

Our file: 2002-1350-18
March 6, 2007

Zhong Liu
P.O. Box 119
Nunavut Water Board
Gjoa Haven, NU X0B 1J0

Re: Amendment Application for Whale Cove

Dear Mr. Liu

There seems to be a lot of confusion with regards to the minimally contaminated soil and the intended program for its management. This may be in part because after the application was made the storage site was moved from the landfill to a quarry at the request of the SAO as the project began, and in part because our intended program of soil storage became inappropriately called a landfarm by others.

As an example of what was intended, please recall our project in Repulse Bay. We found a large quantity of diesel contaminated soil associated with the bulk fuel storage (POL) facility that was being upgraded. In this case, we moved this soil to a storage area selected in the landfill. The area was at the more-or-less high point of the landfill. A three sided berm was constructed to prevent water from flowing through the area, to allow easy access for trucks and to allow easy expansion. Once full, the fourth side would be constructed.

During excavation, it was intended that the soil would be placed in shallow lifts to allow for the greatest exposure to the atmosphere. In the case of Repulse Bay, such exposure resulted in an immediate volatilization of the diesel resulting in a soil that met CCME commercial/industrial standards within a few weeks. Regardless, we closed off the fourth side of the berm to attenuate any water may have flowed from the stored soil.

The Hamlet of Repulse Bay now has reclaimed valuable soil that it can use for cover in its landfill, or for commercial opportunity; and significant savings have been provided to the GN estimated at \$75 to \$100 per tonne. .

The project in Whale Cove is virtually identical to Repulse Bay. When we saw that the results of sampling by others in Whale Cove showed a similar level of diesel contamination to what was experienced in Repulse Bay, we believed that we could undertake a similar project and provide similar savings.

We never intended to build a landfarm unless we had to.

We have also had additional experiences that the level of contamination far exceeded that which was reported by preliminary testing; that diesel fuel actually saturated and dripped from the soil.

In this case we knew a lined landfarm was the only way to deal with such contamination, so we built one, considering the EC landfarm guidance.

The extent of contamination from the Phase III report told us that we could store soil while it volatilized without damaging the environment. Certainly, the contamination at the POL had likely accumulated over years and wasn't going anywhere. There was no reason to think that moving the soil to another location would mobilize the contamination. And, our experience with many other projects confirmed this thesis.

However, for completeness of the original application we showed a concept drawing, not a design drawing, of the lined facility we might build if we had to. It wasn't stamped because it wasn't a design. I wouldn't design and stamp something when I didn't know the quantity or extent of the contamination. Perhaps I could have made it more clear that I would submit a design if it was required and once I had the necessary information. Still, for the purpose of the application we wanted to show we were prepared with a contingency. It appears that this has unfortunately become a source of confusion.

This Whale Cove POL upgrade project had been waiting for funding for several years. This year funding was finally identified, a tight timeline was imposed, and we rushed forward in earnest to get the project completed. As a result, there wasn't time provided in the schedule to undertake a lot of the studies that could have been undertaken. Also, because of the timeframe imposed on us, and respecting the application process of the NWB, we were required to prepare NWB licence application documents before we could get on site to do much of anything.

In doing so, we have the utmost respect for the environment and for the regulatory process. There is no way that we would sacrifice the environment for a few dollars.

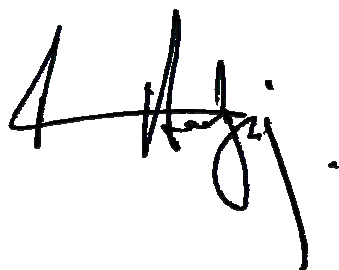
In our February submission we responded to the NWB letter of August 24th. Some of the questions you ask now are additional to those questions. Following is a table that responds to your questions point by point.

Your point 1.	The application form was signed by Ron Kent of FSC, but not dated. The attached questionnaire was revised, but still dated May 24, 2006. The Proponent is to clarify.
Response	This was an unfortunate oversight and is corrected in the attached.
Your point 2.	The landfarm location is not clearly indicated in the map provided. The NWB requests detailed map(s) of an appropriate scale for the landfarm location.
Response	No mapping exists for the old quarry in a scale suitable to show the exact location of the stored soil. We have provided the best mapping available. The coordinates of the area are 62° 11' 22"N 92° 34' 19"W.

Your point 3.	No engineering drawings are attached in this resubmission. Does the Proponent believe that the engineering drawing provided in the previous submission looks like a “standard” landfarm drawing, not a site specific one? In addition, there are not signature and stamp of a qualified engineer in the drawing. The Propone is to provide the updated landfarm design drawings.
Response	There is no landfarm in the application. The application is to store some minimally contaminated soil in a bermed area in an old quarry.
Your point 4.	The resubmission chose the option of volatilization in an unlined storage area, This is a drawback from the lined storage area in the previous submission. In addition, it appears that there is no sump for the landfarm. Does the Proponent believe that the EC Landfarming Information attached to the NWB comment letter dated August 24, 2006 provides “assistance in preparing the additional information requested by the NWB”? The NWB requests detailed explanation for the change.
Response	As the diesel contamination has been determined through excavation to be minimal, we determined that there was no need for a landfarm. Had we determined a landfarm necessary we would have used EC’s guidance.
Your point 5.	There is not an Operation and Maintenance manual available. There is not a contingency plan, either. The monitoring program is outlined, but more details are required, such as site-specific monitoring locations, sampling protocol and measured parameters. The Proponent is to provide them for NWB review.
Response	This is a new request. No O&M manual was provided as there is nothing to operate. This is not a landfarm. The stored soil is high and dry, unaffected by any potential moving surface water. Construction of the POL site continues in summer 2007. FSC will sample the stored soil and undertake field analysis using a Petroflag test kit. If the soil meets appropriate CCME & GN guidelines, we will take confirmation samples using standard field methods for hydrocarbon analysis by a CAEAL approved laboratory. These results will form the basis of recommendations for re-use or continued storage of the soil.

Your point 6.	The application indicated that 1420 m3 of soils identified as hydrocarbon contaminated are to be excavated from the tank farm but the storage area will only be 10m x 10m x 1.5m. The capacity (up to 150 m3 if 1.5 m3 is the depth acceptable for landfarming) is consistent with the number (100m3 of diesel contaminated soil in page 2 of the application form. The Proponent is to clarify the inconsistency and other details (the amount of contaminated and the landfarming capacity)
Response	<p>Upon further review, we understand how this may be confusing. It was intended to build a three sided bermed area, approximately 10 metres wide with 300mm sides. Our goal is to minimize the footprint of the soil storage area. We would place soil into that area to at least 1.5metres in depth or deeper all the time considering the safety of the equipment and workers. Once we got all the soil into storage, we would close the fourth side.</p> <p>In our original application we were planning this for the landfill site, a previously NWB location. However, when construction began, the SAO forbade the use of the landfill site and we were forced to move to the abandoned quarry. Plans remained and nothing changed except for the location. The soil was determined by testing to be minimally contaminated and suitable for storage and volatilization.</p>
Your point 7.	The landfarm construction was scheduled to start in summer 2006. The NWB would like to know the current project status.
Response	There is no landfarm. Soil is stored in an old quarry. It will be reviewed in the summer of 2007

Yours truly,
FSC Architects & Engineers



Kevin Hodgins, P. Eng.
Principal

