

ITEM 13
MANAGER'S REPORT NO. 73
COUNCIL MEETING 1979 10 29

RE: TESTING PROGRAM FOR LANDFILL SITES IN BIG BEND AREA

Following is a report from the Municipal Engineer regarding a testing program for landfill sites.

Policy requires that at least three proposals be obtained for the design of projects. In this case, however, there are very few firms that have the resources and overall expertise to carry out the highly specialized elements of work, none of which involve design. It is therefore felt that these extenuating circumstances warrant a deviation from the policy, and that this approach will enable the municipality to obtain the required level of consulting services that will ensure good results.

There are sufficient funds in the budget for this work.

RECOMMENDATION:

1. THAT the recommendation of the Municipal Engineer be adopted.

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TO: MUNICIPAL MANAGER

79 10 24

FROM: MUNICIPAL ENGINEER

SUBJECT: TESTING PROGRAM FOR LANDFILL SITES IN BIG BEND AREA

1. THAT the Corporation enter into an Engineering Agreement with Underwood McLellan (1977) Ltd. (UMA Group) to provide the necessary engineering services as outlined in this report and in accordance with the Consultant's proposal (copy attached) for an estimated total cost of \$17,130.

REPORT

For some time now, the Engineering Department has been working on revising the Soil Removal and Deposit Bylaw. The one major consideration remaining to be dealt with concerns not only the general nature but also the more specific types of fill material which should be permitted to be deposited on lands throughout the Municipality, but more particularly in the Big Bend Area.

Of at least equal importance to the effective regulation of future deposition of fill materials is the determination of the extent to which possible problems of a future building or environmental nature might be presented by the existence of a number and variety of former landfills. The only area of some concern to the Engineering Department is the Big Bend; queries have also been raised by Council concerning what problems, if any, are being created by such former landfills.

There is no effective way in which a subjective opinion could be developed to accurately and adequately describe the problems that may be presented by the existence of former landfills in the Big Bend Area. The only acceptable way to come up with the answers is to undertake an objective testing program; to this end, your Municipal Engineer has had extensive discussions with representatives of the consulting engineering firm of Underwood McLellan (1977) Ltd. (UMA Group) and has received from the firm a proposal for the services required to establish an objective testing program for former landfills in the Big Bend Area (copy attached).

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Your Municipal Engineer considers the UMA Group to be the foremost firm available for the performance of these particular services, which are of a highly specialized nature and requiring a particular expertise, particularly in the area of the interpretation of the test data to put them into meaningful and understandable format. The UMA Group, which has Offices across the Country, has a considerable range of "experts" to draw upon who have been involved in other projects of this nature. Foremost among these other projects are a major current landfill project for the City of Winnipeg and several former City landfills, all requiring extensive testing programs in order to properly monitor all of the potential problems which could emanate from such landfills, both former and current. The Winnipeg landfills and attendant testing programs are so representative of those in our Big Bend Area that your Municipal Engineer is contemplating making a business trip to Winnipeg in order to acquaint himself in more detail on this important aspect as it affects the course of future actions in the Big Bend Area.

Your Municipal Engineer considers that the total estimated cost of the work as submitted by the UMA Group, namely \$17,130, is extremely reasonable bearing in mind the amount of work involved and the quality of the firm's services. It is therefore recommended that the Corporation enter into an Engineering Agreement with Underwood McLellan (1977) Ltd. (UMA Group) to provide the necessary engineering services as outlined in this report and in accordance with the Consultant's proposal (copy attached) for an estimated total cost of \$17,130.


MUNICIPAL ENGINEER

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Att.

Underwood McLellan (1977) Ltd.

200-6545 Bonsor Avenue
Burnaby, B.C. V5H 1H3
Telephone (604) 438-5311

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The Corporation of the District of Burnaby
4949 Canada Way
Burnaby, B. C.
V5G 1H2

Attention: Mr. E.E. Olson, P.Eng.
Municipal Engineer

Dear Sir

Re: Big Bend Area (Fraser Delta)

Further to our letter-proposal of 1979 06 20, we are submitting the following proposal for item No. 2. In accordance with your letter to us dated 79 06 13 requesting a proposal for the provisions of consulting engineering services to set up a suitable testing program to determine whether former landfills would present problems of a future building or environmental nature, we propose the following program:

- (1) Collect all available data for landfill characteristics:
 - (a) municipal location plans, future zoning, etc.,
 - (b) establish refuse dumping time frame and history,
 - (c) determine refuse composition,
 - (d) review air photos to confirm land fill boundaries.- 2 man weeks
- (2) Develop a field program to identify the presence and character of landfill gas and leachate as well as site specific landfill gas and leachate migration patterns.
- 4 man weeks
- (3) Review field data and State-of-the-Art to establish any construction constraints on and immediately adjacent to the landfills. This will include landfill stability, leachate and gas considerations. We will also identify the scope of work necessary to provide detailed construction criteria as they relate to the Burnaby area. The findings, with recommendations, will be documented and included in a report for presentation to yourself and Council if required.
- 2 man weeks

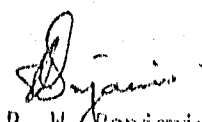
We estimate the total cost for undertaking the above to be \$11,080.00. In addition, expenses for drilling, probe tests, gas and leachate lab analysis will be \$6,050.00.

The above is our best estimate at this time and includes testing of all former landfill sites in the Big Bend area.

We trust the above meets your approval and look forward to commencing work on this exciting project immediately.

Yours very truly

UNDERWOOD McLELLAN (1977) LTD.


P. W. Benjamin
Director, Solid Waste Management