Item 2

COMMISSION FILE NO: 20-049-4 **DATE INTRODUCED:** April 15, 2020

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

REFERRED BY COMMISSION CHAIRPERSON TO: Operations Committee

RELATING TO: Contract J04072D01, Engineering Services – Milorganite® Transport and Silo Storage Equipment Replacement at Jones Island Water Reclamation Facility

SUMMARY:

The Commission is requested to authorize the Executive Director to execute on behalf of the District Contract J04072D01, Engineering Services – Milorganite® Transport and Silo Storage Equipment Replacement at Jones Island Water Reclamation Facility (JIWRF), with Symbiont Science, Engineering and Construction, Inc., in an amount not to exceed $549,994. Symbiont Science, Engineering and Construction, Inc, was the highest scoring proposer, based on a qualifications-based selection method, between two proposals received.

Within the Drying and Dewatering (D&D) Facility, the District produces bulk Milorganite® by heat drying dewatered biosolids in 12 rotary dryers, then screening, classifying, and cooling the product. After cooling, Milorganite® is weighed and transferred to four day bins in the D&D Facility via bucket elevators and screw conveyors. A dense phase pneumatic transport system conveys Milorganite® from the day bins to storage silos (the Milorganite® Storage Facility (MSF)). The MSF contains 14 silos arranged in two banks of seven silos. A dust collection system serves the conveyance and storage facilities.

This project focuses on replacing most equipment from immediately downstream of the Milorganite® product coolers to the silos and includes equipment associated with the silos. Most of the equipment was installed in 1994 as part of the original D&D Facility construction. The equipment has reached the end of its useful service life, and staff recommends replacement. Inadequate performance of the transport equipment has reduced system reliability and efficiency. Recently, the transport system has experienced decreased capacity and increased maintenance. The transport system is a single point of failure element between the D&D Facility and the MSF.

ATTACHMENTS: **BACKGROUND** ☐ **KEY ISSUES** ☐ **RESOLUTION** ☒

FISCAL NOTE ☒ **S/W/MBE** ☒ **OTHER** ☐ ____

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COMMISSION ACTION: _____ **DATE:** _____

SUMMARY (Cont'd)

Contract J04072D01, Engineering Services – Milorganite® Transport and Silo Storage Equipment Replacement at Jones Island Water Reclamation Facility

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In October 2019, a portion of the transport system failed, leading to a significant reduction in Milorganite® transport system capacity from the day bins to the silos. The capacity reduction increased Milorganite® day bin volumes to critical levels and required dryers to be taken out of service to reduce Milorganite® production.

The purpose of this project is to increase equipment reliability and efficiency and to restore equipment service life to a minimum of 20 years. The equipment addressed in the scope of this project includes:

- Two weigh belts and weigh scales
- Two bucket elevators
- Deflagration venting for bucket elevator
- Two day bin transfer screw conveyors
- Two day bin feed screw conveyors
- All inlet and discharge chutes, dust collection plenums, ductwork, and slide gates associated with the bucket elevators and screw conveyors.
- Four day bin cone liners
- Four product transporters
- All air injector booster valves along the dense phase transport piping
- Seven dense phase transport diverter valves
- 14 silo fill valves and actuators
- 14 silo purge valves and actuators
- 14 silo dust valves and actuators
- 14 silo temperature probes
- 14 silo level probes
- Two silo purge fans
- 14 silo draw-off valves
- 14 silo vibrators
- All dense phase transport piping between the day bins and the MSF silos

Under Contract J04072D01, the consultant will perform project management, engineering design services, plans and specifications preparation, and engineering services during construction.

After the design work is complete, the District will publicly bid the construction contract.

The duration for this contract is approximately 32 months.

RESOLUTION

Contract J04072D01, Engineering Services – Milorganite® Transport and Silo Storage Equipment Replacement at Jones Island Water Reclamation Facility

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RESOLVED, by the Milwaukee Metropolitan Sewerage Commission, that the Executive Director is authorized to execute Contract J04072D01, Engineering Services – Milorganite® Transport and Silo Storage Equipment Replacement at Jones Island Water Reclamation Facility, with Symbiont Science, Engineering and Construction, Inc., in an amount not to exceed $549,994.