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September 17, 2024

Board of Wastewater Commissioners:

Mayor Cory Mason
Alder Mollie Jones
Alder Terry McCarthy
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SUBJECT: Change Order No. 2 – Contract D-22 – Biogas Conditioning Project

Dear Commissioners:

Submitted for your review and approval is Change Order No. 2 – Contract D-22 – Biogas Conditioning Project, Lee Mechanical (contractor), in the amount of **\$55,635.04**. This change order is for the purpose of re-routing piping around obstacles as well as adding more durable materials to prevent pipe deterioration from UV.

The original contract amount is \$1,853,000.00. Approval of Change Order No. 2 would bring the total contract amount to \$1,961,671.00. This change order reflects an increase of **5.9%** on the original contract amount.

Sincerely,

Nate Tillis
Wastewater Utility Director

NT/jb

Enclosure

CONTRACT CHANGE ORDER (CCO)

CHANGE ORDER

WRITTEN AMENDMENT

CHANGE NO: 002

TO CONTRACTOR: Lee Mechanical

PROJECT: WWTP Biogas Conditioning Project

PROJECT NO: D-22

OWNER: Racine Wastewater Utility

ENGINEER: SEH

The following modification(s) to the Contract are hereby ordered (use additional pages if required):

1	Replace Combustible Gas Detection Equipment in Main Equipment Building 185 Final Time and Materials Price adjustment	(\$3,758.96)
2	Change from PVC to Aluminum Jacketing, Exterior Biogas Piping (PCO-03)	\$11,223.00
3	Biogas Conditioning Vessels Pile Foundation and Slab Revisions (PCO-04)	\$2,628.00
4	Re-routing Existing Conduit & Wire due to Biogas Room Classification (PCO-05)	\$6,186.00
5	Add Biogas Line Drip Trap (PCO-07)	\$7,290.00
6	Add Ductwork Insulation (PCO-08)	\$1,808.00
7	Reroute Gas Vents and Engine Exhaust (PCO-09)	\$16,076.00
8	Biogas Room HVAC Controls, SCADA Interface (PCO-10)	\$14,183.00
9	Time Extension	\$0.00
	Total:	\$55,635.04

Reason(s) for Modification(s):

1. Contract D-22 Drawings 185R2 & 185E2 call for relocation of an existing Combustible Gas Detection (CGD) Panel and alarm light. Racine staff have advised that this existing Main Equipment Bldg 185 CGD system is out of date and is therefore not compatible with other recently updated CGD systems elsewhere within the plant. Racine staff have requested that the existing CGD panel and 2 existing CGD sensors be replaced. Racine staff have also requested that 2 more CGD sensors be added. The new CGD panel will be rewired to 185-PLC-4, and to the relocated exterior alarm strobe. This price adjustment is for the final time and materials costs incurred in performing the work. Refer to attached PCO-02 Rev 1.
2. New exterior biogas piping will be exposed to sunlight. This change to aluminum pipe insulation jackets will provide better durability and longer life, compared with the specified PVC insulation jackets. Refer to attached PCO-03.
3. The structural design of the pile foundations and base slab for the biogas conditioning media vessels was modified to accommodate revised pile locations, as necessary to avoid buried piping in this area of the project. Pile relocations were anticipated, as noted by General Note 1 on Drawing 186S1. Refer to attached PCO-04.
4. The Contractor's RFI-032 requested clarification of the new Biogas Room hazardous classified location. There are some inaccessible electrical conduits in the existing north wall located between the new Biogas Room and the adjacent stairway. These conduits include sweep bends that are embedded in the wall, and therefore not suitable for installation of explosion proof seal offs that are needed to maintain the explosion proof rating of the Biogas Room. Instead, new re-routed electrical conduits will be provided, and the existing conduits will be capped off and abandoned. The existing embedded conduit represents an unforeseen condition. Refer to attached PCO-05.
5. There is a low point in the profile of the new 10-inch biogas piping located in the lower level of Equipment Building 185. A new biogas drip trap is recommended at this location in order to provide a safe method of periodically draining off any condensate that can accumulate at this low point. Refer to attached PCO-07.
6. Duct insulation is recommended to be added to the new HVAC supply duct for the new Main Equipment Building 185 Biogas Room ventilation system. Refer to attached PCO-08.
7. Several gas vents and one engine exhaust (standby air compressor) from the lower level of Main Equipment Building 185 need to be re-routed to exit the south side of the building, in order to prevent interference with the new Biogas Room ventilation system. Refer to attached PCO-09.
8. The HVAC system for the new Biogas Room was designed for local, manual operation, with a stand alone thermostat controlling the new supply duct heater to maintain proper room temperature. Racine staff requested that the new Biogas Room HVAC be tied in to the existing plant wide Honeywell DDC system, for HVAC remote monitoring and control purposes. Refer to attached PCO-10.
9. Time Extension: The biogas conditioning equipment has been delivered and installed. It is anticipated that check out and testing of the biogas conditioning equipment will occur during September of October of 2024. Assuming successful check out and testing, the project would then be considered to be substantially complete, within the contract date for substantial completion of November 22, 2024. However, the Contract C-22 engine generator will not be ready for startup until December 2025, and the biogas conditioning equipment will be idle until then. December 2025 is beyond the Contract D-22 final completion date of January 21, 2025. Therefore, it is recommended that the Contract D-22 final completion date be extended by one year, to cover biogas conditioning equipment startup and commissioning, in conjunction with Contract C-22 engine generator startup.


Attachments (List Supporting Documents):

Lee Mechanical PCO-02 Rev 1, PCO-03, PCO-04, PCO-05, PCO-07, PCO-08, PCO-9, PCO-10

Contract Amount or Price		Contract Times (Calendar Days)*	
Original	\$1,853,000.00	Original Duration	600 Days
Previous Contract Modification(s) (Add/Deduct)	\$1,906,035.96	Previous Contract Modification(s) (Add/Deduct)	0 Days
This Contract Modification (Add/Deduct)	\$55,635.04	This Contract Modification (Add/Deduct)	+365 Days
Revised Contract Amount	\$1,961,671.00	Revised Contract Time	965 Days

Original Contract Final Completion: January 21, 2025

Revised Contract Final Completion: January 21, 2026

Owner	Contractor	Engineer Recommendation
By: _____	By: _____	By: <u></u>
Date: _____	Date: _____	Date: <u>9/6/2024</u>