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**REPORT TO GANGES SEWER LOCAL SERVICE COMMISSION
MEETING OF TUESDAY 04 MAY 2010**

**SUBJECT DISPOSAL OF UNUSED SKID MOUNT SLUDGE THICKENER AT GANGES
WASTEWATER TREATMENT PLANT**

PURPOSE

To present to the Ganges Sewer Local Service Commission (GSLSC), information, alternatives and a recommendation regarding disposal of the skid mounted ZeeMod modular wastewater treatment system unit currently situated at the Ganges wastewater treatment plant.

BACKGROUND

In 2005, the GSLSC authorized the purchase of new Zeeweed[®] membrane frames, cassettes and a roto-screen assembly for the Ganges wastewater treatment plant. The manufacturer's package included a skid mounted ZeeMOD-WDA-1-1-4 sludge thickening unit; to be used as a pilot program. The Ganges plant however, was fitted with a Kubota press and the ZeeMOD unit was never tested. Of the \$221,000 paid for the total materials package, the unit's 2005 cost to the service is approximated at \$41,000. Using a 15 percent annual depreciation rate, staff would have valued the unit's present worth at approximately \$18,200 (Attachment 1); however, the unit has been proof tested on site (at SSILW cost), and the conclusions confirm that several electronic components need to be replaced in order to make it fully operational. The estimated amount of repairs and upgrades required exceed the depreciated value of \$18,200, therefore the unit's present worth is now considered that only of salvage; approximately \$2,500 (Attachment 2). The unit currently serves no useful purpose to the Ganges sewer local service.

The Salt Spring Island Liquid Waste Disposal Local Service Commission (SSILW) has authorized staff to undertake an upgrade project at the Burgoyne septage facility (Burgoyne) to replace the failing equipment on site. Engineering consultant Dayton and Knight's recommendations include replacement of the existing undersized Membrane Bio-Reactor (MBR) unit. The committee approved project budget of \$1.8 million cannot support a new MBR purchase of approximately \$200,000 without additional borrowing to the service. Although older technology and in need of upgrades, the unit is expected to provide SSILW satisfactory performance for at least 15 years.

ALTERNATIVES

1. That the Ganges Sewer Local Service Commission authorize staff to offer the Salt Spring Island Liquid Waste Disposal Service Commission the option to purchase the MBR unit at the cost of \$2,500, and that the proceeds be deposited in the Ganges Sewer Local Service capital equipment replacement fund.
2. That the Ganges Sewer Local Service Commission receive this report for information.
3. That the Ganges Sewer Local Service Commission receive this report and request further information from staff.

IMPLICATIONS

1. If SSILW were to purchase the ZeeMOD unit from the GSLSC, the \$2,500 funds would be used to offset future capital equipment purchase or upgrades within the Ganges sewer service.
2. Should the GSLSC choose not to sell the MBR unit to SSILW, the superfluous asset would remain at the Ganges plant and serve no useful purpose. There is an extremely limited market for a non operating sludge thickening unit situated on Salt Spring Island should the GSLSC consider sale of the unit in an open market. Given the current functional state of the unit, the GSLSC could expect to receive no more than the estimated salvage value of \$2,500. The public resale value of the unit is estimated to be only that of salvage value which is likely to be less than \$2,500.

SUMMARY

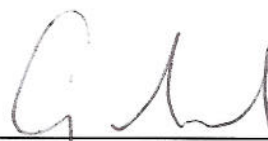
At a 15 percent annual depreciation rate, the ZeeMOD's present value, if in good operating condition, is approximately \$18,200 (Attachment 1). There is an extremely limited market to sell an older, unexercised MBR unit needing component upgrades and being situated on Salt Spring Island. The amount of repairs and upgrades required exceed the depreciated value of \$18,200, therefore the unit's present worth is now considered that only of salvage; approximately \$2,500. The unit currently serves no useful purpose to the Ganges sewer local service. The GSLSC has a vested financial interest in the provision of effective septage disposal services at the Burgoyne septage facility and any realized savings to the Burgoyne project would be of financial benefit to those currently within the Salt Spring Island liquid waste disposal local service. The sale of the unit to the Burgoyne project would provide \$2,500 funds which would be transferred to an equipment replacement fund to offset future upgrades at the Ganges wastewater treatment plant.

RECOMMENDATION

That the Ganges Sewer Local Service Commission receive this report and authorize staff to offer the Salt Spring Island Liquid Waste Disposal Service Commission the option to purchase the MBR unit at the cost of \$2,500, and that the proceeds be deposited in the Ganges Sewer Local Service capital equipment replacement fund.



Gary Plevin, ASCT
Engineering Technician 5



Colwyn Sunderland, ASCT
Local Services Engineering Coordinator
Concurrence

GP:ls
Attachments: 2

2005 capital costs to the Ganges sewer local service to supply the following:

• Roto-screen assembly	\$20,000
• Six ZeeWeed membrane cassette frames	\$6,000
• 18 ZW500a cassette modules (6/cassette)	\$132,000
• Cam-lock assembly (intake)	\$5,000
• Cam-lock assembly (outflow)	\$5,000
• Start-up and commissioning by supplier	<u>\$12,000</u>
Total costs not including MBR unit	\$180,000

Total invoiced cost to supply all materials and equipment \$221,000

Actual 2005 realized cost of MBR skid mount unit **\$41,000**

5 years at 15% depreciation (\$41,000) \$(22,800)

Value after full depreciation: \$ 18,200

Estimated 2010 worth of a fully operational ZeeMod MBR unit is \$18,200 (approximately).

Copy of email from Continuum First, industrial recyclers

Gary, thank you for your interest in Continuum First and for researching the reclamation of equipment you already have. The more complex a piece of equipment is the harder it is to resell. Unless your buyer knows the equipment or has similar equipment it is difficult to convince someone to take on a project like this. Equipment of this nature is usually purchased new with initial startup help. Again unless your buyer is familiar with the equipment there may be additional costs for any specialist hired.

Having sat unused for 5 years (not electrically connected) all the electrics would be suspect (moisture) including the motors. Any value in assets individually would most like be offset by having to remove them for resale. The pumps most likely are fine and have some value. Again removal and handling eat into any profit. I am learning this more and more after having dealt with the Catalyst auction material. If you could use the valves elsewhere then there could be a savings. Without knowing the metallurgy it is hard to determine the value of the valves. The core is worth about \$.45 cents a pound (\$.99 cents a kg) if you scrap it. Obviously a plastic valve is going to be a lot less. Depending upon the seat and gate/ball there may or may not be indentations in any plastic components. Usually the cost of these valves is such that buying new makes more sense. Valves that are used either open or closed will give you the best life cycle. Any valve that is modulating (open and close to control flow, pressure or level) and handling any solids is subject to wear.

I am assuming the frame and tanks are SS. If so the same pricing as stated above would apply. Having not been used there should be no concern with the cleanliness of the unit. If any parts are mild steel (including galvanized) the scrap pricing is somewhere around \$.036 per pound (\$.08 per kg). All pricing is FOB the yard and arrangements would have to be made around transportation.

There would appear to be some good pieces to reuse or sell but most likely the best value would be for the CRD to reuse the unit if you need it. My interest would be in the parts and as such I would consider the unit as scrap. Finding a buyer right now is difficult as there is not a lot of developing happening.

If the total weight is around 5000 lbs and it was considered all non ferrous you are looking at \$4000 as scrap at market. This does not include what the salvage costs are to get it ready and shipped. Working on a \$.0.30 margin per pound to the CRD you would be lucky to get \$2500 for it.

Hope this helps. Again thank you for your interest.

Wes Douglas
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