Santa Clara Valley Water District

File No.: 21-1050

Agenda Date: 11/9/2021
Item No.: 5.2.

BOARD AGENDA MEMORANDUM

SUBJECT:
Approve Sole Source Purchase of Two (2) Online Trihalomethane (THM) Analyzers from Aqua Metrology Systems Limited (AMS) for Continuous Finished Water THM Monitoring at the Rinconada Water Treatment Plant (Project No. 93291012) and Penitencia Water Treatment Plant (Project No. 93231009) for a Not-To-Exceed amount of $200,000.

RECOMMENDATION:
Authorize the Chief Executive Officer to negotiate, execute, and amend the sole source purchase of two (2) online THM analyzers from AMS to obtain real-time THM data at Rinconada and Penitencia Water Treatment Plants from Aqua Metrology Systems Limited (AMS), in a not-to-exceed cost of $200,000.

SUMMARY:
THMs are byproducts of the water treatment process. They are formed when natural organic material, such as the decaying vegetation commonly found in lakes and reservoirs, reacts with chlorine used to treat the water. This reaction produces disinfection byproducts, the most common of which are THMs. THMs are regulated compounds in drinking water, and the current drinking water maximum contaminant level (MCL) is 80 micrograms per liter. Levels of THM can be affected by seasonal changes in source water quality or by changing amounts of disinfectant added.

During the last drought in 2014 to 2015, Rinconada Water Treatment Plant (RWTP) experienced elevated THM in the finished water due to deteriorating source water quality caused by the drought conditions. To better predict and manage THM formation, Staff contacted two companies, which currently produce and supply online THM analyzers, to obtain loaner equipment for the purpose of conducting real time side-by-side analysis and comparison study prior to selecting the instrument that best meets our needs.

Staff proceeded to pilot the two available online THM analyzers in a side-by-side comparison study to provide real-time THM data to assist RWTP Operations with process optimization. The two THM analyzers were AMS's THM-100-FP and Multisensor Systems MS 2000. The study concluded that the THM-100-FP analyzer had a better correlation with laboratory analytical results while the MS2000 did not. At that time, with the drought conditions subsiding, THM values continued to be in normal

ranges and did not justify purchasing such an expensive analyzer.

In 2017, San Jose Water Company (SJWC) loaned Santa Clara Valley Water District (Valley Water) the AMS THM-100-FP analyzer for continuous monitoring of the finished water at RWTP to better understand the THM levels in RWTP's finished water and to manage the formation within SJWC systems. Valley Water staff worked in conjunction with SJWC and compared the online THM analyzer data with laboratory THM data and has further confirmed that the THM-100-FP analyzer continues to correlate well with laboratory analytical results and provide reliable and accurate results that meets our operational needs.

SJWC has since recovered their analyzer early this year to use it in their own system and Valley Water staff continued our efforts to find comparable products and evaluate them. Most recently, in May 2021, Valley Water staff reached out to a third vendor, Parker, to research the real-time THM analyzer that they produced, but Parker informed Valley Water that they did not provide loaner equipment units. Without the loaner unit, even if we were able to acquire the unit's performance data, Valley Water is unable to evaluate Parker's THM analyzer for (1) data accuracy and correlation with laboratory data, (2) ease of maintenance and calibration, (3) reliability and durability.

Based on Valley Water's outreach and evaluation, staff has determined that Aqua Metrology Systems (AMS) THM-100-FP provides reliable real-time THM and THM formation potential data that predicts THM levels in the finished water. Based on the foregoing, the best interest of the District cannot be served through a competitive procurement because only one firm, AMS, produces a real-time THM analyzer that can provide the performance and reliability that Valley Water requires, and there is not an available equivalent that can be properly evaluated that meets Valley Water's minimum needs.

In the last three years staff have successfully used the loaned AMS THM 100-FP to make process adjustments reliably, boosting staff confidence in the analyzer accuracy and operations. Current drought conditions have acerbated THM forming conditions and staff is requesting this sole source purchase to help manage water quality at the RWTP and PWTP where the THM formation potential is the greatest.

FINANCIAL IMPACT:
Funding for the purchase of one (1) THM analyzer will be from Rinconada Water Treatment Plant General Operations budget, Project No. 93291012, and there is sufficient budgeted fund in the FY 22 budget. Funding for the purchase of one (1) THM analyzer will be from Penitencia Water Treatment Plant General Operations budget, Project No. 93231009, and there is sufficient budgeted fund in the FY 22 budget.

CEQA:
The recommended action does not constitute a project under CEQA because it does not have the potential for resulting in direct or reasonably foreseeable indirect physical change in the environment.

ATTACHMENTS:
None.

UNCLASSIFIED MANAGER:
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