

MEMO TO: Mayor Jeyes & Council

MEMO FROM: Michelle Allen, Chief Administrative Officer

DATE: March 8, 2017

SUBJECT: WATER TREATMENT PLANT – MEMBRANE FILTRATION PILOT PROJECT

Background

The new Village of Ashcroft Water Treatment Plant will incorporate membrane filtration as one form of treatment to remove particulates from the water.

Discussion

At the February 27, 2017 regular meeting of Council, approval to award the membrane filtration portion of the project to DWG Process Supply/Pall Water at a total adjusted price of \$918,940. Part of the filtration contract includes providing a pilot operation that will filter our water during the high turbidity season. This pilot project unit has been confirmed and is expected to be on site next week, will require 3 – 5 days to set up and then will begin filtering our water and recording the data.

The purpose of the piloting project will meet four objectives:

1. Confirm that the proposed membranes will provide the required results, and will assist with designing cleaning cycles;
2. Document the membrane performance under various operating conditions;
3. Will allow testing on the residuals to confirm volume, treatment and disposal approaches; and
4. Provide our employees with an opportunity to see and work with the proposed equipment.

Attached to this memo is a work program designed for this piloting project. The grant application included a budget figure of \$50,000 for this project and the work program estimates it to be \$41,000. There could be some adjustments to the overall costs as the plumbing and electrical connections for the pilot unit may take more or less time to complete. The piloting program will be carried out over one month however we have the option to extend the testing period for a second month if we feel that additional data is necessary. The \$41,000 includes the projected costs for a two month test period.

Recommendation

Administration recommends that Council approve the “Piloting for Water Treatment Plant” Work Program dated March 6, 2017 as presented by Urban Systems Ltd. in the amount of \$41,000 and acknowledge that costs may change slightly due to set up requirements.

Respectfully submitted,

J. Michelle Allen,
Chief Administrative Officer

Attach.

March 6th, 2017

File: 1093.0041.01

The Village of Ashcroft
P.O. Box 129
Ashcroft B.C. V0K 1A0

Attention: Michelle Allen, Chief Administrative Officer

RE: PILOTING FOR WATER TREATMENT PLANT

1.0 BACKGROUND INFORMATION

The Village of Ashcroft (Village) was successful in receiving funding through the New Building Canada Fund – Small Communities Fund for a new water treatment plant (WTP). The proposed WTP will address two key aspects of water quality that currently do not meet the Guidelines for Canadian Drinking Water Quality:

1. Turbidity, and
2. Microbiological parameters including protozoa, bacteria and viruses.

Pilot testing is proposed for the WTP to:

- Confirm membrane performance and cleaning cycle design parameters;
- Document membrane system performance under various operating conditions;
- Provide operators with an opportunity to see and work with the proposed equipment; and
- Conduct testing on residuals to confirm treatment and disposal approaches.

2.0 WORK PROGRAM – PILOTING

Task 1 – Pilot Coordination and Design

The first task of the proposed work is to develop a pilot plan and coordinate shipment to site. A pilot protocol will be developed with pilot equipment suppliers outlining:

- Pilot Objectives;
- Targeted water quality parameters;
- Pilot requirements (e.g. power connection, raw water feed and disposal); and
- Required monitoring requirements equipment.

Urban will work with the Village to establish reasonable monitoring and testing throughout the pilot. We will also coordinate the laboratory testing, shipping of equipment and chemicals, equipment housing, power connections and raw water feed with assistance of the Village.

Task 2: Pilot Operation

Pilot operation includes set-up assistance, operator training by the pilot equipment providers and pilot operation. It is assumed that the Village's public works staff will operate the pilot plant, and test the water quality with their own portable equipment. Urban Systems will provide support and technical assistance with installation, pilot operation and the review of water quality data and other Pilot results.

Samples will also be sent to a laboratory for confirmation of the field tests. We have allowed for two general potability water tests on the raw water and residuals, per month of piloting.

It has been assumed that the pilot will be operated for approximately one month with the possibility to extend the pilot to a second month, if required.

Task 3: Summary Reporting and Meeting

This task will comprise the review the pilot operational data and preparation of a summary report of the results. The summary reporting and water quality analysis will be included as a technical memo within the preliminary design.

3.0 PROJECT TEAM

Our proposed project team includes the following members:

| | |
|---------------------------------------|-----------------------------------|
| Project Manager and Engineer | Peter Coxon, P. Eng. |
| Design Engineer | Travis Pahl, EIT |
| Project Coordinator | Connie Blair |
| Piloting Equipment Supply and Support | DWG Process Supply and Pall Water |

4.0 PROJECT SCHEDULE – PILOTING

Upon approval of the DWG membrane proposal, the piloting equipment will be shipped to site. We anticipate equipment to be on site in mid-March. The intent is to run the pilot for approximately one month to provide operation over a typical cycle before cleaning. Depending on freshet and water quality, piloting may be run for an additional month.

| | |
|---|---------------------------|
| Task 1 – Pilot Shipping, Coordination and Setup | March 2017 |
| Task 2 – Pilot Operation | Mid-March to Mid-May 2017 |
| Task 3 – Reporting | June 2017 |

Attention: Michelle Allen, Chief Administrative Officer
Date: March 06, 2017
File: 1093.0041.01
Subject: Piloting for Water Treatment Plant
Page: 3 of 3



5.0 PILOT COSTS

The pilot costs comprise the following components:

1/ Membrane equipment rental costs – these are already included in the proposed work program received from DWG Process Supply. A copy of the DWG Process Supply pilot plant proposal, as well as the rental agreement, is attached for your reference.

2/ USL engineering fees for Tasks 1, 2 and 3 noted above. These fees are \$28,000, which includes an allowance for laboratory testing for a one (1) month pilot period. The cost for an additional month of piloting, including laboratory testing, would be \$4,000. So the total cost for two (2) months would be \$32,000.

3/ Chemical costs – these are estimated to be \$2,000 for the two months.

4/ Electrical costs – these are for the equipment hookup, support and decommissioning at the end of the piloting, estimated to be \$2,000.

5/ Pump and plumbing costs – these are for the supply of the raw water feed pump, associated plumbing and discharge piping, estimated to be \$5,000.

6/ Village's public works staff costs – as noted above, it is assumed that the Village's public works staff will operate the pilot plant. This cost is assumed to be cost neutral to this project.

The cost estimate submitted with the Grant Application included a budget of \$50,000 for the piloting program. The sum of the items noted above is \$41,000.

We look forward to working with the Village on this project. Should you have any questions regarding this work program and the information contained within, please feel free to contact us.

Best Regards,

URBAN SYSTEMS LTD.

A handwritten signature in black ink that reads "Travis Pahl".

Travis Pahl, EIT
Design Engineer

A handwritten signature in blue ink that reads "Peter Coxon".

Peter Coxon, P. Eng.
Project Manager and Engineer

/TP

U:\Projects_KAM\1093\0041\01\C-Correspondence\C1-Client\2017-02-21-WP-Pilot\2017-02-27 LET WTP WP.docx

EQUIPMENT RENTAL AGREEMENT

This Equipment Rental Agreement (this “Agreement”), dated as of the _____ day of _____, 2017, by and between Pall Canada Ltd., acting as an Agent on behalf of Pall Corporation, a New York corporation, located at 839 State Route 13, Cortland, NY 13045 (“Owner”) and Village of Ashcroft, having its principal place of business PO Box 129, 601 Bancroft Street, Ashcroft, BC V0K 1A0 (“Renter”). Owner, Agent and Renter are collectively referred to herein as the “Parties” and individually as a “Party”.

The Parties, for the consideration hereafter named, agree as follows:

1. Equipment. Subject to the Terms and Conditions of Lease, attached hereto and incorporated by reference (the “terms”), Owner hereby rents to Renter all of the equipment named and identified in the following List of Equipment (the “Equipment”), for use at the designated location and at such rental rate for the rental period as is therein stated.

LIST OF EQUIPMENT

| Description of Equipment | Rental Period | Equipment Model Number | Security Deposit (\$CAD) | Rental Charge Per Article (\$CAD) | Rental Rate Unit Base (e.g. daily, monthly) |
|--------------------------|---------------|------------------------|--------------------------|-----------------------------------|---|
| One (1) MF Pilot Unit | One (1) Month | TBD | \$0 | \$0 | \$0 |

2. Proposal. This Agreement applies to the Equipment in Pall Proposal number Pall Pilot Proposal – 119126-02102017-00-P dated February 10, 2017 (the “Proposal”).
3. Address for Rental Charge Payments. Rental Charges shall be paid to Owner, without notice, setoff or deduction, in advance on the first day of each month, in Canadian Dollars at the rate set forth above, to the following address or financial institution:

Remit to Address::

Pall (Canada) Ltd.
c/o TH1234
P.O. Box 4290
Postal Station A
Toronto, ON M5W 0E1 Canada

Wire Transfers USD:

Bank Name: HSBC Bank CA
Bank Address: Toronto ON
ABA: 001610052
SWIFT Code: HKBCCATT
Account Number: 020010001
Transit Code: 10052
Bank Code: 016

Wire Transfers CAD:

Bank Name: HSBC Bank CA
Bank Address: Toronto ON
ABA: 001610052
SWIFT Code: HKBCCATT
Account Number: 020010070
Transit Code: 10052
Bank Code: 016

4. Notices. All notices permitted or required in connection with this Agreement shall be in writing and shall deemed given (i) if mailed by certified mail, return receipt requested, three business days after dispatch; (ii) if delivered to a recognized overnight express mail service or carrier for next day delivery, on the first business day after dispatch; (iii) if delivered on a business day by personal delivery or electronic or facsimile transmission, with “hardcopy” original to follow as provided in clause (i), (ii) or (iii) above, on the same day as delivered, otherwise on the next business day; in each case, addressed as follows (or to such other address as either Party may notify the other Party in writing):

if to Owner, to: Pall Corporation
839 NYS Route 13
PO Box 5630
Cortland, NY 13045
Attention: Nancy Whithey

with copies to: Pall Canada Ltd.
3450 Ridgeway Drive
Unit 6
Mississauga, ON, L5L 0A2 Canada

Pall Corporation
25 Harbor Park Drive
Port Washington, New York 11050
Attention: Legal Department

if to Renter to: [REDACTED]

5. Corporate Authority. The Parties hereto covenant and warrant that the persons executing this Agreement on their behalf have been duly authorized to do so, and this Agreement constitutes a valid and binding obligation of the Parties hereto. The Renter will, if requested by Owner, provide to Owner, Certificates of Authority naming the officers of the Renter who have the authority to execute this Agreement.

IN WITNESS WHEREOF, the parties by their duly authorized officers or representatives have executed this Agreement on the dates set forth below.

PALL CANADA LTD.
Acting as Agent for Pall Corporation

VILLAGE OF ASHCROFT

By: _____
(Signature)

By: _____
(Signature of Authorized Principal or Officer)

Name: _____

Name: _____

Title: _____

Title: _____

Date: _____

Date: _____