



Metropolitan Water Reclamation District of Greater Chicago

100 East Erie Street
Chicago, IL 60611

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Title: Issue purchase order and enter into an agreement with PerkinElmer Health Sciences, Inc., for a NexION 300/350X Inductively Coupled Plasma-Mass Spectrometer, in an amount not to exceed \$159,411.24, Accounts 101-16000-634970, Requisition 1456472

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Date	Ver.	Action By	Action	Result
3/2/2017	1	Board of Commissioners	Approved	Pass
3/2/2017	1	Committee of the Whole	Recommended	Pass

TRANSMITTAL LETTER FOR BOARD MEETING OF MARCH 2, 2017

COMMITTEE ON PROCUREMENT

Mr. David St. Pierre, Executive Director

Issue purchase order and enter into an agreement with PerkinElmer Health Sciences, Inc., for a NexION 300/350X Inductively Coupled Plasma-Mass Spectrometer, in an amount not to exceed \$159,411.24, Accounts 101-16000-634970, Requisition 1456472

Dear Sir:

Authorization is requested to issue a purchase order and enter into an agreement with PerkinElmer Inc. (PerkinElmer) to furnish, and deliver a NexION 300/350X Inductively Coupled Plasma-Mass Spectrometer (NexION 350X ICP-MS) System. The Monitoring and Research (M&R) Department's Stickney Analytical Laboratory (SAL) at the Stickney Water Reclamation Plant is requesting purchase of this instrument to analyze trace metals required by permits, regulations, and ordinances including: water reclamation plant influents and effluents for compliance with NPDES permits, monitoring biosolids permits, industrial discharges to ensure that dischargers are in compliance with the industrial pretreatment regulations, screening samples for the Resource Recovery Ordinance and the monitoring of the water quality in the Chicago area waterways to meet IEPA designated Water Quality Standard. This purchase order will expire on March 31, 2017.

In order for the M&R Department to maintain compliance with evolving IEPA and NPDES permit levels; it is necessary to replace the existing 9-year-old PerkinElmer 5300 ICP-Optical Emission Spectrometer (ICP-OES) with the NexION 350X ICP-MS. With the current instrumentation at both the SAL and Egan Analytical Laboratories, the Analytical Laboratories Division (ALD) will be unable to keep up with the increasingly low levels required by permits, regulations, and ordinances. It is difficult to obtain some of the trace metal levels required in our current permit. The NexION 350X ICP-MS will provide the technology necessary to achieve and surpass the low levels required.

It is recommended to purchase the NexION 350X ICP-MS as a sole source because it is the only technology in the industry with the compatibility of the M&R Department's current instrumentation. As the NexION 350X ICP-MS is the first ICP-MS acquisition for the M&R Department, having a technology with hardware and software compatible and essentially the same as the current ICP-OES systems will be highly beneficial in the successful transition from ICP-OES to ICP-MS minimizing or eliminating any down time for data reporting.

The NexION 350X offers the lowest achievable limits of any instrument on the market while demonstrating the best ability to handle interferences, providing the highest level of data quality. Water Quality Standards and NPDES permits continue to require lower limits. The NexION 350X is able to achieve very low levels by an advanced optical system that contains an adjustable torch that makes it easy to analyze the most difficult samples. In addition, its unique, shear gas system eliminates interferences. When buying low-level instrumentation, it is critical to have the ability to reduce or eliminate interferences, especially for the type of samples our laboratory analyzes with complex environmental or waste matrices.

The NexION 350X also has breakthrough Flat Plate plasma technology that reduces argon consumption. This will significantly reduce the cost of supplying argon to run the instrumentation. In addition, the user interface and instrument maintenance procedures make it the most user-friendly on the market utilizing intuitive single keystroke optimization, scheduled maintenance alerts, fully automated system functionality, and maintenance procedures that eliminate many consumable costs. Typically, ICP-MS systems can be difficult to operate and require specific training. This system can be easily trained to technical staff. Lastly, there is a savings of over \$80,000.00 to purchase this unit which includes a trade-in of an existing PE ICP-OES system.

PerkinElmer Health Sciences, Inc. is registered and in good standing with the State of Illinois.

The Multi-Project Labor Agreement (MPLA) is not applicable to this contract because the contract is primarily a furnish and deliver contract.

In view of the foregoing, it is recommended that the Director of Procurement and Materials Management be authorized to issue a purchase order and enter into an agreement with PerkinElmer Health Sciences, Inc., in an amount not to exceed \$159,411.24.

Funds for the 2017 expenditure are available in Accounts 101-16000-634970.

Requested, Thomas C. Granato, Director of Monitoring and Research, TCG:EWP:MPC:KB:jvs
Recommended, Darlene A. LoCascio, Director of Procurement and Materials Management
Respectfully Submitted, Barbara J. McGowan, Chairman Committee on Procurement
Disposition of this agenda item will be documented in the official Regular Board Meeting Minutes of the Board of Commissioners for March 2, 2017