

COMMISSION FILE NO: 25-075-6 **DATE INTRODUCED:** June 9, 2025

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 P01005C06, Pipeline Cleaning Phase 2 – Interplant Sludge System Improvements, Restore the Executive Director’s Original Delegated Authority, and Approve Changes in Total Project Cost

SUMMARY:

The Commission is requested to authorize the Executive Director to execute a change order to Contract P01005C06, Pipeline Cleaning Phase 2 – Interplant Sludge (IPS) System Improvements, with Terra Engineering & Construction Corporation (Terra) in an amount not to exceed \$147,000 and to restore the Executive Director’s original delegated authority.

Further, the Commission is requested to increase the total project cost (TPC) for Project P01005, Interplant Pipeline Improvements – Phase II, by \$660,000 for an amended TPC of \$32,825,000 and to make a corresponding change to the TPC of Project M99001, Allowance for Cost and Schedule Changes.

The IPS System allows for the transfer of sludge (or biosolids) between the Jones Island Water Reclamation Facility (JIWRF) and the South Shore Water Reclamation Facility (SSWRF). The IPS System is critical for processing biosolids and producing Milorganite®. An IPS System outage can result in operational challenges, lost opportunities to create digester gas, and significant increases in operating costs.

The IPS System consists of a pump station located at JIWRF, a pump station located at SSWRF, and four parallel ductile iron pipelines connecting the two facilities. Each pipeline is 12 miles long for a total length of 48 miles. Two of the pipelines are 12-inch diameter, and the other two are 14-inch diameter. The IPS System has been in service for approximately 30 years.

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 P01005C06, Pipeline Cleaning Phase 2 – Interplant Sludge System Improvements, Restore the Executive Director's Original Delegated Authority, and Approve Changes in Total Project Cost

The transfer of biosolids between JIWRf and SSWRF has been reasonably reliable; however, there has been a reduction in pipeline flow capacity since the system began operation. The cause of the reduced flow capacity is a buildup of settled solids in the pipeline, primarily at low points. The decrease in flow capacity increases the amount of energy needed to transfer biosolids between facilities. The overall purpose of this project is to restore the reliability, operational capability, and energy efficiency of the IPS System.

In January 2022, the Commission awarded Contract P01005C06 to Terra in the amount of \$8,453,660. Under this contract, Terra is:

- Preparing each pipeline for cleaning by removing valves and fittings on various pipeline valve vaults and venting the pipeline.
- Draining and disposing liquid from each pipeline.
- Jet cleaning the pipeline low points with disposal of cleaning water and solids.
- Televising each pipeline.
- Performing final pipeline cleaning using a pipeline insertion gauge (PIG).
- Installing new PIG-compatible valves, piping, supports, and fittings in the valve vaults.
- Improving pipe bonding in each vault to maximize performance of the pipeline cathodic protection system.
- Abating existing lead-based paint coatings and recoat the existing piping and valves in each vault.
- Returning each pipeline back to service.

Following is a summary of the change orders executed under the Executive Director's authority:

- Providing 148 additional pipe spool pieces in pipeline valve vaults.
- Cleaning and removing existing debris from the bottom of four valve vaults.
- Replacing existing isolation valves in one valve vault.
- Modifying the existing valve vault pipe supports.
- Adjusting pipeline cleaning unit quantity.
- Providing flushing connections on existing valves.
- Providing new snubbers at the PIG receiving stations at JIWRf and SSWRF.
- Providing handwheel operators on two pipeline drain valves.
- Filling pits on the exterior of pipes in one valve vault.
- Bonding the joints in valve vaults on pipeline number 1 to improve cathodic protection during construction.

SUMMARY (Cont'd)

Change Order Request, Contract P01005C06, Pipeline Cleaning Phase 2 – Interplant Sludge System Improvements, Restore the Executive Director's Original Delegated Authority, and Approve Changes in Total Project Cost

- Additional jet cleaning to remove a stuck PIG in pipeline number 2.
- Additional PIG cleaning runs in pipeline number 2.
- Providing temporary sound barriers at select valve vaults during jet cleaning.
- PIG cleaning of pipeline number 3.

Following is a summary of change orders authorized under Commission action:

- Providing 20 additional pipe spool pieces in pipeline valve vaults.
- Additional jet cleaning to remove a second stuck PIG in pipeline number 2.

Terra performed jet and PIG cleaning under the original contract on pipeline numbers 2 and 3 plus one additional PIG cleaning of pipeline 3. Terra is now jet and PIG cleaning pipeline number 4, with pipeline number 1 to follow.

Prior to this project, the IPS pipelines were not on a regular PIG cleaning schedule. This resulted in decreased pipeline capacity and increased energy use, along with significant cleaning challenges due to high amounts of deposited solids. To avoid these issues, the IPS pipelines should be periodically PIG cleaned. After each pipeline is cleaned under this contract, it is the intent to regularly PIG clean each pipeline. Staff recommends PIG cleaning to occur around once a year. The actual frequency of PIG cleaning will depend on the pipeline availability and observed capacity and energy consumption.

Under the requested change order, Terra will provide up to five additional PIG cleanings of pipelines that were jet and PIG cleaned under the original contract. Terra can cost effectively perform the additional PIG cleanings, because they are already mobilized with the knowledge and experience to perform this work. The actual number of additional PIG cleanings will depend on the need for cleaning and pipeline availability and will only occur while Terra is still mobilized to perform the original contract scope.

SUMMARY (Cont'd)

Change Order Request, Contract P01005C06, Pipeline Cleaning Phase 2 – Interplant Sludge System Improvements, Restore the Executive Director's Original Delegated Authority, and Approve Changes in Total Project Cost

CONTRACT COST CHANGES

	AMOUNT	PERCENTAGE INCREASE OVER ORIGINAL CONTRACT	AUTHORIZED BY	SWMBE
Original Contract	\$8,453,660		Commission	21%
Previous Change Orders	\$1,965,049	23%	Executive Director and Commission	3.4%
Requested Change Order	\$147,000	2%	Request of Commission	0%
Total Change Orders	\$2,112,049	25%		3.2%
TOTAL	\$10,565,709			17.5%

The Commission has delegated the Executive Director the authority to make changes to construction contracts up to \$400,000 or 10% of the original contract price, whichever is less. For this contract, \$400,000 prevails. The Executive Director has utilized \$399,193 of this authority, leaving a balance of \$807. The request to restore the Executive Director's authority is in case any additional construction changes requiring the Executive Director's change authority are necessary. Without this restored authority, work may need to stop while staff obtains necessary change order authority from the Commission.

The requested change order is more than budgeted, and staff requests to increase the TPC by the change order amount (\$147,000) plus \$513,000. The additional \$513,000 is District staff's estimate of the remaining administration and field staff labor needed to complete the project.

RESOLUTION

Change Order Request, Contract P01005C06, Pipeline Cleaning Phase 2 – Interplant Sludge System Improvements, Restore the Executive Director's Original Delegated Authority, and Approve Changes in Total Project Cost

RESOLVED, by the Milwaukee Metropolitan Sewerage Commission, that the Executive Director is authorized to execute a change order to Contract P01005C06, Pipeline Cleaning Phase 2 – Interplant Sludge System Improvements, with Terra Engineering & Construction Corporation in an amount not to exceed \$147,000, and that the Executive Director's original delegated authority is restored.

FURTHER RESOLVED, by the Milwaukee Metropolitan Sewerage Commission, that the total project cost for Project P01005, Interplant Pipeline Improvements – Phase II, is increased by \$660,000 for an amended total project cost of \$32,825,000, and that a corresponding change is made to the total project cost for Project M99001, Allowance for Cost and Schedule Changes.