

To J. Carrington

cc. R. Lopaschuk

From J. Purkis

P. Taggart

Date October 2, 1980

M. Hampton

Subject VANGORDA CRUSHER - SITE INVESTIGATION

The following program will be initiated by the Engineering Department:

1) Layout Survey:

There is control within 600 meters of the proposed site.

We will survey in a baseline and lay out the clear limits.

Jim Mustard will provide a dozer to clear the area and create an access route.

Borehole locations will be layed out as specified.

2) Borehole Drilling:

The center hole (BH 80-51) will be drilled using the Arctic Diamond Drilling rig provided by Exploration.

- Results:
- a) No significant soils information can be gained by this form of drilling. Also we do not own the necessary equipment to perform field testing of soils.
 - b) Weathered bedrock and bedrock horizons can be determined.
 - c) Rock type, structure, shear strength and water table can be determined.
 - d) Coefficient of subgrade reaction cannot be measured but could be estimated by a qualified individual. I am not positive on this point and will confirm this through a geotechnical consultant.
 - e) Suitability of the bedrock for static and dynamic loading is dependent on the magnitude of the loading. Given the loading parameters by Swan & Wooster, we could advise on this although an independent geotechnical consultant is preferable when one considers future liabilities. If no one from F & D has returned before this point in time, we will choose the consultant and contract him under their budget.

Once the first hole is drilled, Swan & Wooster must confirm the site, after which further drilling could procede.

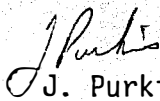
3) General:

- a) I am concerned that soils properties are not part of the tests. The main footings will be set in bedrock, but if there is the odd spot where a soil footing would be cheaper, they will not have any specific properties on which to base design.

To get this information one needs proper drilling and testing equipment, i.e., split spoons, penetrometers, casing hammers.

- b) This is not the way to develop a program. If F & D wanted us to do the program, we should have been informed earlier and given budgetary authority. We are not set up for geotechnical studies and, therefore, must rent equipment or "farm" the project out to a geotechnical consultant under our direction.
- c) The point we have been trying to make concerning the use of geotechnical consultants is not that they shouldn't be used but that projects are internally evaluated to see if we can do them and also they be used only when we do not have the equipment or expertise.

It is also important that geotechnical consultants be supervised by geotechnical or civil engineering personnel.


J. Purkis
Chief Engineer

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