



Metropolitan Water Reclamation District of Greater Chicago

100 East Erie Street
Chicago, IL 60611

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Title: Issue purchase order to Furnish and Deliver External Carbon Source Product and Rental of a Portable Dosing System to the Calumet Water Reclamation Plant, to Environmental Operating Solutions, Inc. (EOS), in an amount not to exceed \$401,000.00. Account 201-50000-601170, Requisition 1384316

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Date	Ver.	Action By	Action	Result
9/4/2014	1	Board of Commissioners	Approved	Pass
9/4/2014	1	Committee of the Whole	Recommended	Pass

TRANSMITTAL LETTER FOR BOARD MEETING OF SEPTEMBER 4, 2014

COMMITTEE ON PROCUREMENT

Mr. David St. Pierre, Executive Director

Issue purchase order to Furnish and Deliver External Carbon Source Product and Rental of a Portable Dosing System to the Calumet Water Reclamation Plant, to Environmental Operating Solutions, Inc. (EOS), in an amount not to exceed \$401,000.00. Account 201-50000-601170, Requisition 1384316

Dear Sir:

Authorization is requested to issue a purchase order to Environmental Operating Solutions, Inc., to furnish and deliver external carbon source product and rental of a portable dosing system to the Calumet Water Reclamation Plant, in an amount not to exceed \$401,000.00, through December 31, 2014. The cost of the MicroC2000 external carbon product is \$392,000.00 and the rental cost of the temporary storage and dosing system is \$9,000.00, for the ninety (90) day trial period.

The potential for implementing enhanced biological phosphorus removal (EBPR) at the Calumet Water Reclamation Plant (CWRP) is currently being evaluated through a full-scale pilot test in order to comply with pending nutrient regulations and resultant National Pollutant Discharge Elimination System (NPDES) permit limits. EBPR is seen as a sustainable approach to nutrient removal; however, previous studies have indicated that there is an insufficient supply of carbon in the influent to the plant. As the availability of readily biodegradable carbon is critical to the success of EBPR, it is essential to supplement the carbon entering the plant with an outside source.

The CWRP Phosphorus Task Force evaluated several carbon supplements and further pursued the use of MicroC2000 in a small-scale reactor test that has been conducted to determine its viability to serve as the supplemental carbon source for the CWRP. Preliminary results have indicated phosphorus levels below the

proposed regulatory limit are achievable with MicroC2000. MicroC2000 was developed for nutrient removal and is a glycerin-based byproduct derived from renewable resources, making it the least expensive alternative. It is also the safest of all the carbon alternatives studied. Although there are several other carbon sources that could also accelerate EBPR, other common choices, such as methanol and acids, are flammable and corrosive in large quantities. As this study has an expected duration of only 90 days, the use of MicroC2000 is a prudent choice for carbon supplementation as it does not require the use of equipment and enclosures classified for hazardous environments required by the other alternatives. Additionally, given the District's sustainability directive, a carbon supplement that is a by product of industry is ideal since it does not draw upon non-renewable resources.

Given the success at the smaller scale using MicroC2000, a full-scale pilot study in one battery will be the next step so that the CWRP Phosphorus Task Force can determine whether the lack of carbon is the only barrier to successful implementation of EBPR at the plant-wide level or whether other infrastructure would need to be changed along with the optimal amount of supplemental carbon required by the system to ensure successful EBPR. In addition, the results of this study can be used as guidance for the implementation of EBPR at three other District plants.

Environmental Operating Solutions, Inc. has submitted prices to furnish and deliver an external carbon source and rental of a portable dosing system through December 31, 2014. Inasmuch as Environmental Operating Solutions, Inc. is the only manufacturer of MicroC2000, said purchase order may be issued without competitive bidding pursuant to Section 11.4 of the Purchasing Act.

The Executive Director has granted EOS an exception to the requirement of registration to do business in the State of Illinois. EOS is incorporated and in good standing in the State of Delaware.

The Multi-Project Labor Agreement is not applicable due to the nature of the work involved. If trade work is required, in-house trades will perform the work.

The Affirmative Action Interim Ordinance Appendix D is not included in this contract because it 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 to Environmental Operating Solutions, Inc. in an amount not to exceed \$401,000.00.

Funds are available in Account 201-50000-601170.

Recommended, Darlene A. LoCascio, Director of Procurement and Materials Management DAL:SEB:jk
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 September 4, 2014