



Meeting Date: September 10, 2018

Report No. SUA-18-34

Agenda Item No. 2a

Purpose: To request authorization for additional expenditures and approval for staff to execute Contract Amendments No. 3 and 4 (CA3 and CA4) to the Professional Services Agreement (PSA) with Black and Veatch for Project 16WG08, WTP Improvements.

Budget Impact: The budget for Project 16WG08 contains sufficient funds for CA3 and CA4.

Prior Council Action or Part of an Approved Project: Yes

Related Items: [SUA-17-01](#) PSA for WTP Lime System Replacement and Misc. Improvements
[SUA-17-22](#) Contract Amendment No. 1 for WTP Improvements
[CC-18-90](#) Mobile Generator OEM Grant Application

Alternatives: The following alternatives are available to the Trustees:

- Authorize additional expenditures and approve CA3 and CA4. Design work will continue for much needed improvements at the WTP.
- Postpone CA3 &/or CA4. Delays will increase the risk for WTP process malfunctions, operational challenges and impacts from power outages. For CA4 only, grant implications will exist.
- Reject CA3 &/or CA4. The WTP has process, safety and operational issues that must be corrected in order to maintain compliance with State regulations, avoid safety incidents, and continue providing safe drinking water to SUA customers.

Recommendation: Staff recommends

1. Approve staff execution of CA3 for \$1,244,700 and CA4 for \$471,500.
2. Authorize total project expenditures of \$2,523,000, which includes the original PSA, CA1 through CA4, permitting and 10% contingency.

Prepared by: Candy Staring, Capital Program Manager

Reviewed by: William Millis, WR Director

Submitted by: Norman McNickle, City Manager

Background Information: On January 9, 2017, SUA authorized \$366,000 for Phase 1 of the Water Treatment Plant (WTP) Lime System and Miscellaneous Improvements Project and approved staff execution of a Professional Services Agreement (PSA) with Black and Veatch. On July 17, 2017, SUA authorized an additional \$249,000 for Contract Amendment No. 1 (CA1) to the PSA. This CA1 and the subsequent CA2 authorized by City Management included detailed assessments and evaluations of the many WTP process and safety issues discovered during the initial PSA work. Results from CA2 have provided staff with a prioritized list of WTP improvement needs, as follows:

PROCESS/PUMPING	CONDITION	RELIABILITY	CAPACITY	FUNCTIONALITY	HEALTH/SAFETY	REDUNDANCY	REPAIR	WATER QUALITY	MAINT. PRIORITY	LIFE FACTOR	ASSET SCORE
Chlorine Feed System	3	2	2	4	5	4	2	5	5	5	44
Filters	4	4	2	4	1	5	5	5	5	5	44
Carbon Dioxide Feed System	5	4	3	4	1	5	5	5	4	5	44
Ammonia Feed System	5	5	2	4	4	2	3	5	5	4	39
Pneumatic System./ Raw Water Valves	3	4	2	2	5	5	1	2	5	5	36
Ozone	4	5	2	4	5	5	2	4	5	3	33
Lime Feed System	4	5	2	4	2	3	4	5	4	4	31
SCUs	5	5	2	5	1	5	5	4	3	5	31
Fluoride Feed System	4	4	2	3	4	5	4	2	3	5	25
Coagulant Feed System	2	3	2	3	3	2	4	3	3	5	15

The asset score shown in the far right column of the above table offers a method for ranking the criticality of various needs with the chlorine system being the highest priority. Based on this prioritized list, staff has negotiated with Black and Veatch to establish a scope, fee and schedule for CA3. The CA3 scope generally includes the following:

- Plan and Layout (10% Design) for modifications and improvements to raw water meter vaults, solids contact units, re-carbonation basins, ozone contactors, backwash pumps, all chemical feed systems, various chemical feed points, instrumentation and controls and many ancillary components necessary to support these system.
- Plan and Layout (10% Design) a new filtration complex north of the existing filters.
- Design, permitting, bidding and construction administration for the Chlorine System.
- Surveying and geotechnical investigation to support design efforts.
- Pilot studies and assessments to ascertain which treatment train option will provide the highest quality of distributed water to Stillwater’s customers.
- Water quality testing and assessments to support a variance request to the Oklahoma Department of Environmental Quality (ODEQ) regarding operation and flow rate for new filters.

- Coordination with ODEQ regarding pilot studies and variance requests.

Additionally, Water Resources (WR) staff recently learned that the Oklahoma Department of Emergency Management (OEM) has grants available for generators. A stationary permanent generator for the WTP was originally scoped under CA1 and planned for a later construction phase. However, the opportunity for at least \$2 Million in OEM grant funds for this purchase created the need for an accelerated schedule for the generator portion of the project. As such, generator planning, design, permitting, bidding and construction administration has been negotiated with Black and Veatch through CA4 to the PSA.

The fee negotiated with Black and Veatch for CA3 is \$1,244,700 and for CA4 is \$471,500. Staff is requesting a total authorization of \$2,523,000, which includes expenditures for the original PSA, CA1 through CA4, permitting and contingencies.

As the project advances, WR staff will return to SUA to request additional authorization for future PSA amendments and for authorization, award and contract approvals for construction and inspection services once construction bids are available. In total, the identified improvements at the WTP are estimated at approximately \$30 Million in design, construction and inspection fees. In order to complete the work at the WTP, the team is planning to phase the work in separate construction packages:

- Package 1: Chlorine Storage and Feed System Upgrades and Rehabilitation
- Package 2: 3,000 kW Stationary Generator
- Package 3: New WTP Filters and Backwash System
- Package 4: Chemical Feed Systems (including Lime Feed) and Miscellaneous Improvements

The various packages will progress through planning, design and construction over the next several years.