



Canadian Environmental Law Association
L'Association canadienne du droit de l'environnement

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March 28, 1984

Special Delivery

Mr. Peter Walker
Walker, Wright, Young Associates Ltd.
c/o Regional Municipality of Halton
Planning Department
1151 Bronte Road
Oakville, Ontario
L6J 6E1

Dear Mr. Walker:

Re: Comments on Draft Report, Phase 2
Stage 2B Selection of Candidate Sites

CELA has recently been retained by the West Burlington Citizens' Group in relation to the proposed expansion of the existing Burlington landfill as well as the Region's long-term waste management plans. The Group has reviewed the above-noted report and offers the following comments for your consideration. Our comments will be directed to the National Sewer Pipe (NSP) Site which has been identified as one of the six candidate sites. These comments are preliminary and should not be taken as conclusive of my client's concerns in regard to the Environmental Assessment document and the NSP site. Our clients' position is that the NSP site is unsuitable for landfilling.

I. The NSP Site does not meet the Criteria established for Site Selection

On page one of your report you state that site selection was based on an evaluation of environmental factors "which stressed (1) the importance of areas hydrogeologically suitable for landfilling, (2) the avoidance of designated environmentally sensitive areas and (3) built-up urban areas."

It is our submission that in the 1980's, our knowledge of waste disposal practices has reached the point that it is generally accepted that hydrogeology is the key concern in the siting of waste disposal sites. The Ontario Waste Management Corporation has followed this philosophy in first mapping the hydrogeology of the

province to narrow down its list of suitable locations for a landfill. It should be noted that the NSP site is located in zone 6 of the OWMC's hydrogeological inventory. In zone 6 "subsurface conditions are generally controlled by bedrock. Overburden will normally allow rapid movement of groundwater to the rock. Flow in the upper rock is commonly associated with open fractures. These conditions usually do not provide natural containment of potential contaminants". The OWMC's consultants found that zone 6 has a low potential for the discovery of naturally suitable lands for waste disposal and that it is likely that total reliance on an engineered system to contain contaminants will be required. Therefore while we believe that the three criteria listed above are appropriate, you violate your own criteria by choosing a completely unsuitable site from a hydrogeological viewpoint.

Further, your report at page 1 states that areas were to be specifically avoided for the siting of a landfill site where:

- soils have low attenuation capability
- soil thickness is not sufficient
- there is steeply sloping land
- setback of 100 meters from major watercourses
- there are major supply aquifers and underground natural features that contain or transmit large quantities of groundwater

It is clear that these characteristics are present in the NSP site. Specifically the area is fractured shale which makes it "quite permeable to groundwater and solute transport. Further, compared to porous media, where much information exists on the theory of contaminant migration, migration in fractured systems is relatively poorly understood."¹

Fractured shale also exists in the Niagara region in the U.S. where Canadian governments have spent thousands of dollars advocating the clean up of leaky landfills migrating into the Niagara River. To deliberately choose an area of fractured shale for landfill seems shortsighted and cannot be justified on an environmental basis.

1. James Pankow, Lorne Isabelle, Janet Hewetson and John Cherry "A Cartridge and Syringe Method for Down Hole Sampling for Trace Organic Compounds in Groundwater", for submission to Ground Water, draft August, 1983.

The NSP lands are also bounded by Indian Creek, a major watercourse in the area which could easily become contaminated by leachate. While on page 2 you state the areas that exhibited the characteristics listed above were considered "environmentally unacceptable" and rejected; this was not done for the NSP site.

II. Pits and Quarries are not Hydrogeologically suitable for Landfill

While agricultural capability was ranked as a second priority item after hydrogeology, pits and quarries somehow entered the picture and were then evaluated on "an equal basis" with sites considered to meet the number one criteria of hydrogeological suitability. This gap in logic is difficult to comprehend - either a site is hydrogeologically suitable or it isn't. It is our submission that the fractured shale present at the NSP site is not a suitable medium into which to place a landfill. It is further submitted that the pits and quarries were not evaluated on an equal basis with other sites or they would have been rejected.

Your report also makes a rather bold leap on page 29 by stating that "pits or quarries candidate areas were not considered to have any immediate constraints for landfilling until the more detailed evaluation of individual sites was undertaken and compared with other candidate areas". Again, quere the hydrogeological suitability of pits and quarries.

Finally, in this regard on page 149 you note that the first order of importance in selecting a site is Public Health and Safety and that hydrologic constraints must be rated "low" impact in order to consider an area for landfill. Yet NSP is rated as "low to moderate". Therefore again even by your own criteria, you should have rejected the NSP site. Our clients also seriously question your rating of the hydrologic concerns as only low to moderate.

Your report appears to have ignored Dr. Cherry's research in regard to the Bayview site and hydrogeological studies of leachate migrating from the existing Burlington site. Further, while you only consider 1/2 mile study area, it is clear that in relation to the NSP site, effects are felt by residents in an area 1 to 2 miles from the site. The impact on Burlington Bay and Lake Ontario is also ignored.

III. The Estimated Capacity of the NSP Site Exceeds Even that proposed by NSP

My clients are also concerned that you are estimating a capacity of 4,350,000 tons for NSP and adjacent lands. First of all, this far exceeds the current NSP application for a private landfill site to hold 1,760,000 tons. Obviously, NSP's knowledge

that their lands included environmentally sensitive areas and streams caused them to limit their application for landfilling to a smaller area of their property. Second, the Citizens' group would ask for clarification of "adjacent lands". They are concerned that this whole area will become one large landfill.

IV. WWY assumes that the Expansion to the Burlington Landfill is a fait accompli

On page 5, you stated that a Regional decision was made during stage 2B to continue landfilling at the existing Burlington site as an interim solution for waste disposal. Our comment would be that it seems premature for the consultants to second guess the results of a matter that has not yet been before the Environmental Assessment Board.

V. Social Costs

My clients are concerned that a number of important factors have been left out of the social and cultural impact analysis of the NSP site. Specifically, (1) as already mentioned the 1/2 mile study area is unacceptable as the population affected by the existing Burlington landfill and hence any landfill on NSP property extends to those residents south of Highway 403 and the residential community located 1 kilometer northeast of the NSP site; (2) the citizens are concerned about the visual impact of the site and the fact that the view of the Escarpment would be further limited by a landfill at the NSP site; (3) Aldershot has a history as a distinct small community and the impacts of placing a landfill in this area should be specifically evaluated; and finally (4) my clients believe that the fact that they have already been subjected to landfilling for at least 20 years should be taken into account. They have inherited the legacy of poor decision-making in siting landfills on fractured shale and feel that with present knowledge of the hydrogeology of the area, the NSP site is not suitable.

VI. The Parkway Belt Plan must be Amended if the NSP Property is to become a Landfill Site

Nowhere does your report refer to the fact that the Parkway Belt West Plan would have to be amended if the NSP site is to become a landfill site. Any amendment would be subject to the process, including hearings, set out in the Ontario Planning and Development Act. The Minister of Housing has stated that an amendment would be necessary in a letter dated September 3, 1982 to NSP's consultants. Clearly, this factor must be considered.

In conclusion, the West Burlington Citizens' Group's position is that the NSP site is unsuitable for landfilling for

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the reasons listed above. We trust that you will take the citizens' views into consideration in selecting your preferred site.

Yours truly,

CANADIAN ENVIRONMENTAL LAW ASSOCIATION

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