

LETTER REPORT

DATE: January 25, 2018

To: Larry Plourde, Administrator

CC: Mike Lott, Utilities Supervisor

SUBJECT: CENTRIFUGE PROJECT

History:

The Village has received numerous reports and many conversations over the past year in support of the Centrifuge Project: They include:

- a. Many conversations and multiple reports and proposals from Opus International.
- b. Estimates from Opus International that were incorrect with the reality being that the project will double in cost from the original estimate depending on a decision on the final layout.
- c. A site visit to the Comox Valley Regional District Wastewater Treatment facility to view their centrifuge dewatering system, talk to staff about their experiences and seek their recommendations. The manager of the facility stated that if he could redo their centrifuge dewatering process he would definitely have the centrifuge mounted in the air which would give them the ability to have the centrifuge drop dewatered sludge directly into a bin system underneath the centrifuge itself.
- d. Several conversations with Ministry of Municipal Affairs and Housing personnel who are in the know on grant funding with news coming in December that our project would be extended for a year from the original March 31, 2018 deadline to March 31, 2019.
- e. A discussion about the extra funding requirements to complete the project and the Village funding that is available in Municipal Gas Tax Funding and Sewer Reserve Funding that could be used to support completing this project.

On December 13, 2017 I forwarded the Letter Report reproduced below commenting on the information provided in the November 30, 2017 Opus International Memorandum.

**“ RE: NEW INFORMATION PROVIDED BY SEMUS FRAME, P. ENG, OPUS
INTERNATIONAL**

Attached is a memorandum with further information on the Centrifuge project provided by the consultants, Opus International.

Staff have reviewed the information and agree the MMRF building is not the best option for this project. We believe that the elevated centrifuge in a stand-alone building is the preferred option from an operational point of view (this opinion was also expressed to us by the staff of the Comox Valley Pollution Control Centre. We visited that operation earlier this year). The advantages to this proposal would be:

- a. The whole sludge dewatering process would be housed in one new building on site specifically designed for this project.
- b. The dewatering operation is a more simplified process with an elevated centrifuge. The dewatered sludge simply drops down into a bin to be transported away instead of being moved to a bin by a conveyor system.
- c. This option allows for the existing dewatering equipment to stay in operation and the village stays in compliance with Ministry of Environment Permit requirements while the new project is completed.
- d. It allows the old building to be converted to a desperately needed work space and storage area.

We do not know the additional costs and/or potential savings from this option but wish to undertake a review prior to any recommendation.

The Village has also been provided an extension to our Infrastructure Project Grant beyond March 31, 2018 which gives us time to review construction options and costs.”

Additional Information:

- a. Option estimates range from \$1,000,000.00 to \$1,300,000.00 (not including a contingency allowance) with the Opus International estimated cost for the elevated centrifuge in a two-story building being \$1,200,000.00 not including a contingency. This is not the least expensive option but it is the most viable and supportable permanent solution for Gold River from the point of view of the qualified operators that maintain and operate the process, from my point of view as a qualified operator and Applied Science Technologist whose discipline is Civil, Water/Water Operations and Technology Management and from the Gold River Utilities Supervisor’s point of view. It is the preferred option.
- b. Engineering design, project management and oversight are vital to successfully completing this project. The Village has had recent experience with not including Engineering design on two electrical upgrades at the Industrial Lift Station and Number 2 well with the result that our alarm systems are not reliable, pump operation is inconsistent and the village does not have any design or as build drawings to compare what was designed with what was built. This makes it very difficult to identify issues or find solutions to the operational problems that are being experienced.
- c. The current Drimad Sludge Bagging Dewatering System has been in operation since 2003/2004 and has always had limitations as to the quantity of sludge that can be dewatered at any one time. It is a labour-intensive operation and is seeing increased

maintenance requirements and costs due to the age of the system. To actually keep up with the sludge dewatering requirements you would have to bag 5 plus days a week and that is not possible given the maintenance demands of other aging systems in village water/wastewater operations.

- d. Once the specific option is confirmed, there will be ample opportunity to sit down with the Consulting Engineers to look for ways to reduce the costs or make changes that are more cost or operationally effective without jeopardizing the integrity of the project. For instance, could prefabricated metal building be constructed around the project after the centrifuge has been mounted on the support beams. Could the building be insulated towards the end of the project construction with spray insulation instead of traditional batt or role insulation.

Conclusions:

Based on the information previously provided and the information in this letter report, direction is required from Council on how to proceed.

Recommendation:

I recommend that Council support the elevated centrifuge in a two-story building project proposal.

Grant Loyer, ASCT, RTMgr, MA
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