

**Metropolitan Domestic Water Improvement District
Board of Directors Meeting**

July 11, 2011

Inorganic Chemical Analytical Services Award

Synopsis

The Board of Directors is requested to approve the Analytical Laboratory Services Contract for Inorganic Chemical Analyses with Turner Laboratories, Inc. Inorganic chemicals consist of the following contaminants: metals, major ions, and other constituents such as asbestos, which are required to be sampled under federal and state rules. This is to ensure that the District complies with the monitoring under the Arizona Department of Environmental Quality's Drinking Water Rules. The contract also provides for analyses of constituents that are not currently regulated under state or federal drinking water rules. District customers routinely request information pertaining to these constituents such as hardness and total dissolved solids.

Background

Required by the Arizona Department of Environmental Quality (ADEQ) Drinking Water Rules, the District must monitor once every three years for regulated inorganic chemicals if there are no detections of the chemicals found within the analyses. Inorganic chemicals include nutrients such as nitrate, and metals such as copper, lead, arsenic and mercury. The monitored constituents are listed in the attached proposal. If nitrate is detected above 5 mg/L, the District must monitor at that sampling point on a quarterly basis for four consecutive quarters until the results are proven to be below the drinking water MCL (Maximum Contaminant Level) value of 10 mg/L. The District can then return to annual sampling if the level remains below the MCL of 10 mg/L, even though it may exceed the increased monitoring level value of 5 mg/L. If an inorganic constituent is detected above the MCL value, the District must sample for at least two consecutive quarters until the results are below the MCL value. The District can then return to annual sampling, and after three years of no results above the MCL value, return to a once every three years monitoring period. Results on detections are reported in the District's Annual Consumer Confidence Reports (CCRs).

The District completes inorganic monitoring for nitrates on a monthly, quarterly and annually for the Metro-Main, Metro-Hub and Metro-SW service areas.

Issues

The District published a request for proposals from laboratories for Inorganic Chemical Analysis in

the Daily Territorial on April 11, 12 and 13, 2011. Eight laboratories were sent the proposal package (see attached), and the District received four proposals. Proposals were received from Turner Laboratories, Inc. (a Tucson based laboratory), TestAmerica Laboratories, Inc. (with a Tucson office and a main laboratory in Phoenix), XENCO Laboratories (with an office in Tucson, and a laboratory in Phoenix) and Columbia Analytical Services, Inc. (with a small laboratory in Tucson and its main laboratory in Kelso, WA). The selection of a laboratory is made by scoring each laboratory according to such details as Quality Assurance/Quality Control (QA/QC) plans, Costs, RUSH Costs, Professional Expertise and Turn-Around Time, Lab Team, Arizona License and Insurance requirements.

In reviewing the proposals, issues arose mainly with costs, turn-around time (TAT) and method detection limits (MDLs). The District samples at each of its active Entry Points into the Distribution System (EPDS) sample locations and at distribution point locations throughout the District. An EPDS is the point at which water is discharged from a well, storage tank, reservoir or pressure tank into the distribution system. The number of samples is subject to change should detection occur, a distribution system sample is collected or the District decides to increase the number of samples taken.

District staff reviewed and had Turner Labs with the highest total score and highest QA/QC, Costs and Professional Expertise scores as noted on Table 1 below. Turner Labs was also first Regular Cost Ranking and on the Five-Day TAT Cost ranking from Tables 2 and 3 below. TestAmerica Labs had the second highest Total Score from Table 1 above. They were also second on QA/QC, Cost and Professional Expertise on Table 1. However, they ranked third for the Regular Cost Ranking on Table 2, but tied for second on the Five-Day TAT Cost Ranking on Table 3. Xenco Labs ranked first for Costs, but third for a Total Score and fourth for QA/QC on Table 1. XENCO also ranked second for Regular Costs on Table 2, and tied for second for the Five-Day TAT Cost Ranking on Table 3. Columbia Analytical Services ranked third on its QA/QC score but last on its Costs, Professional Expertise and Total Costs scores on Table 1. Columbia also ranked last for Regular Costs and Five-Day TAT Cost Ranking on Tables 2 and 3. Columbia obtained these low cost scores mainly due to the fact that the District would be required to pay for shipping and complete its own packaging of the samples back to the Kelso, WA lab for analyses.

As noted below on Table 3, Turner Labs had the best ranking for a five-day TAT cost. A five-day TAT arsenic analysis is used as all of the District's arsenic Treatment Systems to quickly determine if there are any trigger level exceedences within a Treatment System. This allows the District to maintain compliance with the ADEQ Drinking Water rule, and allows for the timely change-out of media as necessary to prevent any further elevated arsenic detections. Turner Labs also had the best overall Total Score on Table 1. Also, Turner had the best cost on the Table 2 Regular Costs, and for a five-day TAT with no additional charges. The District has also used Turner Labs for the past several years and has been pleased with its performance. Lastly, Turner is a solely Tucson based Laboratory, which is important for a faster Turnaround Time of 24-48 hours.

In the event that a QA/QC laboratory problem error occurs that requires a resample, the District's contract requires the laboratory to pay for both the original sample and resample analyses if more

than three resample's are necessary, and if they are due to a laboratory QA/QC error.

Staff Recommendation

Staff recommends that the Board of Directors award the Analytical Laboratory Services Contract for Inorganic Chemical Analyses to Turner Laboratories, Inc. The contract amount for FY 11/12 will not exceed \$44,000.00, and will expire on June 30, 2012, with the option to extend the contract an additional two years, pending the Board of Directors annual approval. These costs account for compliance sampling; contingency sampling, an elective IOC monitoring within all five of the District's Service areas. The District has also used TestAmerica in the past for arsenic monitoring and has been pleased with their performance. In the event that Turner Laboratories, Inc. cannot perform the Inorganic Chemical analysis due to equipment failure, turn-around time, necessary detection levels or other, it is recommended that TestAmerica Laboratories shall be the back-up laboratory for Inorganic Chemical Analyses due to their scores and costs noted above. The District has also used Turner Laboratories in the past and has been pleased with its performance.

Suggested Motion

I move that the Board of Directors award the Analytical Laboratory Services Contract for Inorganic Chemicals to Turner Laboratories, Inc. for a not to exceed amount of \$44,000.00. The contract will expire on June 30, 2012. The contract may be extended for an additional two years, pending the Board of Directors approval. In the event that Turner Laboratories, Inc. cannot perform these necessary analyses, TestAmerica Labs shall be the back-up Laboratory.

Respectfully submitted,

Christopher W. Hill
Deputy Manager

I concur with the above-noted recommendation

Respectfully submitted,

Mark R. Stratton, P.E.
General Manager

Table 1 – Total Proposal Review Criteria

Criteria	Turner Labs	TestAmerica Labs	XENCO Labs	Columbia Analytical Services
QA/QC Score (QA/QC Plan, Back-up Plan, Method Detection Limits)	22	21	13	16
Costs (Total Cost, Unit Cost, RUSH Cost)	22	21	23	16
Professional Expertise (References/Expertise, Lab and Equipment Certifications, Turn-Around Time (TAT), Lab/Office Locations)	20	19	18	14
Lab Team (Resumes/Organization Chart and Subcontractors)	4	4	2	4
RFP, ADEQ Forms and License Included Score	15	15	15	15
Insurance Requirements Score	9	10	9	10
Total Score	92	90	80	75

Table 2 – Regular Costs

Parameter	Turner Labs	XENCO Labs	Test America Labs	Columbia Analytical Services
Metals Cost	\$135.30	\$137	\$145	\$119
Major Ions Cost	\$165.60	\$157	\$173	\$144
Arsenic Cost	\$12	\$10	\$19	\$25
Nitrate Cost	\$13.50	\$10	\$13	\$12
Copper/Lead Cost	\$26.20	\$20	\$28	\$25
Other IOCs Costs	\$252.10	\$275	\$272	\$197
Unit Costs	\$604.7 for all three years	\$609 for all three years	\$650 for all three years	\$522 for all three years (plus shipping and handling to Lab)
Cost Ranking	1	2	3	4

Table 3 – Five Day Turn-Around Time (TAT) Costs

Criteria	Turner Labs	TestAmerica Labs	XENCO Labs	Columbia Analytical Services
Five-Day TAT Costs	0 Extra	1.25x	1.25x	1.50x (plus shipping and handling)
Five-Day TAT Cost Ranking	1	2	2	3