



COMMISSION FILE NO: 24-130-10 **DATE INTRODUCED:** October 14, 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, Purchase Order No. 13323, Material Capital Repair or Replacement No. 1587 – Jones Island Water Reclamation Facility Dryers 1-12 Add-back Conveyor Replacements, Project J06075

SUMMARY:

The Commission is requested to authorize the Executive Director to execute a change order to Purchase Order No. 13323, Material Capital Repair or Replacement No. 1587, Jones Island Water Reclamation Facility (JIWRF) Dryers 1-12 Add-back Conveyor Replacements, with Veolia Water Milwaukee, LLC, (VWM) for Project J06075 in an amount not to exceed \$178,382.

At JIWRF, Milorganite® is produced within the Dewatering and Drying Facility. The Milorganite® production process consists of 12 rotary sludge dryers used to heat dry dewatered biosolids, producing Milorganite®. The District’s Wisconsin Pollutant Discharge Elimination System (WPDES) Permit for pathogen control of heat dried Class A sludge requires that dried biosolids exit each dryer at a minimum temperature of 176°F.

At times, due to mechanical, burner, or process issues, the dryer discharge temperature of the biosolids drops below the required 176°F. When this happens, a control strategy is in place to stop the discharge screw and recycle the biosolids back to the dryer inlet for additional heating and drying. Rather than enter the discharge screw, the material that is below 176°F is directed to the add-back screw conveyor, and then back to the dryer inlet for reheating.

The existing 12 add-back screw conveyors are original equipment and have been in service since 1994. Many of these conveyors are showing significant signs of wear on the troughs and inlet and discharge transition chutes, and there has been an increase in corrective maintenance work on motors and gearboxes. The overall purpose of this project is to replace the add-back screw conveyors in entirety on all 12 dryers.

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

*OP_Change_Order_MCRR_1587_Restore_ED_Authority_legislative_file
09-25-24*

COMMITTEE ACTION: _____ **DATE:** _____

COMMISSION ACTION: _____ **DATE:** _____

SUMMARY (Cont'd)

Change Order Request, Purchase Order No. 13323, Material Capital Repair or Replacement No. 1587 – Jones Island Water Reclamation Facility Dryers 1-12 Add-back Conveyor Replacements, Project J06075

Currently, the metal in areas on each add-back conveyor chute and trough are thin to the point that patch weld repairs are no longer possible. If the add-back screw conveyors are not replaced, wear from abrasion will continue, resulting in weaker and thinner metal and more holes. This will eventually allow fugitive Milorganite® to leak to the floor below, creating a safety and housekeeping concern. Also, augers have lost flight diameter and are inefficient in moving product to the dryer recycle equipment, resulting in increased energy costs. Finally, reliable operation of the add-back conveyors is essential in achieving compliance with the pathogen control requirement of the WPDES Permit.

The District issued a purchase order to VWM in May 2024 in an amount not to exceed \$940,316. VWM had competitively bid the work and awarded a construction contract to Doral Corporation (Doral). Under this purchase order, VWM is responsible for managing and overseeing the contract with Doral. The work under Doral's contract includes the following at each of the 12 dryers:

- Removing and replacing complete add-back screw conveyor assemblies.
- Removing and replacing screw conveyor transition pieces.

Since this purchase order was issued, staff and Veolia inspections have identified that the dryer discharge chutes that connect to these screw conveyors are worn thin by abrasion. The wear occurs as the Milorganite® slides from the dryer discharge down the bottom of the 36-inch-long angled chute into the add-back screw. These wear areas and holes have been patched multiple times by Veolia, but the steel has worn thin to the point that patching is no longer a feasible repair option. In addition, these chutes are not accessible for replacement unless the screw conveyor is completely removed from position.

Also, upsizing screw connectors, motors, and gearboxes and adding hard facing material to the trough and auger have proven to increase reliability and uptime in other recent screw conveyor replacements. As such, these requirements will be added to the construction details of this contract. To minimize downtime in the future, one spare motor, auger, and gearbox will be ordered as part of the change order, since these have long lead times.

Under the proposed change order, VWM will authorize Doral to:

- Replace the dryer discharge chutes.
- Add hard facing to the trough and auger.
- Upsize the screw connectors, motors, and gearboxes.
- Provide a spare motor, auger, and gearbox.

SUMMARY (Cont'd)

Change Order Request, Purchase Order No. 13323, Material Capital Repair or Replacement No. 1587 – Jones Island Water Reclamation Facility Dryers 1-12 Add-back Conveyor Replacements, Project J06075

The cost to procure and install the angled inlet chutes, upgrade conveyor components and materials of construction, and include spares is \$178,382 (including VWM markup). Staff is requesting authorization for a change order in this amount to cover these costs.

CHANGE ORDER SUMMARY

PURCHASE ORDER	AMOUNT	PERCENT INCREASE OVER ORIGINAL PURCHASE ORDER	AUTHORIZED BY	SWMBE*
Original	\$940,316		Commission	53.4%
Requested Change Order	\$178,382	19%	Request of Commission	80.2%
TOTAL	\$1,118,698			57.7%

*Small, Women, and Minority Business Enterprise (SWMBE) participation shown is for contract between VWM and Doral and does not include VWM markup.

This change order will not affect the original construction duration of 500 days and is still dependent on dryer availability.

RESOLUTION

Change Order Request, Purchase Order No. 13323, Material Capital Repair or Replacement No. 1587 – Jones Island Water Reclamation Facility Dryers 1-12 Add-back Conveyor Replacements, Project J06075

RESOLVED, by the Milwaukee Metropolitan Sewerage Commission, that the Executive Director is authorized to execute a change order to Purchase Order No. 13323, Material Capital Repair or Replacement No. 1587, Jones Island Water Reclamation Facility Dryer 1-12 Add-back Conveyor Replacements, Project J06075, with Veolia Water Milwaukee, LLC, in an amount not to exceed \$178,382.