AGENDA MEMORANDUM
Action Item for the City Council Meeting of March 08, 2022

DATE: March 08, 2022

TO: Peter Zanoni, City Manager

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Professional Services Contract Amendment
O.N. Stevens WTP On-Site Hypochlorite Generation (A.K.A. Chlorine Storage and Handling Facilities Improvements)

CAPTION:

Motion awarding an amendment to a contract with Hazen and Sawyer for design and preparation of construction documents and related construction phase services to replace the chlorine gas system with an on-site sodium hypochlorite generation (OSG) feed system and a backup bulk sodium hypochlorite delivery feed system for the O.N. Stevens Water Treatment Plant (ONSWTP) in the amount of $3,454,000, for a total restated fee not to exceed $4,417,600 located in City Council District 1, with FY 2022 funding available from Water Capital Fund.

SUMMARY:

This professional services contract, amendment #2, provides for design and preparation of construction documents and related construction administration services to decommission the aging chlorine gas system and implement on-site chlorine generation system with bulk storage.

BACKGROUND AND FINDINGS:

The City owns and operates the ONSWTP that currently uses a chlorine gas system for disinfection. The chlorine gas system, originally installed in 1981, includes the 90-ton railcar storage area, gas measurement building, 1-ton container storage area, chlorine dioxide generation system, and eight (8) injection locations. Due to criticality of the process, safety concerns and anticipated future regulatory challenges associated with the use of chlorine gas, the City of Corpus Christi (City) is replacing the chlorine gas system with an on-site sodium

hypochlorite generation (OSG - chlorine) feed system with a backup bulk sodium hypochlorite (chlorine) delivery feed system.

Preliminary design (30%) of the project was completed in December 2020. The preliminary design scope included project schedule, construction cost estimates, and options for equipment that will be necessary to generate chlorine on-site, greatly reducing the risk and hazard to plant personnel and surrounding communities.

This amendment provides for remaining design (100%), bid and construction phase services that will be necessary to complete the project. The scope of amendment #2 includes 100% design of:

- Demolition of the existing chlorine gas system
- Site and yard piping preparation
- Access roads and utility improvements
- New OSG-chlorine building, storage and containment facilities
- New power control room (PCR) facilities (inside of OSG building)
- Collaboration through design with the pre-selected OSG vendor, including workshops and site visits (Contracts awarded through separate agenda item)
- Construction support through on-site project representatives and specialty disciplines
- Assistance with startup, integration of the new OSG system into plant SCADA system, and development of process operations manuals

At completion of the project, ONSWTP will be one of the largest OSG facilities in the United States. The conversion from 90-ton chlorine gas railcars to OSG will greatly enhance safety of plant personnel and surrounding communities by reducing risks and hazards associated with chlorine gas.

PROJECT TIMELINE:

2022-2023	2023			2023-2025
March - Feb	M	A	M	June - Dec
Design	Bid			Construction

Projected Schedule reflects City Council award in March 2022 with design completion in February 2023. Construction is anticipated to begin in June 2023 with anticipated construction completion by December 2025.

COMPETITIVE SOLICITATION PROCESS:

Hazen and Sawyer was selected for the FY 2017 Capital Improvement Projects, Parks Master Plan and Continuation Bond Projects, Part C – ONSWTP Chlorine Storage and Handling Facilities in February 2017 under RFQ 2016-06. ONSWTP Chlorine Storage and Handling Facilities was one of three selections that were announced under the Utility Projects Category of the RFQ.

Hazen and Sawyer was selected from five (5) applicants for this project. The selection committee was comprised with representatives from the Utilities Department and Engineering Services. The final evaluation ranked Hazen and Sawyer the highest and recommended the firm as most qualified based five factors: 1) experience of the firm, 2) experience of the key personnel with specific experience in chlorine design & process control for OSG facilities, 3) project approach

and management plan, 4) capacity to meet the project requirements and timelines, and 5) past performance. Additionally, Hazen will work together with Ardurra on this project.

ALTERNATIVES:

Without this project, the ONSWTP will be operating an obsolete chlorine gas system, increasing risks and hazards associated with handling chlorine gas and compromising safety of plant personnel and surrounding communities.

FINANCIAL IMPACT:

This contract will award design, bid and construction phase services for the ONSWTP to replace the chlorine gas system with an on-site sodium hypochlorite generation (OSG) feed system and a backup bulk sodium hypochlorite delivery feed system to Hazen and Sawyer in the amount of $3,454,000, for a total restated fee not to exceed $4,417,600, project is located in City Council District 1, work will begin effective upon issuance of notice to proceed, with funding available from FY 2022 Water CIP.

FUNDING DETAIL:

Fund:	Water 2020 CIP (Fund 4099)
Mission Elem:	Water Treatment (062)
Project:	ONSWTP On-Site Hypochlorite Generation (Chlorine Storage and Handling Facilities Improvements (E10144) reference project 21104 in the FY2021-2022 Capital Budget document
Account:	Outside Consultants (550950)
Activity:	E10144-01-4099-EXP
Amount	$3,454,000

RECOMMENDATION:

City staff recommends award of the professional services contract in the amount of $3,454,000 to Hazen and Sawyer. The design phase is planned to begin in March 2022 with design completion in February 2023. Construction is anticipated to begin in June 2023 with anticipated construction completion by December 2025.

LIST OF SUPPORTING DOCUMENTS:

Location and Vicinity Maps
Contract