

COMMISSION FILE NO: 25-060-5 **DATE INTRODUCED:** May 5, 2025

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

REFERRED BY COMMISSION CHAIRPERSON TO: Operations Committee

RELATING TO: Contract J06087C02, Material Capital Repair or Replacement 1666, Product Cooler #1 Rotor Procurement

SUMMARY:

The Commission is requested to authorize the Executive Director to execute on behalf of the District, Contract J06087C02, Material Capital Repair or Replacement 1666, Product Cooler #1 Rotor Procurement, with Bepex International, LLC, (Bepex) for purchasing a new rotor and associated equipment for Product Cooler #1 in an amount not to exceed \$1,134,000. This is a sole source request, as Bepex is the original equipment manufacturer and the only firm that can provide replacement parts.

At the Jones Island Water Reclamation Facility (JIWRF) Dewatering and Drying (D&D) building, dried Milorganite® product exits the dryers at a minimum temperature of 176 degrees Fahrenheit. The Milorganite® must then be cooled below 105 degrees Fahrenheit for safe storage in the silos. This cooling is accomplished using two product coolers.

Each product cooler contains a rotor and shell through which chilled water flows. Chilled water flows continuously inside the rotor and the shell. Cooling is achieved as the rotor and shell are in close contact with the Milorganite® as it travels from the feed end to the discharge end of the product cooler.

The existing product coolers were installed in 2016. At that time, a refurbished onsite spare rotor was installed inside of a new shell to replace the existing Product Cooler #1 unit, and a completely new unit (rotor and shell) replaced Product Cooler #2. Since that time, the abrasive nature of Milorganite® has worn the hard facing surface and the underlying base metal on rotor #1. Product Cooler #2 also has worn material but is in better condition than unit #1.

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 J06087C02, Material Capital Repair or Replacement 1666, Product Cooler #1 Rotor Procurement

The base metal in the rotor of unit #1 has worn to the point where additional hard facing material cannot be reapplied. Because of the thin base metal, the pressure rating and cooling water flow rate of the unit must be reduced, which results in reduced product cooling.

The loss of product cooler efficiency and possibility of failure presents numerous potential impacts and risks as follows:

- Unsafe Milorganite® temperatures in silos, resulting in increased risks of fires and explosions.
- Possibility of shutting down the D&D facility, which would result in significant increased costs to manage biosolids.
- Increased maintenance costs.
- Ongoing potential for cooling water leaks inside the coolers, resulting in poor quality and unusable Milorganite®.
- Emergency outages to investigate and make repairs when additional leaks develop.

Due to the condition of unit #1 and to reduce the above risks, staff recommends rehabilitating this unit in two phases:

1. Purchasing a new replacement rotor.
2. Developing a bid package and separately bidding and contracting for replacement of the existing rotor with this new rotor.

This Commission request authorizes a purchase contract for a new rotor from Bepex for Product Cooler #1. Bepex supplied both product coolers. No other vendors can supply a product cooler rotor that is compatible with the existing cooler; thus, this request is considered a sole source procurement.

Lead time to obtain the rotor is estimated to take up to 50 weeks. While the rotor is being fabricated, staff will develop a separate bid document for its installation. The installation will then be publicly bid and awarded in a separate contract.

For Product Cooler #2, given the high cost of rotor replacement and its condition, staff will evaluate alternatives to determine if there are ways to provide product cooling at a lower cost. After completing that evaluation, staff will recommend either continued use of Product Cooler #2 (requiring procurement of another new rotor) or begin design/engineering to implement an alternate method of cooling.

RESOLUTION

Contract J06087C02, Material Capital Repair or Replacement 1666, Product Cooler #1
Rotor Procurement

RESOLVED, by the Milwaukee Metropolitan Sewerage Commission, that the Executive Director is authorized to execute on behalf of the District, Contract J06087C02, Material Capital Repair or Replacement 1666, Product Cooler #1 Rotor Procurement, with Bepex International, LLC, for purchasing a rotor and associated equipment for Product Cooler #1 in an amount not to exceed \$1,134,000.