



City of Broken Arrow

Request for Action

File #: 18-331, Version: 1

**Broken Arrow Municipal Authority
Meeting of: 3-6-2018**

**To: Chairman and Authority Members
From: Utilities Department
Title:**

Approval of and authorization to accept the proposal from Pencco, Inc., to extend the 45 day chemical feed pilot program for odor control and the monitoring service along the County Line sewer trunk line

Background:

At the December 5, 2017 meeting, BAMA approved a proposal from Pencco, Inc. to conduct a 45 day chemical addition pilot program for odor control along County Line Road sewer trunk line. This program was initiated as a proactive response to the sewer odor complaints from residents living along County Line Road.

On January 6, 2018, Pencco subsequently mobilized and installed the bulk chemical storage tank and chemical feed pumps at the 209th lift station located along 71st St. E. Two odor loggers were also installed in the manholes along the trunk line; one at New Orleans St & 193rd Ave., the second unit at 8511 S. 9th St. As part of their scope of work, Pencco staff closely monitored and adjusted the chemical feed rate to optimize the chemical dosage according to the Hydrogen Sulfide levels recorded in vapor form and H₂S reduction at the two manhole structures. All data recorded is transmitted and monitored using cloud storage. Staff has been granted access to log on and observe in real time the H₂S levels at the two locations and the chemical feed rate. A third odor logger was installed at staff's request at Washington St. & 193rd Ave. and currently does not have the remote data transmitting capability. The correct type of odor logger is on order and Pencco shall install it as it becomes available.

In reviewing the data collected from the odor loggers, the chemical addition program has proven to be successful. The specially formulated chemical has reduced the vapor level of sulfide recorded from as high as 62 parts per million (ppm) to an average 3 ppm. This was made possible after starting with a high chemical feed rate of about 400 gallons per day (gpd) and gradually lowering the feed rate to about 225 gpd. The initial high dosage was needed to coat the slimy sulfide releasing bacteria layer in the pipe. The established target feed rate is between 180-210 gpd and this will correlate directly to ambient temperature. Higher temperatures increases the release of sewer gases.

Staff is recommending to continue with the chemical addition for the odor control program till the beginning of the new fiscal year. In the meantime Utilities staff will work closely with Engineering and Construction staff to re-evaluate the chemical addition program and explore other cost effective methods to control the release of sewer gases till the trunk line gets replaced.

Staff has reached out to Pencco and negotiated a slightly reduced price of \$2.38 per gallon of chemical compared to \$2.48 charged for the 45 day pilot program. It is estimated that each tanker load of chemical is about 4,200 gallons and is expected to last about 20 days. The cost per load is about \$9,996.00. The last load of chemical delivered per the 45 day pilot program contract will last until approximately March 7, 2018. A new load shall be ordered on or around March 1st to replenish the chemical inventory. Seven more loads will be needed to extend the program until July 2018 at \$9,996.00 per load. Including the monthly cost of equipment rental, the total estimated cost to continue with the chemical addition program is \$69,972.00.

Pencco has agreed to continue with the current services provided as outlined in the November 21, 2017 proposal. Representatives of Pencco will meet with city staff sometime in March to discuss the results of the 45 day pilot program. Staff has identified funds in the Sewer Repair and Construction Division (020-5415-435-4028).

Cost: \$ 69,972.00

Prepared By: Anthony C. Daniel, Utilities Director

Reviewed By: Finance Department
Legal Department
Assistant City Manager-Operations

Approved By: Michael L. Spurgeon, City Manager

Attachments: Proposal from Pencco to continue the chemical addition pilot program for sewer odor along County Line Road sewer trunk line

Recommendation:

Approve and accept the proposal from Pencco Inc. to continue with the chemical feed pilot program for odor control along the County Line sewer trunk line