the digesters due to a combination of the thickness of the sludge and the nondigestible material in the digesters. The contractor then removes the residual sludge using specialized pumps, dewateres it, and disposes it until each digester is empty. Disposal includes either landfilling the dewatered sludge or land applying it to farm fields.

While digesters are in service, there is no way to safely inspect or repair the piping and concrete inside. Each active and storage digester is constantly in service and taken out of service for cleaning approximately once every 10 years. Consequently, after a digester is cleaned, a thorough inspection of the interior should be conducted, so repairs can be identified and performed without the sludge and hazardous atmosphere present.

In April 2024, the District executed Contract S04038C03 with Lee to clean Digesters 4 and 12 in the amount of \$2,597,599. Under this contract, Lee is:

- Removing, dewatering, and landfilling residual sludge from Digester 12.
- Removing, dewatering, and land applying residual sludge from Digester 4.
- Cleaning each digester interior to facilitate manned entry and inspection.
- Inspecting each digester interior for defects in the piping and concrete structure.
- Repairing any piping or concrete defects on the inside of each digester.
- Installing a new flushing line that can convey treated plant effluent inside Digester 4 to facilitate removal of stratified sludge in the future.

For each digester, the contract included a line item for cubic yards of residual sludge to be removed, dewatered, and landfilled or land applied, with the estimated quantity of 8,000 cubic yards for Digester 12. The actual volume of residual sludge in Digester 12 is now estimated at 13,127 cubic yards.

To allow Lee to continue digester cleaning without delay while seeking authorization for this change order, the District has executed a change order under the Executive Director's change order authority in an amount not to exceed \$259,754 (representing 3,468 cubic yards of residual sludge). This Commission requested change order in an amount not to exceed \$124,260 allows for the removal, dewatering, and landfilling of the remaining 1,659 cubic yards of residual sludge in Digester 12.

## BACKGROUND

Change Order Request, Contract S04038C03, Digesters 4 and 12 Cleaning at South Shore Water Reclamation Facility, and Restore the Executive Director's Original Delegated Authority

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For construction contracts greater than or equal to \$500,000, the Commission has delegated to the Executive Director the authority to make changes up to \$400,000 or 10 percent of the original contract price, whichever is less. For this contract, 10 percent of the original contract price (\$259,760) is the lesser. To date, the Executive Director has utilized \$259,754 of this authority through the first change order, leaving a balance of \$6. The request to restore the Executive Director's authority is in case any additional construction services are needed for this work.

## CONTRACT COST CHANGES

	AMOUNT	PERCENTAGE INCREASE OVER ORIGINAL CONTRACT	AUTHORIZED BY	SWMBE
Original Contract	\$2,597,599		Commission	17.0%
Previous Change Orders	\$259,754	10.0%	Executive Director	0%
Requested Change Order	\$124,260	4.8%	Request of Commission	0%
Total Change Orders	\$384,014	14.8%		0%
<b>TOTAL</b>	<b>\$2,981,613</b>			<b>14.8%</b>

## **RESOLUTION**

Change Order Request, Contract S04038C03, Digesters 4 and 12 Cleaning at South Shore Water Reclamation Facility, and Restore the Executive Director's Original Delegated Authority

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**RESOLVED**, by the Milwaukee Metropolitan Sewerage Commission, that the Executive Director is authorized to execute a change order to Contract S04038C03, Digesters 4 and 12 Cleaning at South Shore Water Reclamation Facility, with Lee Mechanical, Inc., in an amount not to exceed \$124,260, and that the Executive Director's original delegated authority is restored.