

For Information Only

Sludge Forcemain Relocation Project at the Vale Tailings Ponds - Update

Presented To:	Operations Committee
Presented:	Monday, Jul 07, 2014
Report Date	Wednesday, Jul 02, 2014
Type:	Correspondence for Information Only

Recommendation

For information only.

Background

The purpose of this report is to inform Council of the final project cost for the relocation of the sludge forcemain at the Vale Tailings Ponds.

On June 11, 2013 Council received the attached report discussing the need to relocate the sludge forcemain at the Vale Tailings Ponds. The work was completed as of December 2013. Council approved funding the project costs from the Capital Financing Reserve Fund - Wastewater to an estimated amount of \$690,000.

The construction costs and the reimbursement to Vale came in significantly lower than originally estimated. As a result, the total cost to complete the relocation was \$355,784.00.

Signed By

Report Prepared By

Brad Johns
Facilities Engineer
Digitally Signed Jul 2, 14

Division Review

Nick Benkovich
Director of Water/Wastewater Services
Digitally Signed Jul 2, 14

Recommended by the Department

Tony Cecutti
General Manager of Infrastructure Services
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Recommended by the C.A.O.

Doug Nadorozny
Chief Administrative Officer
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Request for Decision

Sludge Forcemain Relocation Project at the Vale Tailings Ponds

Presented To: City Council

Presented: Tuesday, Jun 11, 2013

Report Date Wednesday, May 29, 2013

Type: Managers' Reports

Recommendation

THAT, due to the time constraints associated with the removal and relocation of the sludge forcemain at the Vale tailings ponds, and R.V. Anderson Associates Limited's previous experience and knowledge of the transfer station and forcemain system, the City of Greater Sudbury approve retaining R.V Anderson for the preliminary and detailed design, tender period assistance, contract administration and inspection in the amount of \$65,000, excluding HST; and

That the City of Greater Sudbury authorize staff to tender and award the construction of the sludge forcemain relocation to a maximum of \$500,000; and

That the City of Greater Sudbury approve the reimbursement to Vale for the actual costs, estimated to be \$125,000, excluding HST, associated with the engineering services performed by Golder Associates, and for the construction of works identified in item 4 of this report dated April 30, 2013; and

That, the City of Greater Sudbury approves the funding of these costs from the Capital Financing Reserve Fund - Wastewater.

Finance Implications

The design, tender period assistance, contract administration and inspection portion of the project is estimated to be \$65,000, excluding HST and the reimbursement to Vale for engineering and construction costs is estimated to be \$125,000, excluding HST.

The cost of relocating the sludge forcemain is estimated to be \$500,000. The estimated project total of \$690,000, excluding HST, will be funded from the Capital Financing Reserve Fund - Wastewater.

Signed By

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Division Review

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Director of Water/Wastewater Services
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Recommended by the Department

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General Manager of Infrastructure
Services
Digitally Signed May 31, 13

Recommended by the C.A.O.

Doug Nadorozny
Chief Administrative Officer
Digitally Signed Jun 5, 13

Background

The City of Greater Sudbury has been operating and maintaining the Meatbird Sludge Transfer Station and sludge forcemain at the Vale tailings pond for approximately 35 years. The sludge generated at nine of the City's wastewater treatment plants is collected and hauled to the transfer station where it is pumped into Vale's tailings pond. This process will continue until the Biosolids facility is completed in 2015.

Vale has informed the City that they are committed to begin depositing tailings into a location that requires them to raise the tailings pond berm over a number of years. They are planning to start depositing tailings at the end of September 2013.

Tailings dam safety is a key priority for Vale. They have an independent Board of globally recognized experts who review their tailings areas annually for the express purpose of assuring themselves that, organizationally, they are diligent in managing risk. Pipes passing through any earthen dam create potential for piping failure and potential for preferential seepage, which is always of concern when assessing dam safety. The presence of the sludge forcemain raises this general concern. The decommissioning of the sludge forcemain once the Biosolids facility was completed was identified in 2011 while the City and Vale were working through the overall contract for utilization of the tailings ponds. This agreement extended the arrangement to the end of 2013, and has since been extended, however, Vale needs to continue to operate the tailings ponds as planned. To accommodate their tailings operation, the City is responsible for the following:

1. The sludge forcemain from the valve chamber into the pond must be re-routed at the City's expense;
2. A portion of the sludge forcemain inside the tailings pond must be removed by the City;
3. The City is responsible for retaining an engineering firm to design, and contractor to construct, the works identified in items 1 & 2;
4. The portion of sludge forcemain beneath the berm must be removed as soon as the sludge forcemain has been relocated. Vale has retained Golder Associates, as the Engineer of Record for the Guindon North Dam to complete the design of the removal and associated works for this portion of forcemain. The City will be responsible for all costs related to this work. The estimated cost of this work, including engineer services, and construction is approximately \$125,000, excluding HST;

Note: Items 1 and 2 must be completed by the end of August so item 4 can be completed by the end of September.

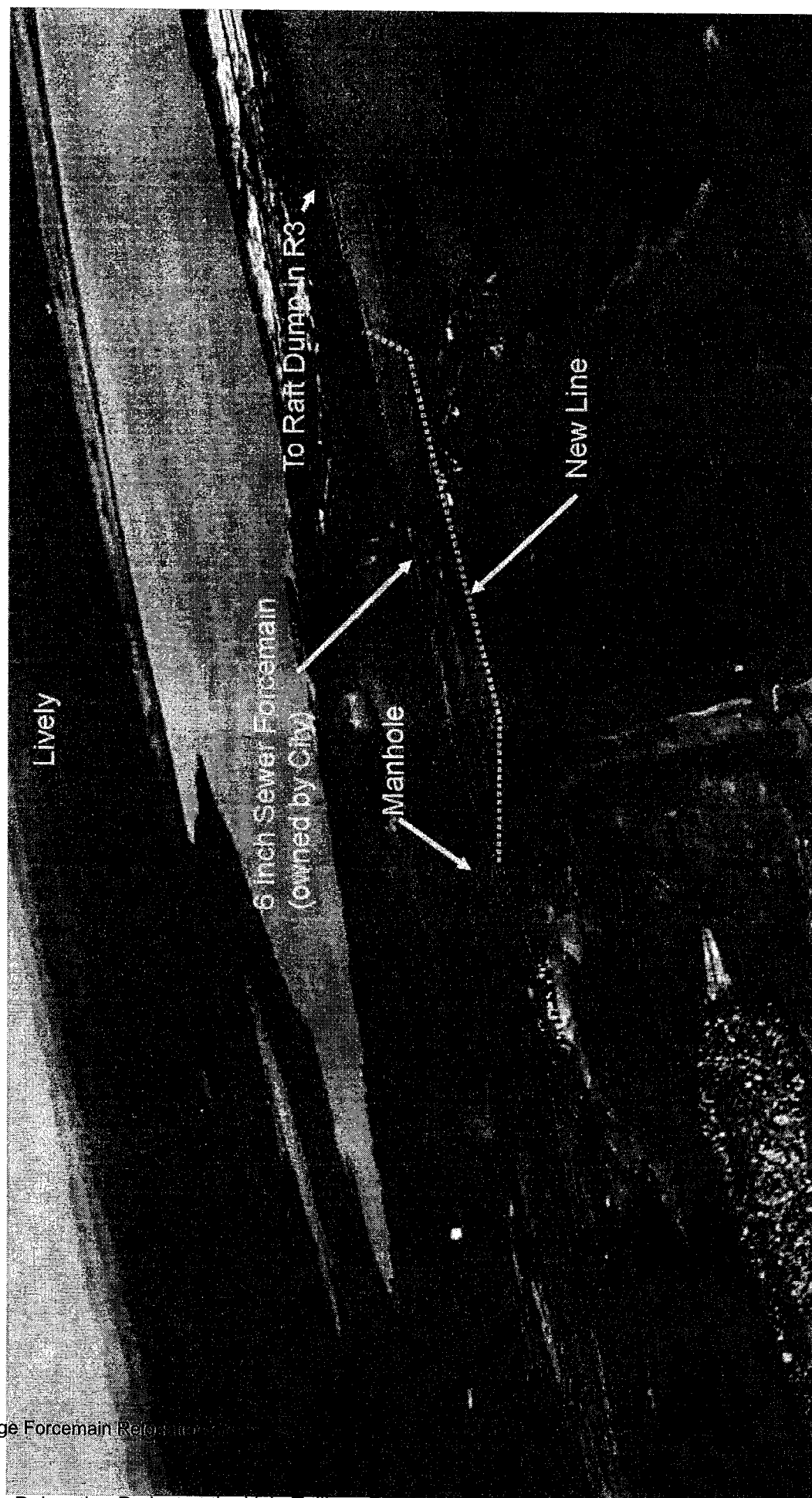
In terms of timing of the actual work, the piping needs to be removed now because the pipelines are, at present, very near the ground water surface. As the ground water table rises, the more difficult and expensive the excavation and backfilling of pipelines becomes. The pond level will lower over the next few months, but Vale will increase it in the fall to comply with their filling and water management objectives. Waiting to decommission the sludge forcemain until after the completion Biosolids facility is not an option.

This project was not identified during the 2013 capital budget deliberations and, as per the City's purchasing policy, staff must seek Council's approval to retain a consultant to assist with completing this project. Staff is recommending that R.V. Anderson Associates Limited be retained to complete the design and contract administration. They have been the Engineer of Record for the Meatbird Sludge Transfer System since the 1990's for the following projects: sludge forcemain extensions, pump replacements and grinder replacements, the discharge raft design and odour control using Bioxide. They are very familiar with the site and can expedite this project. R.V. Anderson has submitted a solicited proposal for preliminary engineering, detailed design and tender period assistance, and contract administration and inspection, totaling \$65,000, excluding HST. So that the project is not delayed, staff has issued a purchase order to R.V. Anderson in the amount of \$23,600, excluding HST, for the preliminary design phase. Once the detailed design is complete,

a tender for construction will be issued.

Excluding the engineering services and the reimbursement costs to Vale, the work associated with the relocation of the sludge forcemain is estimated to be \$500,000. Once the project is complete and the final costs are available, staff will provide Council with a project cost summary.

Removal of Forcemain from Guindon Dam Foundation



GCS Sludge Forcemain Relocation Project