Making a difference...together

REPORT TO SALT SPRING ISLAND LIQUID WASTE DISPOSAL LOCAL SERVICE COMMISSION MEETING OF TUESDAY 04 MAY 2010

SUBJECT **OFFER TO PURCHASE SKID MOUNT ZeeMod SLUDGE THICKENING UNIT FOR BURGOYNE SEPTAGE RECEIVING FACILITY**

PURPOSE

To present to the Salt Spring Island Liquid Waste Disposal Local Service Commission (SSILW) information, alternatives and a recommendation regarding the acquisition of a skid mounted ZeeMod sludge thickening system currently situated at the Ganges wastewater treatment plant.

BACKGROUND

SSILW has authorized staff to carry out an upgrade project at the Burgoyne septage facility (Burgoyne) to replace the current deteriorating equipment at the site. Engineering consultant Dayton and Knight's recommendations include replacement of the existing Membrane Bio-Reactor (MBR) unit. The commission approved $1.8 million dewatering upgrade project budget cannot meet the full recommendation without additional funding to the upgrade proponent of the project. A skid mounted sludge thickening unit at the Ganges plant could however, be used to replace the existing pressate treatment equipment and will meet the end performance standards of the redesign once refitted to a fully functioning status.

In 2005, the Ganges Sewer Local Service Commission (GSLSC) authorized the purchase of replacement equipment at the Ganges wastewater treatment plant (Ganges plant). The equipment included a skid mounted ZeeMOD-WDA-1-1-4 system to be used in a sludge thickener pilot program at the Ganges plant. The pilot was never performed as other mechanical technology was used to effectively thicken the sludge. Considering an annual 15 percent depreciation rate, the current estimated value, if fully functional is approximately $18,200 (Attachment 1). The unit has been tested at the Ganges plant and anticipated electrical component replacement and control re-programming is estimated to be $45,000 before the unit is considered operational and useable at the Burgoyne facility. A recycling merchant specializing in industrial equipment has provided a market worth of approximately $2,500 for the unit.

Staff will recommend that the GSLSC consider selling the unit to SSILW for the salvage value of $2,500. An approximated $152,000 savings compared with the purchase of new equipment would be realized should SSILW and GSLSC approve the sale of the unit. As the unit has not yet been fully paid for under the Ganges sewer local service debt borrowing schedule, payment would not occur until late fall of 2010, after GSLSC has clear title to the unit.

All costs associated with testing and refurbishment of the unit will been borne by the Salt Spring Island Liquid Waste Disposal Local Service upgrade project budget.

ALTERNATIVES

1. That the Salt Spring Island Liquid Waste Disposal Local Service Commission authorize, subject to concurrence by the Ganges Sewer Local Service Commission, the purchase of the ZeeMOD sludge thickening unit for a price of $2,500.

2. That the Salt Spring Island Liquid Waste Disposal Local Service Commission receive this report for information.

3. That the Salt Spring Island Liquid Waste Disposal Local Service Commission receive this report for information and request further information from staff.

IMPLICATIONS

1. SSILW does not have sufficient funds to complete the full replacement of the deteriorating equipment at Burgoyne with new equipment. Including the investment in upgrades to proof test the Ganges sludge thickening unit, the purchase of the Ganges skid-mount unit for $2,500 will save the service approximately $152,000 and meet the design performance specifications for pressate treatment at the re-designed Burgoyne facility. Anticipated unit upgrade costs of $60,000 will lessen the committee's need to reduce the scope of work at the septage facility as opposed to purchasing a new MBR unit for approximately $200,000.

2. Should SSILW decide not to purchase the unit from the GSLSC, the added costs to procure new pressate treatment equipment would further limit the available funding for the Burgoyne project and a further reduction in scope of works will need to be considered.

SUMMARY

Purchase of the GSLSC's surplus MBR equipment by SSILW would be both practical and beneficial to both services. Any money saved through the acquisition of the discounted, yet usable equipment would enable staff to utilize the available funds elsewhere in the Burgoyne project. Sale of the unit at a price of $2,500 is subject to the approval of both the SSILW and GSLSC.

RECOMMENDATION

That the Salt Spring Island Liquid Waste Disposal Local Service Commission authorize, subject to concurrence by the Ganges Sewer Local Service Commission, the purchase of the ZeeMOD sludge thickening unit for a price of $2,500.

Gary Pleven, AScT
Engineering Technician 5

Colwyn Sunderland, AScT
Local Services Engineering Coordinator
Concurrence

GP:ls

Attachments: 2

Attachment 1

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	$12,000
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 an operational ZeeMod MBR unit is $18,200 (approximately)

Estimated 2010 upgrade costs to make the MBR unit operational is unknown at this time, but is anticipated to be upward of $60,000. Salvage value is estimated at approximately $2,500.

Attachment 2

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
C_F Continuum First: **www.continuumfirst.com**
Phone: 250-710-5752
Fax: 250-743-1865
Email: **wvd@shaw.ca**