

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

June 9, 2014

**Approval of Analytical Laboratory Services Contract
for Radiochemical Analyses**

Synopsis

The Board of Directors is requested to approve the Analytical Laboratory Services Contract for Radiochemical Analyses with Turner Laboratories, Inc. This is to ensure that the District complies with the Arizona Department of Environmental Quality's Drinking Water Rules.

Background

According to the Arizona Department of Environmental Quality (ADEQ) Drinking Water Rules, the District must currently monitor for Radiochemicals once every three years. Regulated radiochemicals include Gross Alpha, Radium-226 and Radium-228, and Uranium. The District monitors for the Regulated Radiochemicals at the 21 active Metro-Main Service Area's Entry Point into the Distribution System (EPDS); the five active Metro-Hub Service Area's EPDSs, and the five active Metro-SW Service Area's EPDSs. An EPDS is the point at which water is discharged from a well, storage tank, reservoir or pressure tank into the distribution system, prior to any service connection. The District occasionally collects samples for Radon in anticipation of the new Radon rule. Please note that the compliance samples for Radiochemicals within the Metro-Hub and Metro-SW Service Areas are collected by ADEQ under the Monitoring Assistance Program (MAP) unless there is a detection.

In December 2000, EPA finalized a new Rule for Radionuclides that requires monitoring for Gross Alpha (MCL of 15 pCi/L), Combined Radium 226/228 (5 pCi/l), and Uranium (MCL of 30 ppb). The rule requires that four quarters of monitoring for each of the noted contaminants must occur. However, grandfathered data was accepted by ADEQ for the District's Metro-Main service area. Due to the acceptance of the grandfathered data, and four quarters with no detections of data for the District's newest wells, the new rule allows for monitoring once every three, six or nine years at the District's EPDSs. However, for any new wells, four quarters of monitoring must occur before an ADEQ approved reduction in monitoring can occur. Results for detections for radiochemicals such as Gross Alpha, Combined Radium and Uranium are reported in the District's annual Consumer Confidence Reports.

Issues

The District published a request for proposals from laboratories for Radiochemical Analyses in the

Daily Territorial on April 21-24, 2014. Seven laboratories were sent the proposal package but the District only received one proposal. District staff received a proposal from Turner Laboratories, Inc. (Turner Labs), a Tucson based office and laboratory. The selection of a laboratory is normally made by rating each laboratory according to quality assurance/quality control, method detection levels, costs for analyses, turnaround time, references, certification, and other pertinent factors such as laboratory methods used, and laboratory reports.

Issues mainly occur with costs 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. The number of samples is subject to change should a detection occur, a distribution system sample is collected or the District decides to increase the number of samples taken.

District staff reviewed the analytical contract proposal from Turner Labs and noted the Radiochemical Costs on Table 1. The District has used Turner Laboratories in the past for Radiochemicals and has been pleased with their results. It should also be noted that Turner Labs subcontracts their Radiochemical analyses to Radiation Safety Engineering, Inc., which is the only licensed laboratory in the State of Arizona to perform Radiochemical analyses.

Table 1 – Costs

Parameter	Turner Labs
Gross Alpha Cost	\$52
Combined Radium Cost	\$180
Radium 226 Cost	\$26
Radium 228 Cost	\$115
Gross Beta Cost	\$51
Isotopic Uranium Costs	\$105
Radon Costs	\$61
Unit Costs	\$590.00
Cost Ranking	1

In the event that a QA/QC laboratory problem error occurs that requires a resample, the District requires the contracted laboratory to pay for both the original sample and resample analyses if more than three resamples are necessary.

Staff Recommendation

Staff recommends that the Board of Directors approve the analytical services contract for Radiochemicals to Turner Laboratories, Inc. based on their Costs and past performance. The contract approval would not exceed the amount of \$20,000, to expire on June 30, 2015, but with the

option to extend the contract an additional two years with Board approval. This cost includes compliance sampling for Metro-Main, Metro-Hub and Metro-SW service areas and some contingency sampling. Funding is included in the Fiscal Year 2015 Budget.

Suggested Motion

I move that the Board of Directors approve the analytical services contract for Radiochemical Analyses to Turner Laboratories, Inc. for a not-to-exceed amount of \$20,000, and would expire on June 30, 2015, with the option to extend the contract for two additional years pending the Board of Directors annual approval.

Respectfully submitted,

Charlie A. Maish, P.E., R.L.S.
District Engineer

I concur with the above-noted recommendation

Respectfully submitted,

Joseph Olsen, P.E.
General Manager