

April 18, 1984

Questions/Concerns Re: Regional Application to Expand Burlington Landfill:

- 1: Cadmium was found at B 17 (most southerly borehole, at service road) at 9 ppb: (Q 57, Table E 1):
 - (a) Where did it come from? This is an indicator of something other than household waste.
 - (b) What does this say about the controls at the Landfill and M.O.E. requirements? How much toxic waste is in a municipal landfill?
 - (c) Since the cancer threshold for cadmium is 10 ppb, how comfortable can be that cadmium has been detected at 9 ppb?

- 2: Phenanthrene was found in the Man Hole (MH) in the February, 1984 sample at 222 ppb. Apparently, this is a very high level even at the MH stage. If we assume the detection level is 10 ppb (or even 5 ppb as stated elsewhere in the Report), then the detection limit is at least 2000 times the cancer threshold of .00028. Therefore, the 222 ppb is 793,000 times the cancer level ($222 / .00028$).
 - (a) Given such an analysis, how comfortable can we be with such data?
 - (b) Based on figures in the Report phenol attenuates from 680 ppb at MH to 12 ppb at BH 16 111 and 4 ppb at 17 1 (November, 1983). If we use the same rate of attenuation for phenanthrene the figure for BH 17 would be 1.3. This is below the detection level - but 4,643 times the cancer level.

- 3: How credible are Gartner Lee Associates given the following:
 - (a) History: * Monitoring Report #1 found a plume between the fill and 403 using phenol as a marker, as they said they would in their 1979 Report.
 - * Monitoring Report #2 did not measure for phenol and was silent on the plume.
 - * Monitoring Report #3 did not measure for phenol, nor any other unique marker, but indicated they were uncertain about the plume.
 - * Pressure was brought on GLA at Regional SWMC meetings and now there is the possibility of hearings.
 - * The present GLA Report now definitely says that there is a definite plume, but they do not know its southern limit or how fast it is travelling. Yet, they have made no attempts to drill holes south of 403 or to use the Dr. Cherry data to arrive at conclusions. Yet, they use other hypothetical information to arrive at conclusions in this Report.
 - * The Report makes conclusions and statements to stress the Positive in the Region's favour - statements that cannot be substantiated by their own data, statements that can mislead any reader. i.e.: The statement, "The southerly limit of the plume is likely between Hwy. 403 and the fill.", is not supported by their own data. Their own data shows that it is "likely" south of 403 - but they haven't bothered to confirm or relate to Dr Cherry's work.

The idea that the present site is properly working and properly monitored rings somewhat hollow, especially if you live directly below the site!

Page two:

- 4: Should we have further drill holes south of 403 to determine the southern limit of the plume? Should this be done before the hearing? If Dr. Cherry is right, could the plume be under urban Aldershot by now? If that is the case, what are the hazards?
- 5: It has taken 13 years to get the plume where it is - and other reports state that leachate generation is at its height 20 years after the garbage goes in. It has only been the last two years that we have been taking the much greater volume of garbage from the entire Region. Now we have a proposal for all of the garbage for all of the REgion for 3 years. (The proposed capacity is almost twice as much as the actual expeansion agreed to in 1980).

*What difference will this accelerated rate of dumping make to the plume?
I cannot find that question addressed in the Region's Report.

- 6: The calculation of future leachate is made on hypothetical information and assumptions, not actual experience (0 152). How reliable is this?
- If you accept the assumptions and resulting figures for whatever reason, there is nowhere in the Report an analysis of the effect on the plume of a more concentrated leachate. Could the decrease in dilution add a problem?
- 7: Phase A is on top of the earliest landfill which is also the unengeneered and undrained part. Does this not present a dangerous potential?
- 8: It is not clear that the GLA monitoring has been consistant in analyzing samples at high and low water times.
- 9: Since we are dealing with fractured shale on a slope, can you ever get enough bore holes to really determine what is going on under neath?
- 10: If a proposed landfill can be shown to have off site impacts, should it be approved?

It is clear that the present landfill has off site impact now of still to be determined proportions.

The evidence appears to be that the expansion will either make the bad situation with respect to the plume worse or certainly prolong the effects. Either way the result is an offsite effect!

- 11: The visual part of the Region's submission is very poor. It is brief and limited. It appears that everyone is concentrateing on the hydrogeology and letting pass what may be the most significant impact from the point of view of most Burlingtonians now and in the future. Is it really in the public interest to desecrate the Escarpment to the extent that C/D would do? Not covered in the REport are views from many more individual residences, Harbour Square Apartments, Aldershot Park, the Bay, the Skyway, the future GO/ALRT, Confederation Park, Hamilton Upper James, our own Bayview Park, and the future public parkway along the escarpment where the province now owns land and the Conservation Authority has an interest.