On page 17 of bylaw 31/12 under <u>GROUNDWATER MONITORING</u> it says "three monitor wells will be installed down gradient from the fill area". To date, only two down gradient wells have been installed. See site plan for details.

On page 5, of REPORT PD-2015-05 under <u>REPORTING-FILL</u> <u>PLACED ON SITE</u> it says "the QP will obtain a minimum of one audit sample for every 1000 loads of soil received". This is inadequate.

A fill operation of this size should require:

- 1. A sampling plan
- 2. Use of an ISO certified laboratory capable of analyzing for the chemicals listed in Table 1 of the SOIL, GROUNDWATER and SEDIMENT STANDARDS for USE under part XV.1 of the ENVROMENTAL PROTECTION ACT.

## SUGGESTED SAMPLING PLAN

The current proposed frequency of sampling is one truck per thousand trucks Other options could be:

A. 1/500

B. 1/100

C. 1/25

D. 1/1

Question becomes, which sampling frequency do you chose? The answer is, <u>HOW DILIGENT DO YOU WANT TO BE</u> The more diligent you are, the more you mitigate your liabilities.

## I would recommend a combination of C&D as follows:

- A. Five samples from each truck are taken using a device called a "sample thief". These five samples are blended together to make a composite sample.
- B. When 25 composite samples have been collected, they in turn are blended together to make a lab sample to be submitted for analysis.
  - C. The fill from these 25 truckloads should be placed in a methodical order and NOT levelled until permission to do so is granted from the township. If analysis indicate a problem, remedial action should be undertaken. This could be a re-analysis or a removal of the fill in question.
  - D. This process should be followed until the project is complete.

## **NOTES**

- 1. All sampling should be done on site AND by the laboratory doing the analysis. This is called "Stewardship" of the samples.
- 2. All samples should be labelled and retained for five years.
- 3. All results should be of public record at anytime.

A final word, whatever sampling plan you chose (if any) I would suggest you have your legal council approve it, and then have an environmental layer scrutinize it, and amend it appropriately.

## TOWNSHIP 1500 TRUCKLOADS

HRCA 5,500 TRUCKLOADS

WATER TABLE