



Request for City Council Committee Action From the Department of Public Works

Date: January 4, 2011

To: Honorable Sandra Colvin Roy, Chair Transportation & Public Works Committee

Referral: Honorable Betsy Hodges, Chair Ways & Means Committee

Subject: **Agreement with Dow Chemical for Research and Development Pilot Testing of Ultrafiltration Membranes**

Recommendation:

The proper City Officials are authorized to enter into a written agreement with the Dow Chemical Company providing for:

- a) Field testing of Dow Chemical Company ultrafiltration pilot unit and related items at a designated site in the City of Minneapolis water treatment facility at 4500 Marshall Street Northeast in Fridley, Minnesota,
- b) City's assistance in the installation and operation of the Dow unit,
- c) Dow's delivery and installation of the Dow unit at the facility,
- d) The City's allowing process streams to be discharged to appropriate locations,
- e) Confidentiality obligations of the City regarding information obtained from the testing,
- f) Reimbursement of the City for direct costs incurred by the City,
- g) Defense and indemnification of the City for claims arising from the project, and
- h) Other necessary and related provisions as laid out in the written agreement of the parties.

Previous Directives:

On April 16, 2010, the City Council authorized that proper City Officers be authorized to execute the necessary agreements to enter into a collaborative partnership with the Dow Chemical Company to evaluate existing and next-generation ultrafiltration membrane technologies and performance. The City will be reimbursed for all direct costs for coordination, installation, and operation of Dow equipment, including City staff time.

Prepared by: Annika M. Bankston, Senior Professional Engineer 661-4975

Approved by:

Steven A. Kotke, P.E., City Engineer, Director of Public Works

Presenters: Annika M. Bankston, Sr. Professional Engineer, Department of Public Works, Water Treatment & Distribution Services

Reviews

Permanent Review Committee (PRC): Approval ___ Date _____
Civil Rights Approval Approval ___ Date _____
Policy Review Group (PRG): Approval ___ Date _____

Financial Impact

No financial impact. The City will be reimbursed for its direct costs.

Community Impact

City Goal: “Lifelong Learning – Second to None,” the city will fully realize the benefits of having renowned educational and research institutions; ... and Minneapolis will be known as a center of ideas. This partnership follows the strategic direction for the City as an “Economic Engine: Generating Ideas, Inventions & Innovations”.

Comprehensive Plan: This project promotes the City’s environmental stewardship in encouraging partnerships with other organizations to make public operations more sustainable.

Background/Supporting Information

The City of Minneapolis has invested in state-of-the-art ultrafiltration membrane treatment at its Columbia Heights Membrane Treatment Plant. One of the core values of the Public Works Department is to develop collaborative partnerships that lead to a safe, clean, and beautiful urban environment. A research partnership with Dow evaluating commercially-available ultrafiltration modules and new, next-generation ultrafiltration technologies will benefit the City in a variety of ways:

- Knowledge gained about fundamental membrane characteristics and source water quality can be leveraged to optimize the operation of the Columbia Heights Membrane Plant.
- The parallel performance of the Dow membranes can be compared in real-time to that of the membranes of the Columbia Heights plant to provide better understanding of feed water quality and temperature impacts on ultrafiltration membrane performance.
- Data exchanged with Dow will provide additional information about Minneapolis water quality with respect to parameters that impact membrane performance. Dow will conduct water quality analyses not currently performed by the City
- The partnership with Dow will provide MWW insights into the research approach of a company renowned for innovation. MWW staff would benefit by being able to apply approaches and methodologies to our own internal research and process improvement efforts.

This partnership will allow Dow Water & Process Solutions, located in Edina, MN (a subsidiary of Dow Chemical) access to a municipal water source close to its Research & Development headquarters, which will allow for realistic testing of ultrafiltration technology as it is being developed and improved upon—furthering the industry with better ultrafiltration options.

On April 16, 2010 the City Council authorized City officials to execute the necessary agreements to enter into a collaborative partnership with the Dow Chemical Company. A confidentiality agreement (City agreement C-28012) was executed between Dow and the City to allow the Parties to discuss and evaluate opportunities for Dow to evaluate treatment technology and developmental products at City facilities. Such evaluations have confirmed the benefits to both parties as summarized above.

Key provisions of the testing agreement between the City and Dow for the project include:

- Allowance for Dow staff to work in City facility subject to standard Division security and access control policies;
- City's provision of floor space, a source of water at a specified flow rate, a power supply, and discharge locations for process streams from the unit;
 - Permeate and backwash streams from the unit will be recycled to the upstream process and undergo full-scale treatment.
 - Chemical waste streams from the unit will be directed to sanitary sewer.
- City's advance notification to Dow of other companies testing or studying at the facility and of facility shutdowns;
- City's agreement to keep all of Dow's testing data confidential except where not permitted by data practice laws until 2020 and to give them notice of requests for such data. The City promises it will not export or re-export any of their technology;
- An agreement term of 3 years, which can be terminated earlier upon advanced notice without cause;
- Dow's basic agreement to defend, indemnify and hold harmless the City and agreement to carry specified insurances. Dow will not provide any bonds or letters of credit;
- City staff assistance to Dow with any necessary government authorizations for the testing; and
- Dow's agreement to pay for costs incurred by the City.