ANNOUNCEMENT

OF

PILOT PROJECT

TO CLEAN CONTAMINATED WATERFRONT SOIL

WORLD TRADE CLUB

WEDNESDAY, JANUARY 23, 1991

AT 10:00 A.M.

REMARKS

BY

COMMISSIONER FRANK R. SMITH

CHAIRMAN

THE TORONTO HARBOUR COMMISSIONERS

Good morning ladies and gentlemen.

The Toronto Harbour Commissioners are announcing today a major undertaking which will have a significant and beneficial environmental impact.

We are unveiling a pilot project designed to clean contaminated soil on Toronto's waterfront. A demonstration plant, to be built at a cost of $4.3 million, will be the first of its kind in North America.

We have discussed our project with the Ministry of the Environment at the staff level and received enthusiastic response. We trust our soil recycling process will assist the Ministry in helping it solve some of the problems with which it is wrestling.

But before going on, I would like to step back a few paces.

Last October, The Toronto Harbour Commissioners funded a $60,000 study to examine existing technologies that are available to clean the kinds of soil and the range of contaminants that are present in the 1,200-acre Port Industrial District.

I am happy to report that our study has been successful and has produced some exciting results.

We found that technology exists to clean our type of soils containing our type of contaminants. This can be done to a sufficient level so that we will be able to re-use or recycle the soil once it is cleaned.

We also found that this remediation can be done in an environmentally safe and controlled manner.

But most important of all, especially to those whose lands need remediation, the soil and groundwater cleaning can be performed at a cost per tonne that will be less than the option of removing this soil to a licensed landfill site.

At present, the cost of removing small volumes of contaminated soil from the port area, including excavating, hauling, disposing in a licensed landfill, and replacing the removed soil with clean fill, is approaching $200 per tonne. For larger volumes the cost would be much more, even if a disposal site could be found.

Our study showed that if our soil cleaning plant processed 300,000 tonnes per year, we could establish a charge of approximately $160 per tonne to recover costs.

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Our Director of Engineering, Dennis Lang, will go over the soil cleaning process in more detail a little later. But briefly, the process works like this:

First the contaminated soil is washed under high water pressure to remove the large majority of contaminants from the sand. The resulting clean sand, which makes up about 80 per cent of our soil, would then be recyclable as backfill.

The remaining contaminated slurry would require further treatment.

The second step would see the removal of inorganic materials, mainly toxic heavy metals, from the contaminated slurry using a leaching process adapted from the metals mining industry.

The third step would involve the treatment of organic contaminants by bioremediation under controlled conditions in reactors. The final product would result in a soil that is suitable for topsoil and landscaping.

The soil washing plant we have in mind will have an annual throughput of 300,000 tonnes. Our Engineering Department and our consultants, SNC Inc., estimate that the Port Industrial District contains in excess of 2 million tonnes of contaminated soil.

Working at full capacity, our washing plant could take care of this contaminated soil over a seven-year period.

Soil washing plants of this size and capacity already exist and are operating in Germany and Holland.

This is not a new technology. However, it is new to North America.

Our approach is also new because we will combine the wash plant with the other two processes whereby we actually treat the contaminants in the contaminated slurry that is produced by the washing process.

In Holland and Germany, this contaminated slurry is dewatered and the contaminated sludge is disposed of in a licensed landfill.

Our objective is to clean the contaminated slurry, thereby providing a complete cleaning and recycling service.

We see the permanent plant site and storage area being located on 20 acres of land east of the Richard L. Hearn Generating Station on Unwin Avenue.

This is an ideal location because the size of the enclosed plant would not be out of place with the Hearn facility.

But before we run, we will have to walk. Based on our findings to date, The Toronto Harbour Commissioners have made a commitment to build a demonstration plant, the first of its kind in North America, at a cost of $4.3 million.

We are considering three possible sites for this plant.

Our demonstration plant should consist of the soil washing plant, the heavy metals extraction plant and the bioslurry operation.

Unfortunately, there is no existing available soil washing plant that we could bring to our site. So, if we cannot bring a plant to our soil, we will bring the soil to an existing soil washing plant.

We propose to ship up to 6,000 tonnes of soil by vessel to a plant in Western Europe, either in Holland or Germany, where it would be processed.

This bulk sample could be excavated and shipped abroad while our demonstration plant is being assembled.

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We will collect the cleaned soil, contaminated slurry and wash water and return them to our demonstration plant and work them through the other two stages of the process ... for heavy metals extraction and then for bioremediation.

There are many more details to be discussed with regard to the permanent and demonstration facilities. In addition, certain safeguards must be taken at the site from which the contaminated soil will be taken. Dennis Lang will explain this.

The Commissioners have, for a number of years, been collecting data on contaminated lands in the port area, on their own lands and lands owned by others.

If the Industrial District is to grow, soil remediation is a must. We know this can be done in an environmentally acceptable manner and at reasonable cost.

Our demonstration will prove this to be so. For the first time ever, we will see contaminated soil cleaned and made usable again.

At this point, I would like to call on the Commissioners' Director of Engineering, Dennis Lang, for additional comments and explanations.