



## Legislation Details (With Text)

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**Title:** Contract No. 2302932  
Incineration Complex II Conveyor System Fire Protection Improvements  
I&E  
**Sponsors:** Navid Mehram  
**Indexes:** Wastewater Operations  
**Code sections:**  
**Attachments:** 1. 2302932. Procurement Board Report (002), 2. 2302932.Cost Tabulation

Date	Ver.	Action By	Action	Result
3/21/2024	1	Board of Directors	Approved	Pass
3/13/2024	1	Operations and Resources Committee	Recommended for Approval	Pass

### **Contract No. 2302932** **Incineration Complex II Conveyor System Fire Protection Improvements** **I&E**

**Agenda of:** March 21, 2024  
**Item No.:** **2024-090**  
**Amount:** \$1,323,000.00

**TO:** The Honorable  
Board of Directors  
Great Lakes Water Authority

**FROM:** Suzanne R. Coffey, P.E.  
Chief Executive Officer  
Great Lakes Water Authority

**DATE:** February 29, 2024

**RE:** **Contract No. 2302932**  
**Incineration Complex II Conveyor System Fire Protection Improvements**  
**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. 2302932, "Incineration Complex II Conveyor System Fire Protection Improvements" with Commercial Contracting Corporation, at a total cost not to exceed \$1,323,000.00 for a duration of nine (9) months;** and authorizes the CEO to take such other action as may be necessary to accomplish the intent of this vote.

### **BACKGROUND**

GLWA operates and maintains the Incineration Complex-II (C-II), constructed in the 1970s at the Water Resource Recovery Facility (WRRF). C-II houses eight (8) multiple hearth incinerators (MHI) that treat the sludge, a byproduct of wastewater treatment, into ash for landfill disposal. The dewatered sludge at the Dewatering Complex is conveyed to C-II incinerators through a network of belt conveyors.

In March 2016, a fire occurred that caused significant damage to the north C-II northside belt conveyor system, which in turn required complete replacement. In September 2020, another fire occurred on the C-II southside belt conveyor system. Although the two fire events were not equal in terms of damages, with the 2016 event being the worst, operational interruptions were experienced during and after both fires.

As a result of these fires, GLWA's property insurance carrier, AXA, prepared a Property Loss Prevention Survey report for the WRRF which included recommendations to address fire risks within the C-II belt conveyor system. As a result of the insurance report, GLWA conducted a study and subsequent design to carry out the recommendations of AXA. During the study, several alternatives were identified and evaluated based on life cycle (Operations, Maintenance (O&M) and capital) costs. The study recommended piloting a fiber optic linear heat detection system (LHD), optical flame detection equipment, a local application water mist fire prevention system, and a belt alignment monitoring system. The purpose of the pilot was to evaluate these technologies for effectiveness, operational and maintenance requirements, and inform about a future full-implementation project for C-II.

The estimate from the study leveraged AXA estimates and engineering opinion of probable construction costs (OPCC) and anticipated the total project costs (pilot + full implementation) of the recommended alternative at \$2.8 million. GLWA proceeded with the design of the pilot project and based on the engineer's OPCC of \$353,000.00 for the pilot, and the need for timely implementation, GLWA decided to complete the construction through its Job Order Contract (JOC) to obtain competitive bids and deliver in a quick and timely fashion.

The bids received for the project significantly varied from AXA, and design & study firms OPCC. This required GLWA to revisit the alternatives analysis and recommendations to determine if the selected recommendation remains as the preferred alternative, which GLWA concluded was indeed the best option versus the no action option because a total loss of incineration would jeopardize our ability to treat wastewater and meet permit requirements for solids disposal. As part of this evaluation, GLWA updated the OPCC for full-implementation and compared that to AXA estimates for a total loss of incineration ranging from \$50 Million to \$500 Million. The updated OPCC for the entire implementation is approximately \$50 Million with a total estimated present worth cost of \$55 Million.

### **JUSTIFICATION**

To effectively mitigate the potential for fires within the C-II conveyor system, piloting of these various technologies recommended by the study is needed to ultimately select a final technology that will be deployed across C-II. Time is a critical factor in having these alternative technologies installed so that evaluation can begin and then selection of the best and most effective alternative(s) can undergo design and eventual construction for the remainder of C-II.

Based on the urgency of this effort and the design engineers, the OPCC estimate the GLWA elected to utilize the job order contract (JOC) method to optimize the procurement time in delivering the project while still maintaining a competitive price. However, the bids for this pilot exceeded the \$1 Million threshold set for JOC tasks. Given the urgency of this work, and time critical elements of evaluation and implementation, GLWA Wastewater Operations now considers

this an emergency or urgent issue to ensure future fire conditions can be effectively detected as early as possible to prevent total loss. To advertise this work through the normal procurement process will delay this project by an additional seven (7) to nine (9) months before award, along with likely escalation of costs.

Fire risks in C-II impact the health and safety of GLWA team members and affects our ability to treat wastewater risking environmental pollution and violation of our National Pollutant Discharge Elimination System (NPDES) permit.

It is the GLWA's team opinion to move forward with the pilot project to ultimately determine the right technology to be used for the C-II facility. Based on the results of the pilot, GLWA will reassess the feasibility, reliability, O&M, and the present worth analysis of the technology and determine if full implementation is recommended.

### **FINANCIAL PLAN IMPACT**

**Summary:** This proposed emergency contract was not anticipated during the development of the FY 2024 budget or the FY 2025 financial plan. The value of this proposed project exceeds the available Capital Outlay budget for Wastewater Incineration. Therefore, budget amendments will be required for this project. First, offsetting other positive variances within the Water Resource Recovery Facility Capital Outlay budgets, then from other areas, and finally from the unallocated reserves.

**Funding Source:** Improvement and Extension (I&E) - 5404

**Cost Center(s):** Wastewater Incineration Process (892226)

**Expense Type(s):** Capital Outlay over \$5K (I&E-Capitalized) (901100)

**Estimated Cost by Year and Related Forecast Variance:** See table below.

<b><u>Fiscal Year</u></b>	<b><u>Amount</u></b>
FY 2024 Budget	\$24,000.00
FY 2025 Plan (Prorated)	<u>83,525.00</u>
Total Financial Plan	\$107,525.00
Maximum Contract	<u>\$1,323,000.00</u>
Variance (positive/(negative))	<u>(\$1,215,475.00)</u>

### **COMMITTEE REVIEW**

This item was presented to the Operations and Resources Committee at its meeting on March 13, 2024. The Operations and Resources Committee unanimously recommended that the GLWA Board adopt the resolution as presented.

### **SHARED SERVICES IMPACT**

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