

COMMISSION FILE NO: 19-019-2 **DATE INTRODUCED:** February 11, 2019

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

REFERRED BY COMMISSION CHAIRPERSON TO: Operations Committee

RELATING TO: Contract J04061D01, Engineering Services – Programmable Logic Controller 5 Upgrade in the Dewatering and Drying Facility

SUMMARY:

The Commission is requested to authorize the Executive Director to execute on behalf of the District Contract J04061D01, Engineering Services – Programmable Logic Controller (PLC) 5 Upgrade in the Dewatering and Drying (D&D) Facility, with Eclipse Controls, Inc., in an amount not to exceed \$499,828. Eclipse Controls, Inc., was the highest scoring proposer, based on a qualifications-based selection method, among three proposals received.

The District's D&D Facility houses equipment utilized to produce Milorganite®. Twenty-four belt filter presses dewater plant sludges, and 12 rotary dryers dry the dewatered sludge. Dried solids are classified using screens and mills to create a consistent Milorganite® product size. Product is cooled and placed into storage bins to await transport to the Milorganite® Storage Building. The D&D Facility also contains conveyors, bucket elevators, holding tanks, air emissions equipment, and other supporting systems. The D&D Facility has been in use since 1994.

Approximately 66 PLC's are distributed throughout the D&D Facility and provide localized control of equipment. A PLC is an industrial computer designed specifically for the control of manufacturing processes in challenging environments. The existing set of PLCs (Allen Bradley PLC5) were installed in 1994. Rockwell Automation, the parent company of Allen Bradley, announced that the PLC5 product line has reached its end of life; they have discontinued manufacturing new parts, and equipment repair will depend solely upon existing parts inventory. This creates a situation where, without replacement, the District's D&D control system will ultimately be unable to control the D&D Facility.

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

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COMMITTEE ACTION: _____ **DATE:** _____

COMMISSION ACTION: _____ **DATE:** _____

SUMMARY (Cont'd)

Contract J04061D01, Engineering Services – Programmable Logic Controller 5 Upgrade in the Dewatering and Drying Facility

It is critical that PLC control equipment be functional and maintainable for the continued operation of the D&D Facility. The purpose of this project is to replace the existing PLC5 control platform and accompanying control equipment with a modern, serviceable control platform and equipment. The improved functionality of the new controls equipment will provide enhanced performance, fault tolerance, and safety.

Under Contract J04061D01, the consultant will:

- Provide design engineering services for the replacement of 66 PLC's, associated communication network, and other ancillary control equipment.
- Evaluate specific startup and operational issues associated with automatic dryer operation. Incorporate solutions into the design.
- Provide a transition plan to migrate from existing control equipment to new control equipment.
- Provide engineering services during construction.
- Provide updates to facility operations and maintenance manuals related to the new control system.

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

The duration for this contract is approximately 42 months.

RESOLUTION

Contract J04061D01, Engineering Services – Programmable Logic Controller 5
Upgrade in the Dewatering and Drying Facility

RESOLVED, by the Milwaukee Metropolitan Sewerage Commission, that the Executive Director is authorized to execute Contract J04061D01, Engineering Services – Programmable Logic Controller 5 Upgrade in the Dewatering and Drying Facility, with Eclipse Controls, Inc., in an amount not to exceed \$499,828.