



Legislation Text

File #: 2020-229, Version: 1

Contract No. 2000917
Refractory and Inspection Repairs - Complex II Incineration
CIP# N/A / BCE Score

Agenda of: July 22, 2020
Item No.: **2020-229**
Amount: \$4,752,640.00

TO: The Honorable
Board of Directors
Great Lakes Water Authority

FROM: Sue F. McCormick
Chief Executive Officer
Great Lakes Water Authority

DATE: July 22, 2020

RE: **Contract No. 2000917**
Refractory and Inspection Repairs - Complex II Incineration
Vendor: Commercial Contracting Corporation

MOTION

Upon recommendation of Navid Mehram, Chief Operating Officer - Wastewater Operating Services, the Board of Directors (Board) of the Great Lakes Water Authority (GLWA), authorizes the Chief Executive Officer (CEO) **to enter into Contract No. 2000917, "Refractory and Inspection Repairs - Complex II Incineration" with Commercial Contracting Corporation, at a cost not to exceed \$4,752,640.00 for a duration of 1,937 days (5 years and 4 months);** and authorizes the CEO to take such other action as may be necessary to accomplish the intent of this vote.

BACKGROUND

The Water Resource Recovery Facility (WRRF) on average treats approximately 650 million gallons per day (MGD) of wastewater that generates a byproduct of approximately 450 dry tons per day (dtpd) of sludge. The sludge is treated and disposed of as Class "A" biosolids and Ash. The biosolids dryer facility (BDF) treats approximately 75% of the average sludge production which is distributed as Class "A" biosolids. The remaining sludge volume is treated through the facilities Multiple Hearth incinerators that converts the sludge to water vapor and gases exiting to atmosphere and bottom ash for disposal to landfill.

Multiple Hearth incinerators are large furnaces that have multiple levels (hearths) that operate at very high temperatures (1,500-1,600 degrees F) to evaporate water and breakdown the dry sludge material to combustion gases and Ash. The sludge material is introduced at the top of the incinerator, the material is then heated as it traverses through alternating inner and outer openings in each subsequent hearth. The material is moved towards center or perimeter by action of rotating rabble arms (like a large rake) which are connected to a rotating center shaft. Each hearth is an arch constructed of refractory bricks that is maintained under compression which is eventually supported by the outer ring (metal structure) of the incinerator. To maintain the reliability and integrity of the facilities incinerators, regular inspection and repairs of the units are required.

JUSTIFICATION

The Great Lakes Water Authority's National Pollutant Discharge Elimination System (NPDES) permit requires the WRRF to maintain a solid processing peak capacity of (850) dtpd, calculated as a 10-day average. The incineration system makes up approximately 537 dtpd of the total required capacity. The reliability and integrity of the incinerators are essential for compliance with the facilities NPDES permit and the continuity of operations for maintaining the facilities sludge inventory.

The award of this project will provide for a qualified vendor to perform a full inspection of the 8 incinerators through the duration of the contract. The inspection will include a full condition assessment of the units including refractory, exterior shell, castable insulation, center shaft insulation, and rabble arms. Proceeding the inspection, the vendor will provide a restoration recommendation for GLWA's review. Upon review of the recommendation, GLWA will authorize the use of provisional allowance through a series of pay items covering possible spectrum of refractory repair work.

FINANCIAL PLAN IMPACT

Summary: The services outlined under this contract were partially anticipated in the Operations and Maintenance (O&M) budget for Sewer Operations, Wastewater Incineration. Should this contract be utilized at its maximum value it would exceed the current budget for Sewer Operations, Wastewater Incineration. As noted below the provisional allowance for repairs, which may or may not be utilized, creates the majority of the shortfall. Should this allowance be needed, a budget amendment may be required for this variance.

Funding Source: Operations and Maintenance (5960)

Cost Center: Wastewater Incineration (892226)

Expense Types:

617900 - Contractual Operating Services - Inspections and preventative maintenance

622300 - Repairs & Maintenance Equipment - Preventative maintenance and repairs

Estimated Financial Plan by Year and Related Estimating Variance:

FY 2021 Budget	\$697,500
FY 2022 Financial Plan	727,500
FY 2023 Financial Plan	758,000
FY 2024 Financial Plan	789,000

FY 2025 Financial Plan	821,500
FY 2026 Financial Plan (Prorated)	<u>306,000</u>
Total Financial Plan	<u>\$4,099,500</u>
Proposed Contract:	
Hearth Inspections	\$811,840
Provisional Allowance	<u>3,940,800</u>
Total Proposed Contract	<u>\$4,752,640</u>
Variance (positive/(negative))	<u>(\$653,140)</u>

COMMITTEE REVIEW

This item was presented to the Operations and Resources Committee at its meeting on July 8, 2020. The Operations and Resources Committee unanimously recommended that GLWA Board adopt the resolution as presented.

SHARED SERVICES IMPACT

This item does not impact the shared services agreement between GLWA and DWSD.