

MEMORANDUM

TO: Paul Rakosky  
Director of Finance and Management

FROM: Greg Davies  
Director of Public Utilities

DATE: August 21, 2012

RE: BID RECOMMENDATION – NUTRIENT AUTO ANALYZER 3 SYSTEM  
BID PROPOSAL #SA004490

The Purchasing Office opened formal bids on July 19<sup>th</sup>, 2012 for the purchase of a nutrient auto analyzer system for the Division of Power and Water (Water). Three (3) bids were received.

OI Corporation was the apparent low bid of \$39,925.50. They, however, do not meet the following specifications 3.6.2.1, 3.6.2.9, 3.6.3.2, 3.6.3.5, 3.6.3.9, 3.6.4.7, and 3.6.4.9.

The second lowest bid was Seal Analytical Inc., at \$44,521.00 and they meet our specifications.

Therefore, the Division of Power and Water (Water) is recommending the award go to Seal Analytical, Inc. as the lowest responsive, responsible, and best bidder to meet our specifications. This award is for one (1) nutrient auto analyzer system. The total award will be for \$44,521.00.

If additional information is needed please contact Matt Steele at 614-645-7691.



## **Evaluation of OI Analytical Bid Proposal - SA004490 / Nutrient Auto Analyzer 3 System**

*3.6.2.1 The pump should have capacity for 28 pump tubes plus up to 8 air supply tubes.*

The OI pump can only accommodate 8 or 16 pump tubes. This prevents multiples tests (i.e. ammonia, nitrate, total and ortho phosphorus) from being run at the same time – increasing analysis time.

*3.6.2.9 Pump must utilize existing AutoAnalyzer II model pump tubes.*

None of our current consumables, pump tubes, spare parts or chemistry modules will work on the OI machine, resulting in an additional \$5K in supplies just to get it running.

*3.6.3.2 Hydraulic components must be glass, chosen for its inert chemical properties.*

OI only uses plastic components (fluorinated ethylene propylene, polyether ether ketone, ethylene-vinyl acetate, polysulfone, and polyethylene) not glass. The chemical reaction coils need to be glass, but they are hydrophilic ethylene-vinyl acetate. When exposed to the harsh chemical conditions the plastic components will break down, and may interact with the chemical reactions during the analysis.

*3.6.3.5 Must have a leak detector to prevent damage to the analyzer in the event of a chemical spill.*

OI does not have a leak detector. This makes it impossible to find/see a leak, especially since the OI design contains all the plumbing within the equipment housing. In addition, the design has multiple units stacked on top of each other, not only making the leak hard to access but also an issue for the components below the chemical spill.

*3.6.3.9 Include a 3 channel system to analyze three chemistries simultaneously, i.e. Ammonium, Nitrate and Ortho-P, per Standard Methods SM4500 NH3-G, SM4500 NO3-F, and SM4500 P-F.*

The OI system is not able to analyze our samples that have been preserved with sulfuric acid for all three chemistries simultaneously.

*3.6.4.7 Must be capable of fitting 10mm, 30mm or 50mm flowcells according to method sensitivity requirements.*

The OI photometric detector only comes with a 5mm flow cell and an optional 10mm flow cell. We are certified by Ohio EPA to run Total and Ortho Phosphorus by Standard Methods (SM 4500-P F), which requires the use of either a 15mm or 50mm flow cell. This limitation prevents us from using this machine to analyze 2 of the 4 certified nutrient tests to be addressed by the Nutrient Auto Analyzer System.

*3.6.4.9 Must have extended wavelength range 350-900 nm for extended sensitivity at low-to-mid-wavelengths.*

OI range is 420 - 880 nm.