

West Burlington Citizens Group
c/o June Anderson
685 Inverness Avenue
BURLINGTON, Ontario
L7T 3S9

April 3, 1985

Re: Region of Halton Landfill, Environmental Assessment Draft Report,
"Selection of Preferred Site" by Walker, Wright, Young

Dear Sir/Madam:

Our comments on parts of the above report are enclosed for your information. They were submitted to the Region on March 26, 1985, as requested, and cover a number of major subjects.

Due to technical errors, lack of supporting evidence and faulty logic in many essential matters, we reject the report and its ranking of the sites as invalid on several counts, each being sufficient.

Our comments show why, and we expect you will agree.

Yours sincerely,



June Anderson (Mrs.)
President

THE WEST BURLINGTON CITIZENS GROUP

685 Inverness Avenue
Burlington, Ontario L7T 3S9
634-0411

March 25, 1985

The Regional Municipality of Halton
1151 Bronte Road
Oakville, Ontario L6J 6E1

Attention: Mr. R. Mohammed
Director of Planning and Development

Dear Sir:

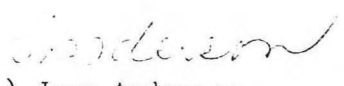
Re: Draft Report on the Selection of a Preferred
Landfill Site

In accordance with your letter of February 13, 1985, we hereby submit comments on the above report.

Due to the size of this report and in view of your March 26, 1985, deadline, we found it necessary to limit our review to selected parts of the 14 volume report. Therefore, we reserve the right to comment further as our review progresses.

In addition to our comments, I am also enclosing a letter from Mr. A. P. Paterson, Director, Royal Botanical Gardens, outlining concern over selection of Site F as the preferred site.

Yours sincerely,


(Mrs.) June Anderson
President
JA:dm



March 21, 1985.

Mrs. June Anderson,
685 Inverness Avenue,
Burlington, Ontario,
L7T 3S9.

Dear Mrs. Anderson:

Thank you for giving me the opportunity of commenting upon the Halton Landfill sites report. I should emphasize that as a principle Royal Botanical Gardens avoids comment upon politically sensitive subjects unless they impinge directly upon its own concerns. The Aldershot site F appears to do so.

1. RBG has been involved for some years in moves to upgrade the water quality in Burlington Bay and the public amenity aspect of the Harbour as a whole. A major study, promoted by the City of Hamilton is now underway to decide the future of the west end of the Bay. To this end Mayor's Day on April 13 will be a central part of a three day seminar to which all major users of the Hamilton waterside will contribute. The quality of life in this area is again being linked with use and well being of the Bay. Leachate from the Landfill site F, as described by the submission would negate the inter-city moves described above.
2. The Region of Halton and Burlington in particular is concerned with the economic impact of tourism, as is Hamilton-Wentworth. For both, Royal Botanical Gardens is the major tourist attraction as the biggest botanic garden in Canada. Recent capital grants from Federal and Provincial government to provide a visitor-available greenhouse will make it a year round attraction.

Landfill site F could have an adverse effect from water-pollution as mentioned above not only directly into the Bay but also from road refuse run off into the adjoining Grindstone Creek system. Provision only of the domestic road-system for delivery of refuse will have a deleterious effect to the area as perceived by its tourist traffic.

3. RBG can only deplore the anticipated loss of significant botanical habitats and the rare species within them as evinced by the biophysical study.

Sincerely,

A. P. Paterson,
DIRECTOR.

Overview

We have reviewed at least partly the following volumes:

Vol. 7/7A, Hydrogeologic - Hydrologic Assessment and Conceptual Design

Vol. 1, Transportation Assessment

Vol. 6, Air Quality Assessment

Vol. 9, Noise Assessment

Vol. 5, Social Impact Assessment

Cultural Environment Assessment

Vol. S, Draft Summary Report

We are particularly interested in Site F, in the City of Burlington.

A number of common observations emerge from the more detailed reviews and their conclusions;

1. Various important findings are not supported by data, calculations or other convincing evidence. Such statements remain therefore opinions that are an insufficient basis for deciding the selection of a large landfill site.
2. Further, the protection of the environment remains a minor concern throughout the reviewed material. Instead, the reports generally play down many important concerns. Some impacts are ignored, others underestimated or explained away, and some are simply declared acceptable.
3. The level of detail is claimed to be adequate for deciding the selection of a long term site. We disagree strongly. At least, where estimates must be used we would expect the limits of accuracy to be stated. Similarly, in matters of safety a margin of safety is required when working with estimates. We found neither, although they are commonly used in such work of professional quality. The question is too important to decide by guesswork.
4. The reviewed material is particularly vague about the site ranked best, Site F. The reason for that seems to be the many problems this site presents:

A poor rock base, a sloped site, existing leachate problems on either side, close to population centres, questionable history of becoming a candidate, too little area, requires engineered controls, greatest cost, raised elevation (dust, noise, visibility), transport access through city streets ... and so on.

Of course this site should not even be a candidate, let alone be named as the first choice. It is truly incomprehensible, using common sense, how the environmental assessment could arrive at its result.

5. In spite of all that, the reports persist with a dogged determination:

- Technical matters outweigh health and safety
- Existing pollution justifies more of the same
- Offsite water pollution is ignored or denied
- Opinions replace measurements, facts and logic
- Projections to the future are forgotten
- Frames of reference are shifted
- Comparisons are slanted
- Engineering shortcuts replace precautions ... and so on.

This is not a joke, unfortunately. These approaches are used to arrive at a result which is so heavily biased that it leads to the only logical conclusion: That the result was predetermined, and that the so-called assessment serves to justify that foregone conclusion.

The responsibility for this state of affairs certainly lies with the main consultants who engaged and coordinated the specialist consultants, but it must as well be placed on the consultants' contacts at the Region of Halton who endorsed the ranking of sites and how it was derived.

We reject outright the presented ranking of sites as being unfounded and arbitrary and the conceptual engineering of Site F as being dangerous to public health and safety. We also reject the insult offered us by way of numerous misleading arguments. The environment we and future generations must live in is too important.

APPENDIX 7 - 7A

HYDROGEOLOGIC - HYDROLOGIC ASSESSMENT AND

CONCEPTUAL DESIGN - COMMENTS

1. Purpose.

The preliminary assessment and generic conceptual site development plans have turned out to be insufficient for identification of a preferred landfill site, which is the overall purpose of the study: This report invites environmental trouble.

More comprehensive evidence than that given is required for an "identification", especially when the summary is stated to result in small differences in top rankings. (P. Walker, Feb. '85 public meeting.)

2. Scope of Investigation:

The report takes pains to explain a lack of evidence, for good reason: "However, there was no attempt during Stage 2C to develop on any site the level of detail required for approval of a facility under the Environmental Assessment Act" (p. 4). In fact, details for Site F are selectively zero (see below).

This inadequate level of detail in effect selects a site first, F, and looks at crucial data later, if at all. What appears as reasonable is really turned into covering up known but unwanted facts about Site F. That indicates that the site choice was preordained, and this report, as several others, merely supports that choice.

The inherent conflict appears in "The preparation of conceptual plans.. .. must be predicated on a level of hydrological investigation suitable for E.A. purposes" (p. 3).

If that level is insufficient for approval (....."there was no attempt..."), then recommendation for site selection is obviously also on insufficient grounds.

"....a comparable level of detail for hydrogeological investigations must be developed from original testing on some sites" (p. 1), and the details reported are (Vol. 7A):

<u>SITE</u>	A	B	C	D	E	<u>Avge. A-E</u>	F
Borehole logs	9	8	9	8	3	7.4	2
Soil grain distribtn. curves	10	4	7	11	10	8.4	-
Well construction-details	19	15	18	15	-	13.4	-
Groundwater elevations	36	14	34	42	-	25.2	-
Groundwater chemistry	5	4	4	5	2	4.0	3
Hydraulic conductivity	1	1	1	1	-	0.8	-
Water well records	92	92	92	55	26	71.4	-
Total data (sets) reported	172	138	165	137	41	130.6	5
Grand Total = 658							

The "comparable level of detail" is not given for F vs. A to E, although much more is available for F, more than "Previous Work" and Appendix F3 list, which itself is mostly by or for proponents.

Site F is "most preferred" (p. 63) although the information reported for F is only 5/130.6, or less than 4% of the average information reported for sites A to E. The information for F is $5/658 = 0.76\%$ of the grand total. Clearly, that is not sufficient, nor is it equitable.

3. Previous Work (p. 3-4) and Appendix F3, Sources.

The referenced material deals almost exclusively with the Site F. Of eight sources referenced, only two can be considered "at arm's length", the other six sources advocate or lobby for landfill at F.

Notwithstanding the available references, the information reported for F does not reflect the widespread underground leachate contamination already existing in that area, and only Bayview is mentioned.

Neither does this report refer to the "study area" and thereby it avoids dealing in any detail with the adjacent dumps/landfills and associated problems.

The claims that the proposed landfill would improve existing leachate problems (p. 60 and p. 83) are unfounded and misleading. They are "sales talk";

Dr. Cherry determined that the leachate plume from Bayview extended to the deepest boreholes.

Previous Work came together at the 1984 EPA hearing (site expansion). There, all experts agreed that no dump/landfill should have been started in the first place, considering the given hydrogeology. This report (for a proponent) neglects to mention that consensus, but it is a crucial point.

Previous Work ignores the 1980 report by Dr. Cherry "Hydrogeological Suitability of the NSP Landfill". Excerpts are attached.

We find this selection and use of reference material unacceptable.

4. Selection Criteria:

Attenuation Capability fails to describe fractured shale (Site F) though it is a major consideration. It has high permeability and low leachate attenuation. This omission would appear more than an oversight since Site F ends up the preferred choice.

The term "bedrock" is not used here either.

On overburden thickness, related to poor attenuation, the selection criteria are contradicted by Table 1, p. 75, where this constraint should read HIGH for site F.

Similarly the report fails to assess the complexity of the groundwater flow system at F. That constraint is rated LOW in Table 1, contradicting the selection criteria.

This report generally limits its view of Site F to the landfill area. Off-site contamination, already a problem, is consistently not assessed. Nevertheless it is claimed there would be no problem at Site F.

On drainage, Site F "was considered suitable for further investigation" while rejecting earlier all other pits and quarries. Significantly, pits and quarries had originally been found unsuitable due to their fractured rock base. The inconsistencies leading to selecting Site F keep compounding where now it is argued that "a liner is not required".

Further, the "potential danger that contaminants may leak from landfills and migrate to surface waters" (p. 7) is certainly applicable to Site F but is later ignored without explanation.

Neither does the report even acknowledge the surface contamination from leachate "springs", a serious problem at the present Burlington landfill. The slope of the land causes high hydraulic leachate pressure in the lower parts, and the elevation difference of the landfill area of 60 m (200 ft.) is not addressed. That is a serious deficiency of this report.

5. Use of Selection Criteria.

Although quoting the MOE requirement to keep boundary impacts low, this is in fact not heeded for Site F where this report assesses only the landfill area instead of a suitable study area. But collected leachate is to be piped directly to sewers and to the Burlington Bay?

Lack of overburden is given consideration at sites B and C, but this section does not mention the virtual absence of overburden at F, declarations of "equitable levels of detail" notwithstanding.

The statement "designs have been developed...to attenuate contaminants to acceptable levels" is only self-congratulating because the actual use of selection criteria at F falls dangerously short of that, as shown.

6. General Engineering Criteria (p. 9).

The generality of the criteria is seriously compromised by the engineering proposed for Site F:

- Buffer areas are largely eliminated for gaining site capacity that is really too small. The quoted reason, adjacent dumps/landfills, in fact call for the buffer areas to permit tracing and correcting the existing leachate problems. If three sources of leachate were allowed to form a single large plume, it would be impossible to determine the worst offenders, let alone to intercept that leachate in the only effective location, ie. nearest to the source. This is a well known engineering maxim, and this conceptual site design violates it. In effect, this design renders existing and future contamination hazards at Site F impossible to find and correct, being determined to gain a capacity that is too great for the location and its known faults to begin with. This is unacceptable, not only as a design, but also as an approach, especially in an environmental assessment context. That area needs solutions, not more problems.
- The "probable access along the access to the existing Burlington landfill" (p. 58) is a further example of disregarding boundaries to gain capacity.
- Similarly, the plan to locate the new service area of Site F near the entrance would create intolerable problems off-site with dirt, noise, visibility, etc. and is unacceptable.
- Excavating the site, and "the depth of cut is to average about 4.5m" are singularly inappropriate for Site F. It implies that the exposed fractured shale would be used for depositing garbage on it. We note that the target capacity does not allow any space for a clay liner (the dimensions and capacity calculations are not provided - a 1.5m clay liner would take up about 10% of rated capacity) and a synthetic liner is indeed out of the question.

This approach is not only technically wrong, the fact that this hydrological report skirts around such a pivotal consideration reflects badly on what it stands for.

- Similarly, the expected escape of leachate to the shale is acknowledged (p. 55), but no estimate of either the amount or the composition is produced. Yet, the author offers his "opinion that a liner.....is not required" on the basis that groundwater is already bad (that is good?), it is not used (some is used) and that the collected leachate is piped off site (another question, but itself a major problem).

Again, we find this report less than forthright, offering opinions and excuses in place of credible assessment. The basis for preferring Site F is obviously weak, and this report evades a major concern.

This far, we have addressed what the report actually contains. We find it equally or more important to register what this report implies by ^{the} way it treats the hydrology and conceptual design subjects, including its serious omissions.

In our opinion, this report says in effect:

- (a) that technical, cost and other considerations outweigh concern for health and safety;
- (b) that it would be acceptable to further contaminate bad groundwater already polluted by existing sources;
- (c) that it need not be considered where the groundwater emerges off-site e.g. surfacing in the flatlands to the south, including stream beds and built up city areas;
- (d) that it need not be considered what happens to leachate in the sewage treatment process;
- (e) that it need not be considered what (synergistic) effect leachate chemicals have on water quality in the Bay and Lake Ontario;
- (f) that it is acceptable to use information almost exclusively produced by or for landfill proponents, ignoring even the 1984 hearing consensus that it was a mistake to begin with to deposit garbage there;
- (g) that it is acceptable to ignore the misgivings of the few experts with no interest in the matter;
- (h) that it is acceptable to ignore the warnings of environmental scientists to err on the side of caution, finding the single or synergistic health effects of many chemicals are worse than expected;

- (i) that it is acceptable to squeeze "required capacity" into a site of ordinarily about half that capacity by reducing or eliminating environmental safeguards;
- (j) that it is acceptable to choose a landfill site out of six candidate sites while presenting less than 1% of supporting technical data for the chosen site;
- (k) that it is acceptable to ignore the slope of the site and the leachate pressure ("springs") causing surface water contamination;
- (l) that it is logical and rational to eliminate from consideration all pits and quarries as inherently too difficult for adequate leachate control, except one, and then prefer that one over normally acceptable sites;
- (m) that it is acceptable to not allow for shipping in to Site F appropriate (clay) cover material when almost nothing but crushed shale is available from excavating the landfill area;
- (n) that it is alright to omit the need to transport cover material to Site F although that affects assessments of other factors, e.g. traffic, costs, air quality and social impact;
- (o) that it is acceptable not to consider separately drained refuse cells for the landfill structure (conceptual design);
- (p) that it is acceptable to place landfill over the areas which would allow access for controlling existing underground leachate problems of other deposits.

This list of omissions and shortcuts in the basis of the landfill design, while not exhaustive, makes these points:

- The design basis is totally inadequate,
- it sacrifices environmental concerns for meeting predetermined objectives, and
- therefore, ranking Site F as the best choice of the six candidate sites is totally unacceptable from either the technical or the Public Health and Safety point of view.

Conclusions

1. The level of detail used in Vol. 7 and 7A in regard to Site F is not only lower than required for approval, it is too low for a rational site selection, especially with hydrogeology being of the first priority in the matter. This amounts to choosing a site first and asking questions later.

2. Documented data for Site F are much less than for other sites, although
 - (a) much more relevant data are available
 - (b) the lists of references and of "previous work" (p. 3-4) deal almost exclusively with the Site F area
 - (c) Site F must be primarily engineered to control leachate and is therefore inherently more sensitive.

The proclaimed principle of "equivalent amounts of information for every site" is actually over-extended here to suppress the available information. Only a few select items are presented to support the end result.

3. Off-site effects are virtually ignored, although they include the most serious environmental concerns, e.g. leachate surfacing off-site and leachate entering the Bay.
4. The stated "selection criteria" are applied very unevenly where it comes to Site F. Such topics as leachate transport and attenuation are neglected.
5. Such neglect would appear more than an oversight where the conceptual design calls for obvious shortcuts to achieve the desired capacity. That includes the stated intent to have no liner and the absence of any clay sole, which is implicit in the site dimensions and the specified capacity. Obviously, enumerating the actual and potential problems would not yield the same preferred site.
6. The "general engineering criteria" are in substantial conflict with the features of the Site F design. Those conflicts include the omission of buffer areas, invading areas already polluted and preventing their future cleanup, encroaching on the present landfill (then in afteruse) and, worst of all, excavating deeply into the shale at Site F.
7. These shortcuts demonstrate a complete disregard for protecting the environment, especially where
 - (a) they would repeat mistakes of the past that have produced the present leachate problems at two sites;
 - (b) it is contingent on the specialist to apply that expertise responsibly.

8. The design ignores the recommendation of the Region's own engineers to limit the depth of landfill to 15 m (50 ft.). The design calls for 19.5 m i.e. 30% greater depth.
9. The combination of the design shortcuts and the neglect of caution in the face of uncertainties and clear warnings shown in Vol. 7-7A demonstrate a mindset of disregard for the environment. The engineering approach taken in this report is dangerous to public health and safety.
10. This report is a discredit to its author, and the main consultant with his contacts at the Region of Halton must share the responsibility for it.

Attach./Excepts, Dr. J. A. Cherry

EXTRACTS FROM: Hydrological Suitability of the NSPL Landfill Site,
Burlington, Ontario

& 1983 update (paper on tracer methodology)

By: John A. Cherry and Donald L. Lush

October 1980

"The current guidelines and policies of the Ministry of the Environment are not specific with regard to the hydrogeological aspects of the problem and therefore recommendation made by consultants on landfill suitability and design are unavoidably problematic."

"Regardless of the choice, many contaminants will eventually end up in Hamilton Bay."

"It is necessary to assume leaching will occur for hundreds of years under a relatively high flow, and design the landfill accordingly."

"Based on the existing hydrogeological data from the Bayview landfill, it appears that a large plume of leachate-contaminated groundwater has developed in the shale and that the zone now extends beneath and beyond Highway 403." ⁽¹⁹⁸⁰⁾

"These zones are migrating towards an urban section of Burlington and in future years they may cause gradual changes in the quality of streamflow in Burlington."

"Some emphasis should be placed on analysis of toxic organic chemicals and their breakdown products in addition to the inorganic constituents that have been included in previous monitoring of the area. There is reason to believe that numerous toxic organic compounds occur in landfill leachate and that some of these constituents may be relatively mobile in some groundwater flow systems. At present little is known about the types and concentration levels of organic compounds in

leachate from landfills."

"The decision with regard to whether or not a site is hydrogeologically suitable is, to a significant degree, a matter of personal judgement. Personal judgement is an important factor largely because the Ontario Ministry of the Environment has almost no regulations, policies, or guidelines that are specific in a hydrogeological context."

"Based on the Gartner Lee report and the Phase II report by Morrison Beatty Associates Limited, it is expected that leachate that seeps downward beneath the landfill into the shale will gradually move at some depth, along primarily horizontal flow paths toward the southeast (i.e. towards Hamilton Bay)."

"The inclusion of interceptor drains in the proposed landfill may be expected to alter the quantity of leachate which reaches the streams but not its quality. Quality may be expected to be a function of the types of material placed in the landfill, the flow path both within the ground and surface water system, and time."

"In the (Bayview) seepage areas the phenol equivalents were comparable to some of the highest groundwater values and accordingly these also exceeded the provincial objectives for surface waters. High phenol equivalent values persisted down into Burlington. Analyses carried out

by MOE for chlorinated hydrocarbon compounds such as PCB's, herbicides, and a variety of pesticide residues indicated that these compounds are all at low but detectable levels and do not exceed federal maximum

acceptable surface water concentrations although their concentrations do exceed Ministry of the Environment surface water objective concentrations. The presence of these materials, many of which have been suggested as being carcinogenic, may result in public objection to any further landfill development unless it can be shown that water quality will improve as a result of future development."

"A sanitary landfill site of the type proposed for the NSPL property may be expected to have deposited within it either intentionally or unintentionally a variety of materials hazardous to life. These contaminants may be broadly classed into organic and inorganic materials. The organic materials are composed of a variety of pesticides, herbicides, and industrial products such as PCB's. The inorganic materials may be expected to consist of compounds of lead, zinc, copper, arsenic and other elements such as those which have been detected leaching from the closed Bayview landfill."

"Once in Hamilton Harbour most contaminants are expected to enter the sediment at some time in the future and to be removed from biological systems."

(As we know from Mercury in Northern lakes,
Sediment seldom results in final removal — recycling through fish is long term)

"The total concentration of several metals in the Rambo-Hager Diversion are at present higher than that deemed to be acceptable by the federal and provincial governments."

Dr. Cherry: Survey Update, August 1983

"Several diagnostic compounds have been identified in the (Bayview) groundwater. These compounds are common chlorinated hydrocarbons produced by the chemical industry. A summary of the results pertaining to three of these compounds is provided in a table included with this letter. (*)

The results indicate that a zone of leachate influence extends from the landfill at least to piezometer nest OW12/ (Half way is 400 ft from Bayview) and that the zone of influence extends to the deepest piezometers in the nests that were sampled. Of the various nests that were sampled, OW12 is the farthest from the landfill.

At present we do not have sufficient data to predict the fate of the chlorinated hydrocarbons in the hydrologic system."

(*)		OW12		Δ (ppb)
		10/6/6	background	
	Chlorobenzene			
	Chlorobenzene	0.8	0.05	+ 0.75
	Paradichlorobenzene			
	Paradichlorobenzene	0.05	ND	+ 0.05
	1,1,1 trichloro ethane	10.0	0.5	+ 9.5
	1,1,1-trichloro ethane			

APPENDIX 1

SELECTION OF PREFERRED LANDFILL SITE

TRANSPORTATION ASSESSMENT - COMMENTS

1. Introduction

The referenced report considers two basic evaluation factors:

- traffic safety; which encompasses use of local roads for haulage and potential conflicts along main haulage routes.
- traffic service and operation, which considers the following aspects: use of local roads; travel times and distances; standard and operating characteristics of main feeder routes to the site.

We will attempt to focus our comments on these basic evaluation factors in the same manner as the report.

Principally, data as it pertains to Site F was reviewed. No attempt was made to verify information given for the other land sites. However, we feel that the information reviewed impacts Site F in such a manner that it drastically revises the overall ranking of the various sites as given by the consultant.

2. Haulage Routes

The haulage routes specified in the report are based on two assumptions:

- a) Highway 403 is complete.
- b) Waterdown Road/Highway 403 interchange is in place

The report acknowledges that the timing of these new facilities is uncertain. However, it proceeds with basing its haulage routes to Site F on the assumption that the interchange is in place. Telephone calls to the Ministry of Transport and Communications, Government of Ontario, ascertained that the interchange is not in their five-year

program and, although it has been discussed, has not been placed on their long-range plan. Further discussion indicates that it appears on an independent MTC Highway Program related to the installation of a GO ALRT Station and, should the LRT proceed, will be constructed sometime within the next five to ten year period. (Current indications are that this whole section of the system is under review.)

Should the region wish to make formal application to have this interchange constructed for access to the landfill site, then they would have to go through the process of vying for dollars in an already established budget. There is no guarantee that their request would be favourably entertained.

We would suggest that it was convenient for the consultant to assume that this interchange exists in order to present Site F in a favourable light.

We note that the report has modified haulage routes to accommodate a completion of Highway 403 by 1996. Why was this approach not taken with the proposed interchange?

In view of the fact that this interchange does not exist, then the haulage routes to Site F must be re-established.

They would be as follows:

Burlington North-West

- North Service Road

Burlington South

- Plains Road/Brant Street/North Service Road

Burlington North

- Guelph Line/Plains Road/Brant Street/North Service Road

Oakville South

- QEW/Plains Road/Brant Street/North Service Road

Oakville North-West

- Highway 25/QEW/Plains Road/Brant Street/North Service Road

Oakville North-East

- Dundas Street/Highway 25/QEW/Plains Road/Brant Street/North Service Road

Milton South

- Highway 25/QEW/Plains Road/Brant Street/North Service Road

Milton North

- Guelph Line/Plains Road/Brant Street/North Service Road
- Alternatively, Guelph Line/Highway 5/Brant Street/North Service Road

Halton Hills East

- Regional Road 11/Trafalgar Road/Highway 5/Highway 25/QEW/Plains Road/Brant Street/North Service Road
- Alternatively, traffic could continue along Highway 5 to Brant Street to the North Service Road

Halton Hills West

- Highway 25/QEW/Plains Road/Brant Street/North Service Road

Traffic from all routes, with the exception of Burlington North-West, would have to travel along Plains Road, Brant Street and then the North Service Road. Plains Road and Brant Street are both heavily trafficked roads through built-up residential and commercial areas. The North Service Road westbound from Brant Street is a main feeder to the Tyandaga Development and light industry located on the North Service Road.

If we take the number of haulage trips per day to the site as stated in the report, Table 7, then in 1988, 440 - 9 vehicles will use this

route to get to the dump and return. On an average eight hour day a haulage vehicle will pass a particular point on this route every 108 seconds ($440 - 9 \times \frac{2}{8} \times 60 \text{ minutes} \times 60 \text{ seconds}$).

This volume of traffic is forecast to increase in 1996 and does not take into account any haulage required for cover and capping material which does not exist on the site. This additional demand could double the number of haulage vehicles passing through the streets.

Why hasn't there been any study of the impact of this traffic on the existing traffic patterns, increased noise levels, dust levels, pollutant levels, on this residential/commercial route?

3. Site Access Requirements

Principal access to Site F would now be along the North Service Road from the east. A turning lane would still be required but on the other side of the road.

4. Traffic Volumes and Arrival Characteristics

Our second major disagreement with the report pertains to the inclusion of cars in the development of weight statistics.

Cars entering the Burlington landfill site are not weighed. Although a large number of cars visit the site, especially on Saturdays, the volume of garbage and hence the tonnage they can carry, is insignificant when compared to the large trucks.

In order to determine the number of haulage vehicle trips per day (Table 7) one needs to establish the tonnage hauled per vehicle and then divide the forecasted garbage tonnage by the tonnage per vehicle and the number of haulage days in the year,

ie.:

$$\frac{\text{Total Garbage Disposed (weekdays and Saturdays) 1983}}{\text{Total Vehicles - Cars (weekdays and Saturdays) 1983}} = \text{Tonnes Per Vehicle}$$

$$\text{Forecast Number of Trips/Day} = \frac{\text{Forecast Garbage Tonnes (1996)}}{\text{Tonnes Per Vehicle} \times \text{Haulage Days (312)}}$$

$$\text{Therefore number of haulage vehicle trips per day for Burlington South in 1996} = \frac{167,331 \text{ tonnes}}{58,507 + 10,615} = 2.42 \text{ Tonnes Per Vehicle}$$

$$\text{Forecast Number of Trips} = \frac{95,337}{2.42 \times 312} = 126$$

Note: This is based on the assumption that the tonnage figures given in Table 6 are for the complete year. If we assume they are tonnes disposed during weekdays then the forecast becomes 133 trips per day. In either case, nowhere near the 187 trips per day listed in Table 7.

Table 7 and 8 remain beyond our comprehension and are assumed to be completely erroneous.

5. Travel Time and Distances

Figures given in Tables 9 and 10 are taken at face value but nevertheless we are alarmed when we see that the average speeds for garbage trucks to reach Site F from the centre of each waste zone vary from a low of 58 KM per hour to a high of 81.2 KM per hour. These Tables will need modifying to reflect the additional time and distance involved in reaching Site F before the Highway 403/Waterdown Road intersection is constructed.

Table 11 and 12 are no longer valid as they are based on the haulage vehicle trips per day stated in Table 7.

Similarly, Table 13 which is based on incorrect data contained in Tables 11 and 12, needs revising. The result will be that the Services and Operations Index will change making the selection of Site F more ludicrous.

6. Impacts and Evaluation

The report states that "Traffic Safety differences among the sites are not considered significant". Only Site E "has potential conflicts with local traffic". However "conflicts with haulage vehicles should be relatively low".

Our opinion is that Site F has conflicts with local traffic and, due to the volume of existing traffic and the large number of business and residential entrances encountered, these conflicts are going to be high.

For this safety reason alone, Site F should be ranked lower than Site E.

The following is a summary of the main transportation aspects associated with Site F:

Traffic Safety

- Requires truck turning at local intersections.
- Potential conflict with local traffic --
 - in Milton's urban area for trip from Halton Hills West waste zone,
 - on Guelph Line for Milton North waste zone,
 - on Plains Road, Brant Street and the North Service Road for all haulage routes except Burlington North-West
- Poor (dangerous) access on and off the QEW at Plains Road

7. Summary

There are enough errors and incorrect assumptions in the report to throw doubt on its integrity, as a whole.

Existing conditions have been ignored and data based on an unverified assumption.

Basic calculations are in error.

Despite this, supporting data is not presented in the report in sufficient detail to be able to verify the Consultants findings.

8. Conclusions

Site F, because of its remoteness from the centres of waste disposal and the need for all haulage vehicles to travel through a built-up residential and commercial area, makes it the least desirable candidate of the sites selected.

APPENDIX 6
SELECTION OF A PREFERRED SITE
AIR QUALITY - COMMENTS

This report is based on several misconceptions and assumptions. It also missed some important "real world" facts, some of which are particular to Site F. The result is overly optimistic.

1. Haulage traffic for Site F is about 150% of the quoted 263 vehicles/day (note: Vol. 1, Table 7, quotes 370 to 520 trips/weekday) arriving because cover material must be hauled in, and excavated rock must be hauled away. Excavated rock is not suitable for use as landfill cover.
2. Windspeeds over hilltops (50 ft. high) are increased (x2) by the flow concentration effect. Dust erosion by wind therefore starts for this purpose at a quoted 10 (not 20) km/h. Figure 3.1 indicated 65% of time for wind speeds 10 km/h or greater, and Appendix "A" is not representative.
Dust from wind erosion is consequently much more, particularly since the air flow's kinetic energy increases not simply in proportion but as the square of the wind speed.
3. The statement "assumptions have been based on current operating conditions....." is not borne out:
 - (i) Table 2.1, Item 4 (a), and p.2-2 specify handling to cover fill by scraper tractor, but fill trucks must be used, at least at Site F (see 1. above).
 - (ii) The assumed mitigating measures for road dust exceed by far what is either current or realistic: Table 2.1 shows mitigation of 99% for paved roads and 75% for unpaved roads. In fact, all roads within 1 km. of the site's "active face" get continually covered with dirt by vehicles leaving. Sweeping and washing a dump's roads where the traffic is 1 trip/minute or more is unrealistic. A site visit may help to revise Table 2.1.
 - (iii) The odour and dust estimates assume that garbage is exposed only 500 m² (e.g. 10m x 50m) but in fact it can spread over 100m x 400m with 50% cover, or about 40 times more exposed garbage that has "aged" (photos taken). The stench is sickening. The odour concentrations of Fig. 4.3 require a large factor.

4. Site F also differs from the other sites by the absence of buffer zones at much of its borders. The effect this has on the surroundings, including the possible afteruses of the present landfill, has not been mentioned.
5. A "legal standard" of $100 \mu\text{g}/\text{m}^3$ dust concentration is quoted, but the MOE criterion for dustfall of 20 tons/ mi^2 , 30 days, or an annual average of 13 tons/ mi^2 -month, (Nov. 1984) is not included.
6. After conceding that dust at the site could exceed $100 \mu\text{g}/\text{m}^3$, it is reported ".....we have assumed that dust emission rates could be approximately 50% lower than our theoretical estimates due to mitigating factors we have not considered".

We find that an amazing feat after assuming that roads are paved, swept and washed vigorously (99%). A conflict appears here between the forecast and the end result. We can only speculate that the first result did not suit the proponents' purpose. At least, the author indicated the conflict in his report and showed both Figure 4.1 and Figure 4.2.

7. While this report is more realistic than others, inasmuch as its measure of dust effects includes the number of people affected in bands of increasing distances to 2 km (p. 5-1 and Fig. 5.1), we find this still less than adequate. It considers only residences, thereby omitting the non-resident daytime population in the area when the site is also active. For Site F, that difference amounts to hundreds of people within those area bands who are overlooked, including school children.

The number of persons assumed for Fig. 5.1 are not given, but from area maps for Site F it is clear that the plot "F" in Fig. 5.1 must rise at even closer distances to spectacular heights (note the broken scale).

8. Future population growth is not evaluated, only the present pattern.

However, the last sentence (p. 5-2) hints correctly that ".....local population patterns may be affected.....", which is more than most of the other reports have done, and there can be no doubt that a landfill would indeed affect the population pattern, most of all in the urban setting of Site F: There, a landfill would create a gaping hole in the City's map for 20 years (none of the reports considers tax revenue losses).

9. The pollution and hazards of landfill gases are totally overlooked.

Conclusions

Several air quality effects are assessed with unrealistic assumptions which make the impacts appear lower. Differences both in site design and in the surroundings make the impacts at Site F greater than at other sites, and that has not been evaluated. E.g., population counts for nights instead of daytimes were used, which makes impacts at F look relatively much smaller. The ranking of sites is based on exposures to dust alone, using an unsupported reduction of the (low) concentration and none of odours and gases. If it were not for the described errors and omissions, including the arbitrary decision to accept only one half of predicted dust concentrations, Site F could not nearly have been ranked as the preferred site. This report requires major revisions.

APPENDIX 9

SELECTION OF PREFERRED LANDFILL SITE

NOISE ASSESSMENT

1. Measurements at existing Burlington operation.
 - spectral data are normally required to calculate attenuation due to distance, molecular absorption, barrier, etc. - only dBA Leq. provided.
 - Meteorological and ground conditions at test site are not described.
2. Acoustic Model Predictions - Table 1 (p. 2-1).
 - Table 1 indicates distance attenuation ranges from 9.5 dBA/double distance (100/200m) to 7dBA/DD (400/800m). This implies excess attenuation over normal assumption of 6 dBA/DD. Sources of excess attenuation such as molecular absorption, ground impedance, etc. are not described.
 - "Worst Case" scenario is not described.
 - Neutral weather conditions are assumed. Variations with wind direction and velocity as high as 20 dB have been reported (Ref. 1) and under inversion conditions levels 6-7 dBA above the theoretical 6 dB decrease have been measured (Ref. 2).
 - Locations of sources have not been identified. Such locations are necessary to calculate distance attenuation and berm insertion loss.
 - Berm insertion loss calculation technique is not described or referenced. Berm insertion loss over long distance propagation is often minimal due to thermal and wind gradients and interference with beneficial ground plane impedance effects.
3. Source Noise Control Assumptions.
 - Only exhaust noise is considered.
 - Bulldozers and earth movers have several other very significant noise sources: drop boxes, direct engine and radiator fan noises, (engines uncovered), track noise, process noise (scraping, etc.) hydraulic system, back-up horns.

4. Site Plan Area F

- as mentioned, the 7 dB/DD attenuation assumed in the report may not be realized under inversion or following wind conditions (Ref. 1). At this site, the 50 dBA Leq. and even the 55 dBA Leq. contours could be expanded under such conditions to include neighbouring homes, i.e. calculation accuracy is most crucial for this site.

Conclusions

1. This report underestimates the noise impacts in several important aspects, affecting both the "normal" and "worst case" predictions. Noise levels about 7 to 7 dB greater than estimated are likely to occur under some weather conditions (3 dB represents doubling of the sound pressure).
2. Too little supporting evidence is presented leaving many questions unanswered. Typically, the effects of following wind, refraction and reflection are not sufficiently dealt with.
3. Noise from earthmoving machinery is taken to consist of exhaust noise, when in fact the noise from the track, the hydraulics, fans and scraping soil or shale make a substantial contribution that can not be muffled.
4. At Site F, much greater accuracy is required to support the claim that the 50 and 55 dB contours do not invade the built-up residential areas. Note that no margin of error and no margin of safety are included, either.
5. On traffic noise, we do not agree that the noise made by a truck can in any way be related to the noise of a passenger car. The nuisance quality of a heavy diesel tractor accelerating through its many gears is so different that an equivalent number becomes meaningless.
6. Not included under traffic noise are
 - (a) the fact that the assumed truck route from the Q.E.W. to Waterdown Road does not exist. Trucks must exit the Q.E.W. at Plains Road and pass through city streets to reach North Service Road.

(b) At Site F, additional haulage is required to remove excavated shale and supply cover fill (clay) since broken shale is unsuitable as a cover. This could add as much as 50% to the haulage for that site.

7. In view of the hundreds or thousands of people jeopardized in Burlington, the work presented is inadequate. The possible selection of a landfill site such as "F" is too important to be made on that basis.

References

1. The Horizontal Propagation of Sound from a Jet Engine Close to the Ground, at Radlett, Parken & Scholes, J. of Sound Vib. 1964.
2. Measurement of Noise Fluctuation in Steel Works Caused by Weather Conditions, Y. Arimitzo, Kobe Steel SECSI-2, 1979.

APPENDIX 5

SELECTION OF PREFERRED SITE

SOCIAL IMPACT - COMMENTS

This report is heavily biased to select site F, noting the errors and omissions:

1. Narrow Definitions and Concepts

- Study area is much smaller than others¹, deliberately ignoring nearby residential and commercial areas for F.
- Ignores the urban (vs. rural) setting and its lifestyle.
- Ignores the existing leachate problem and its increase.
- Ignores the geographic (scenic) setting: escarpment, bay.
- Ignores future development potential, creating a long-term blight.
- Ignores the Parkway Belt West zoning (Provincial Act).
- Ignores haulage routes passing through city streets.
- Ignores site's commercial license for clay/shale extraction.
- Ignores emotional impact/stigma re. existing site and Bayview.
- Ignores the stress of fighting the expansion of the present landfill.
- Ignores the difference between a dump and a landfill.
- Ignores concern about Bay and Lake quality (leachate to sewers).
- Ignores difference between urban and rural "visiting patterns".
- Ignores difference between urban and rural appearance standards.
- Ignores the "social equity" issue, leaving it a "political" matter.
- Ignores the recreational use of sites (all-terrain motorcycles/buggies).

¹ Myra Schiff stated in public meetings "study areas were selected before I joined the project".

<u>Size of Study Areas:</u>	<u>Site:</u>	<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>	<u>E</u>	<u>F</u>
Farthest from "site", Km		3.1	2.3	2.5	2.1	1.4	1.0
ie. noise remaining, relative to "F",		10%	19%	16%	23%	51%	<u>100%</u>

- Ignores noise impact (50 dB) at Tridon and King Road commercial area.
- Ignores use of weight factors in evaluations.
- Ignores past and future of social environment.
- Ignores measurements, relying on volunteered opinions.
- Ignores F visible from city streets, Skyway Bridge, escarpment lookouts, boats on Bay and Lake.
- Ignores "showcase" properties nearby; Tridon, Cumis, Stelco R&D.
- Ignores the social life of the Aldershot community.
- Ignores traffic counts (densities) re. visibility of sites from a Highway (P. 2-14/15).
- Ignores the below-standard environmental performance of landfills.
- Ignores the after-use plans (park) for the present Burlington landfill.

2. Inconsistent Arguments (re. Site F)

- Omits maps referred to throughout the report.
- Does not rank impacts as "Nil" where called for (rated "Low").
- Excludes "properties used for commercial purposes" (P. 2-1).
- Included unoccupied rental properties (P. 2-2).
- When Site Plans were selected, the larger "candidate areas" were retained in the "study" area (P. 2-2). At F, the study area was extended into vacant land and to Waterdown Road (P. 2-4); (not on Map 5 of "Noise" report), ie. 1.8 km westward, but not to southward and eastward residential areas at 0.7 and 1.0 km. Also see footnote on previous page.
- Table 1: Only 11 samples for F, vs. 24 to 66 samples (average 53.2) at others.
- North Service Road included re. haulage, but not the other city streets to reach it (built-up areas).
- Uses 3-digit accuracies evaluating survey data (P. 2-7), but the accuracy of the volunteered data was not verified at all.
- Potential income (loss of ...) from land is considered at all sites (P. 2-7) except F: NSP land is licensed for clay/shale quarrying.
- Planning for future, older than 45: Considered at other sites, but the quoted RSP premium data show a lack of planning (P. 2-8).

- "Fewer housing options" for families of 5 and more: 4 bedroom houses are common in the region; building codes prohibit small houses (P. 2-8/9).
- An "Index of Income" is listed but not evaluated:
 - "Relative rather than absolute value", although all factors are relative.
- "Disruption" of households and residents only: Commercial not included.
- Heavy reliance on "study area" limits, but description does not agree with quoted map for F, "Noise" (P. 2-10 to 2-16 and P. 2-4/5).
- Sec. 2.5 headings refer to "Study Area" but text then refers to results for "each Site Plan Area" (P. 2-13, 2-14).)
- Ditto Sec. 2.6 (P. 2-19).)
- Ditto Sec. 2.7 (P. 2-21 and 2-22).) *
- Ditto Sec. 2.10 (P. 2-27).)
- * Consistently misuses the area definitions, P. 1-2.
- Special attention to children up to 16 years, but ignores growing concern with self-image for 16 to 25, including wider perspective.
- Children up to 16 years "represent special concern with respect to traffic safety ... and specifically the use of school buses in the vicinity of ... haulage routes" - disregarding haulage routes through Burlington City streets to Site F (P. 2-12).
- Visibility from highways cited, but not multiplied by number of vehicles.
- Stress from the selection process, "to reflect the time, energy and disruption to their lives",
 - a) excludes those not "living on-site or in the study area ..." (see small study area at F) (P. 2-16),
 - b) excludes the uneven availability of resources and information for governments vs. individuals or groups.
- Head count of Table 6 ignores (a) commercial, (b) residential areas nearby or even inside (re. (a)) the study area. (opposite P. 2-17).
- "Stigma" assessment included but only re. visibility of landfill; the real stigma effect works much more by other factors (P. 2-17/18).
- Considers "stability of the community" and "local social networks", but makes no attempt to gauge the (sub)urban context (F) (P. 2-19/20) as opposed to the rural setting: More people identify with an area, have greater regard for civilized surroundings (landscaping, architecture, ...).

- "Where people failed to provide usable information ... it was necessary to input a score to them on this measure" (disruption of community) (P. 2-19):
 - a) has failed to measure or validate data.
 - b) takes liberty of adding manufactured data.
 - c) decides ratings without showing the evidence after lengthy description of what should be considered (P. 2-19 to 2-22).
- Special consideration for "artists, writers, artisans and crafts people" is not extended to the Aldershot community (see "study area", small; avoids the word "measure" here) (P. 2-22 to 2-25).
- "Mitigating measures" refers to other reports, omitting water quality (lists noise, visual, land use and air quality in P. 2-25 footnote): Leachate effects are a major concern at F.
- Fails to include that leachate control at F depends on engineering works (prone to fail) while all others depend on natural effects (more reliable), ie. the future risk factor.
- Recommends and describes in detail a liaison committee (including some citizen representatives), but fails to state the powers of the "liaison" committee, if any (none, as per present arrangement) (P. 2-26).
- Ranks sites before discussing "Social Equity" issue, although that is a major objection to Site F: Termed "political" (P. 3-1).
- Cites emotional impact under "Social Equity" for Sites D and E, not for Site F (P. 3-2 and 3-3).
- Calls the Bayview site a former landfill; it was a simple dump, ie. it is environmentally much more damaging (P. 3-3).
- "Recreational uses" cited but not for site F (motorcycles, dune buggies) (P. 4-1).
- Assessing "community facilities" only by aspects raised by some individuals "responsible for (them)" - No independent definition of impact factors (P. 4-1).
- Enumerates in detail minor "community facilities" aspects, eg. walkathons (P. 4-2, A) but ignores the escarpment lookouts for F, eg. top of King Road (P. 4-5/6).
- Quotes Parkway Belt West (Act) re site C (P. 4-3), but not for site F (P. 4-5/6).
- Rates for the identical (noise) impact: site B "moderate", site C "high" (P. 4-7 and 4-8).

- Concern about aesthetic (visual) impact re. Milton District Hospital ("justified") is not similarly considered in (urban) Burlington, at much closer distances to much more population (P. 4-8; 4-10/11).
- "Possible impact ... at Bayview Park ... partially supported", whereas that park must be given up, per P. Walker at public meetings (P. 4-10).
- (See above) "it appears both feasible and reasonable that the recreational opportunities at Bayview Park can be provided elsewhere" - contradicts "possible impact" (P. 4-12 vs. 4-10).
- "Community facilities" fails to address the King's Court restaurant/dance hall inside the site F study area, nor are the other commercial services on King Road mentioned. They serve the public too (P. 4-10 to 12).
- Quotes a relatively high availability of parks in Burlington but fails to acknowledge higher lifestyle standards in the city than in farming areas (P. 4-12).
- Concludes "impact of a landfill on community facilities in Burlington is rated low": Uses city-wide area in this context (ie. not the study area any longer!)
- Footnotes refer to visual, noise and air quality aspects re. Bayview, omitting the leachate problem (P. 4-10/11).

Conclusions

This report is constructed on the inadequate basis of dealing only with issues raised by affected parties, but then selecting only some and ignoring other issues raised. The report totally lacks independent concept of social impact, measurement and objectivity, and is not even a valid opinion poll. Counting 26 issues ignored and 48 inconsistencies, mostly in respect to favoring the selection of site F, we view this report as a blatantly biased attempt to justify a predetermined choice of a site. A valid assessment of this subject would alone be sufficient to reject site F totally.

APPENDIX

SELECTION OF PREFERRED LANDFILL SITE

CULTURAL ENVIRONMENT

Comments

The Cultural Environment category deals with the potential loss of historical assets caused by a landfill. The value of archeological and heritage features is undeniable and these subjects are appropriate.

What concerns us is the total absence of any recognition given the present and future cultural life which are also assets subject to loss or damage.

There can be no doubt that

- (1) the present population has a culture;
- (2) this culture has a life, i.e. it grows, changes and dies, and it is fragile;
- (3) cultural differences exist between basic population groups, such as ethnic vs. mainstream, rural vs. urban, etc. and between free associations of individuals sharing like interests;
- (4) future cultures grow out of present cultures.

The fact that governments institute ministries for cultural affairs attests to the fact that culture is an important part of our lives.

We are concerned that the consultants and their contacts have failed to respond after the subject was raised. That does not come as a surprise, because our comments on this subject at earlier public input meetings met with a clear lack of interest and vague replies.

Either way, the impacts of landfills on present and future cultures have not been dealt with.

We submit that

- (1) this subject is appropriate and should be addressed;
- (2) real damage can result from a landfill, especially through noise but also in other ways;
- (3) the amount of damage increases with the number of people affected;
- (4) our urban environment differs more from a landfill operation than a rural setting in respect to culture, which makes the impact relatively

greater in the urban setting;

- (5) damage to current culture reduces the basis on which future culture grows and thereby causes long term damage.

Conclusions

1. Impacts on present and future culture have not been assessed, although they should have been.
2. This omission was not accidental.
3. Impacts in urban settings are greater than in rural settings due to numbers of people affected and greater cultural clash with a landfill.
4. Failure to assess this impact has added bias to the overall assessment towards selecting Site F, City of Burlington.

Volume 5
SELECTION OF A PREFERRED SITE
DRAFT SUMMARY REPORT - COMMENTS

While most contributing specialty reports are slanted towards selecting F as the preferred site, the summary report adds further bias to ensure Site F is chosen. The evaluation method, used on purpose, is cumbersome and tedious, partly obscuring the bias toward Site F. The end result is a bold reversal of logic in respect to Site F.

1. Rankings

The bias in site rankings by the specialty reports is evident from comparing Charts 1 to 5 or 6 to 9, the findings, with Figure 1 which compiles the various rankings. The listed advantages and disadvantages are clearly conflicting with the rankings in Figure 1 and with the end result.

2. Omissions

These contradictions become even greater when the numerous errors and omissions are taken into account. Some major ones are:

- (i) A leachate collection system at Site F can not improve existing leachate problems because:
 - (a) those drains would not reach the path the present leachate contamination takes;
 - (b) a landfill at Site F, laid on bare shale after excavating, without a liner, would actually add a tremendous amount of contamination seeping underground in view of the proposed capacity.
- (ii) Leachate collected by drains at Site F would be discharged via sewers to the Bay and Lake, a major health and safety concern which is totally ignored by these reports, although it was raised at earlier stages.
- (iii) Traffic impact would be much greater at Site F because:
 - (a) the excavated shale rock is not suitable for landfill cover material, therefore, cover soil must be brought in to F, increasing haulage substantially;

- (b) the proposed haulage route does not exist, forcing haulage traffic from the Q.E.W. to use city streets to reach Site F.
- (iv) Dust emissions from the site and connected roads, are badly underestimated by:
 - (a) assuming paved roads, being kept clean by sweeping and washing them while (more) trucks pass in rapid succession to and from the dirty area;
 - (b) arbitrarily cutting dust concentrations to 50% of an optimistic estimate, without showing cause.
- (iv) The social impact at Site F is grossly underrated due to a great number of omissions and contradictions that favour selecting Site F. Especially the study areas used in the report have a heavy discriminating effect.
- (v) The costs do not include losses in tax revenue.

Many more inequities could be cited here, but the listed items demonstrate how much greater the discrepancies really are, all of which adds to the contradiction already seen between Charts 1-5 or 6-9 and the final ranking of the sites.

3. Evaluation

The summary report's evaluation methods are far less objective than they could be, and that choice was deliberate, against our early objections:

- (i) Weight factors for expressing priorities (see attached excerpt from Chemical Engineering, October 1, 1984) have been rejected in favour of "key trade-offs" and "an element of judgement" as "more understandable and defensible" (p. 14). That approach is simply not adequate for a technical recommendation of such importance to a great number of people (thousands at Site F).
- (ii) An example of how subjectively the chosen evaluation method was used is shown in "Site D vs. Site F", p. 22-23; although the dominating facts consistently argue against Site F, this comparison chooses F on the basis of secondary aspects and questionable opinions. This puts a new meaning on the subtitle "Selection of Preferred Site".

Technique evaluates engineering alternatives

When faced with making a choice among alternatives, you need a method to select the best one. Here is a simple means that works for evaluating a wide variety of problems.

Robert L. Landis and James E. Hamilton, Brown & Root, Inc.

□ Making engineering decisions is often not easy; multiple alternatives may exist, and no one choice may seem best at first. Examples of such decisions are: selecting a vendor and deciding upon a contractor.

The technique that will be discussed provides an objective method for what otherwise could be a subjective one. Briefly, it breaks the requirements of a particular assignment into categories. Each category is rated from 1 (unsatisfactory) to 10 (outstanding). Also, a weighted factor is assigned to each category. An overall score is obtained by adding up the sum of the ratings multiplied by the factors for each option.

At the authors' company, this procedure is used to make judgments for clients who are constructing large oil refineries and petrochemical complexes. The method is used not only to select licensors (see the example) but to pick engineering contractors and commodity vendors. The implementation of this procedure has enabled our firm to make more-uniform and more-objective recommendations to clients.

Advantages and purposes

As noted, the main advantage to using the method is its objectivity. Evaluators, unfortunately, often allow previous experience (including that of their colleagues) to influence their decisions. While such information should not be excluded from the evaluation procedure, it should not unduly influence the current decision.

Without a process such as the one that will be given here, people sometimes make a selection by integrating all of the positive and negative aspects of each alternative. For most people, it is difficult to stay objective and pick the best overall selection, especially if the various choices seem about the same.

The proposed procedure minimizes such problems by breaking down the case into various categories that are analyzed and rated one at a time. Doing this not only simplifies the evaluation process but helps to avoid allowing overly negative or positive opinions from influencing the decision.

(2) Another advantage is that the method purposely avoids comparing alternatives. Instead, the merits of each are judged against a predetermined standard. The

use of this technique will yield two further advantages:

1. It generates a checklist for evaluating the candidates' ability to do the job. Thus, the evaluator is forced to review the candidates' capabilities in every category. This highlights areas where additional information is needed, as well as provides a basis for further evaluations and negotiations with potential candidates.

2. In comparing the candidates against a standard rather than against each other, it avoids selecting the "best of the worst" one. With other evaluation methods, one candidate may be found to be the best overall, yet still may not meet requirements sufficiently.

(3) Still other advantages: The method will result in an overall score for each candidate, showing how close each is to the standard. Also, when all of the people working on a project use the same evaluation technique, there is a greater degree of standardization.

Standardization is especially important when specialists from different groups (e.g., process engineers, contract administrators and project managers) are all evaluating a particular bid. This, combined with evaluators' justifications of each candidate's rating for each category, gives further credibility. Thus, greater assurance can be given that an impartial evaluation has been made.

Now, let us explain how to use the method by presenting an example. The example is selecting a technology licensor for a high-density polyethylene unit.

Before a detailed evaluation can be done, a preliminary screening must be carried out to narrow potential candidates to a reasonable number. This is usually three to eight firms, depending upon such factors as client requirements, the need for international sourcing (of materials or services), and the availability of interested candidates. Without a preliminary screening, the evaluation process would become much too cumbersome.

Next, invitations to tender must be prepared. At the same time, the evaluation categories must be established (see Table I). The box shows factors to be considered for the categories. The invitations to tender must specify that the prospective candidates include a response for each evaluation category. This not only minimizes the need to query bidders for more information, but also ensures that each bidder is properly informed of the

- (iii) We question the purpose of two sets of charts, 1 to 5 and 6 to 9, when one set could have compiled the individual results in the form of numbers and descriptions. The second set starts out by eliminating Sites B and C, a questionable step to take at that point, only to include B and C again in the "pairing" evaluation in the same section. This creates a profusion of arguments, repetition and confusion, which may indicate difficulties in coming to terms with the subject matter and/or the end result, but it further obscures or evades the path of logic. Surely, the "engineered" landfill of the urban Site F would have been rejected by a straight forward assessment using common sense instead of the circuitous route presented.

4. Detail

The level of detail for selecting a preferred site was argued to be necessarily less than the level of detail required for an approval. That opinion is prejudicial: the correct question is rather whether or not sufficient detail is provided to support a well reasoned decision, taking into account how important it is that the result be correct.

- (i) From our long list of questionable opinions, errors, omissions, contradictions and indications of bias, it would appear that the level of detail in the January 1985 report falls short of what is required, provided one regards the outcome as important in the first place.
- (ii) On the other hand, some reports show considerable amounts of detail which may be taken to mean it is sufficient. Such a first impression is false, because there is a serious lack of substance, realism and consistency behind the volumes of words. For example, hydrogeology, certainly a key subject (Vol. 7 and 7A):
- of 658 data or sets of data, only 5 (0.76%) are given for Site F (the selected site), despite the fact that all of the referenced sources of information deal with the Site F area. This serious discrepancy is to be measured against the main consultant insisting earlier that he will ignore his knowledge of some pertinent information (!) to obtain equivalent levels of detail for each of the sites. The point is that the results are prejudiced by pertinent information being ignored or omitted: had equal volumes of information been used then, at least that selection would have been fair. The declarations of being equitable now have a hollow ring.

- The summary of Table 1 in Vol. 7 (p. 63) rates "constraints to site development". Expressing the ratings as shown in numbers, NIL=0 to HIGH=5, the total scores rank Site F as #5, not #1. This is the primary and most important result, but it is overturned consequently on the basis of secondary considerations and questionable ratings.

Again, matters are dealt with in a selective and biased way.

At this point it should be noted that the main consultant is responsible for the coordination of specialists he engages. He must therefore be held accountable for the quality of the specialists' work and for abiding by the rules of fairness that were stressed so much in rejecting pertinent input at earlier stages. But the specialists can not be absolved from their obligation to be objective either.

We find that the January 1985 report not only lacks an adequate level of detail on important issues, but also that the level of detail and selection of information are applied selectively to support an end result that does not flow logically from the known facts.

Conclusions:

1. The summary report accepts and uses results from the specialty reports which contain conflicts between their rankings and descriptive findings for the sites.
2. The summary report accepts and uses specialty results based on errors, omissions and inconsistencies.
3. The summary's evaluation methods are not straightforward; the end results are not derived in the most objective way, and they are not self-evident.
4. The choice of evaluation method was a considered decision on the consultants' part, ie. not accidental.
5. The level of detail used for Selection of Preferred Site is applied selectively rather than uniformly in dealing with a number of issues that affect the end result.
6. The shortcomings listed have the effect of a pronounced bias to declare Site F as the best.

7. If it were not for the listed shortcomings, Site F would most certainly not have been preferred over the other sites: The difference in preference was described as small on the basis of the January 1985 report.

agenda

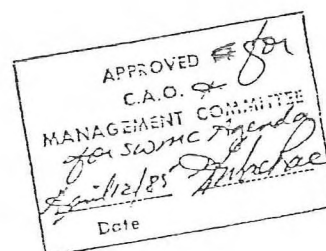
SWM - 25 - 85

COMMENTS:

WWY report "Selection of Preferred Site", Volume 2
(January 1985)
Biophysical Assessment

by Michael Brecht, Forest Technician
411 Dorchester Crescent
Burlington, Ontario

March 25, 1985



SWM-25-85

BIOPHYSICAL ASSESSMENT

Study Method

The Author states in this section that the information obtained for the report was obtained by a variety of methods. One of these techniques employed on-site investigation of the different candidate sites. However the Author states that site A1 was not examined because permission was not granted for access to the area. Also C2 and C4.

This statement is supported by Table 1.

Comparisons of Sites

1. In almost every circumstance Site Plan F4 and F2 have higher mean averages of plant life than all other sites. This is supported by Table 2.
2. Site F has the largest wooded area of all candidate sites.
3. Site F is the only candidate site that sustains provincially rare species of plants.

There seems to be some confusion by the Author on the exact number of rare species. The author has identified 3 rare species, while another report states that as many as eight were found, although the classification of most of the eight has been changed. To this writer this indicates that most of rare species which were reclassified are borderline subjects.

4. Although Table 2 shows Site Plan B3 as having a larger concentration of Graminoids and Forbes, the identical observation can be used for Site Plan F1 and F2. That is to say that Site Plan F1 has equally the amount of exotic trees, and Site Plan F2 has a higher concentration of exotic shrubs.
5. The Ministry of National Resources has produced an evaluation chart that shows that Site Plan F is the only site that will suffer moderate and positive impacts on the existing plant life.

6. On May 25/84 there was an unconfirmed sighting of a rare butterfly, and areas where it is found require protection which would be E2. Even if this is fact, should F1 and F2 not be given the same consideration for having confirmed rare species of plant life. The author of the report supports the statement in Section 4.6 by saying that because of the diversity of community types, and the presence of rare plants, Site Plan F is the least suitable site for a landfill and that Site Plan H is the most suitable area for a landfill because there is the least amount of bio-physical constraint.
7. The same section also states that all the other Site Plans will suffer less damage than Site F.
8. An overview of the Biophysical charts for all landfill sites show clearly that Site Plan F is the least suitable for a landfill because it is the most suitable for growth and rare species of plant life.
9. Should Site F be used as a landfill there will be a complete loss of rare plant life. This should raise a number of legal and moral considerations as to the destruction of rare species of plants for the purpose of garbage.
10. In the very beginning of the report there is mention of sightings of Juglans Nigra (Black Walnut) but in the List of Plant Species it is not given any mention.

CONCLUSION

It becomes very clear the more one reads the Biophysical Assessment that Site Plan F should not even be considered at all because of the amount of plant life that exists in the area, and the ecological damage that will occur if the area is used as a landfill.

All of the statements made in Assessment report were made as accurate as possible except that assumptions were made from a distance in some cases because access to the sites was denied. We must therefore question the accuracy of the author's finding because they have made no on-site evaluation on the areas.

In summation, I find, and the author finds as well, that because of existence of so many diverse plant types either rare, exotic or natural, Site F, and F2 are the least suitable areas for a landfill.

Prepared by

Michael Brecht,
Forest Technician

SWM - 25 - 85

10* Include:

As reading material this report was very difficult to assess because every species of plant was listed by scientific name, and there is no way that the common person would be able to determine the numerous varieties of trees, shrubs, plants and other vegetation unless they had formal training in the field of Dendrology.

ADDRESS TO CITY COUNCIL, CITY OF BURLINGTON

Date: March 25, 1985

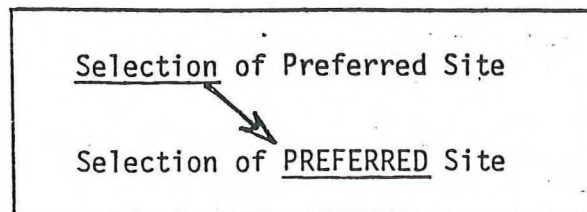
Delegation: Hans Kreplin, 510 - 20 Northshore Blvd. West
V.P., West Burlington Citizens Group
and member, Solid Waste Committee

Subject: Region of Halton Landfill, draft report "Selection of Preferred Site"

Mayor Bird, - ladies and gentlemen of the City Council:

You know me already and the West Burlington Citizens Group and its Solid Waste Committee. Let me get directly to the subject, the Region's January 1985 draft report on landfill, "Selection of Preferred Site".

We have had reason to object to the conduct of the Region's administration many times before, but in this instance the staff and its consultants have outdone themselves, setting a new record of the objectionable kind. The simplest way I can sum up our comment is by underlining one word in the title to express its actual meaning:



This report does not really select a site, it only tries to justify what was apparently "preferred" beforehand. But going through the motions was not that easy.

Overview

We have reviewed at least partly the following volumes:

Vol. 7/7A, Hydrogeologic - Hydrologic Assessment and Conceptual Design

Vol. 1, Transportation Assessment

Vol. 6, Air Quality Assessment

Vol. 9, Noise Assessment

Vol. 5, Social Impact Assessment

Cultural Environment Assessment

Vol. S, Draft Summary Report

We are particularly interested in Site F, in the City of Burlington, *of course*.

A number of common observations emerge from the more detailed reviews and their conclusions.

1. Various important findings are not supported by data, calculations or other convincing evidence. Such statements remain therefore opinions that are an insufficient basis for deciding the selection of a large landfill site.
2. Further, the protection of the environment remains a minor concern throughout the reviewed material. Instead, the reports generally play down many important concerns. Some impacts are ignored, others underestimated or explained away, and some are simply declared acceptable.
3. The level of detail for selecting a preferred site was argued to be necessarily less than the level of detail required for an approval. That opinion is prejudicial: the correct question is rather whether or not sufficient detail is provided to support a well reasoned decision, taking into account how important it is that the result be correct:

The level of detail is claimed to be adequate for deciding the selection of a long term site. We disagree strongly. At least, where estimates must be used we would expect the limits of accuracy to be stated. Similarly, in matters of safety a margin of safety is required when working with estimates. We found neither, although they are commonly used in such work of professional quality. The question is too important to decide by guesswork.

4. The reviewed material is particularly vague about the site ranked best, Site F. The reason for that seems to be the many problems this site presents:

A poor rock base, a sloped site, existing leachate problems on either side, close to population centres, questionable history of becoming a candidate, too little area, requires engineered controls, greatest cost, raised elevation (dust, noise, visibility), transport access through city streets ... and so on.

Of course this site should not even be a candidate, let alone be named as the first choice. It is truly incomprehensible, using common sense, how the environmental assessment could arrive at its result.

5. In spite of all that, the reports persist with a dogged determination:

- Technical matters outweigh health and safety
- Existing pollution justifies more of the same
- Offsite water pollution is ignored or denied
- Opinions replace measurements, facts and logic
- Projections to the future are forgotten
- Frames of reference are shifted
- Comparisons are slanted
- Engineering shortcuts replace precautions ... and so on.

This is not a joke, unfortunately. These approaches are used to arrive at a result which is so heavily biased that it leads to the only logical conclusion: That the result was predetermined, and that the so-called assessment serves to justify that foregone conclusion.

(See display)

The responsibility for this state of affairs certainly lies with the main consultants who engaged and coordinated the specialist consultants, but it must as well be placed on the consultants' contacts at the Region of Halton who endorsed the ranking of sites and how it was derived.

We reject outright the presented ranking of sites as being unfounded and arbitrary and the conceptual engineering of Site F as being dangerous to public health and safety. We also reject the insult offered us by way of numerous misleading arguments. The environment we and future generations must live in is too important.

HYDROGEOLOGIC - HYDROLOGIC ASSESSMENT AND
CONCEPTUAL DESIGN - COMMENTS

This far, we have addressed what the report actually contains. We find it equally or more important to register what this report implies by the way it treats the hydrology and conceptual design subjects, including its serious omissions.

In our opinion, this report says in effect:

- (a) that technical, cost and other considerations outweigh concern for health and safety;
- (b) that it would be acceptable to further contaminate bad groundwater already polluted by existing sources;
- (c) that it need not be considered where the groundwater emerges off-site e.g. surfacing in the flatlands to the south, including stream beds and built up city areas;
- (d) that it need not be considered what happens to leachate in the sewage treatment process;
- (e) that it need not be considered what (synergistic) effect leachate chemicals have on water quality in the Bay and Lake Ontario;
- (f) that it is acceptable to use information almost exclusively produced by or for landfill proponents, ignoring even the 1984 hearing consensus that it was a mistake to begin with to deposit garbage there;
- (g) that it is acceptable to ignore the misgivings of the few experts with no interest in the matter;
- (h) that it is acceptable to ignore the warnings of environmental scientists to err on the side of caution, finding the single or synergistic health effects of many chemicals are worse than expected;
- (i) that it is acceptable to squeeze "required capacity" into a site of ordinarily about half that capacity by reducing or eliminating environmental safeguards;
- (j) that it is acceptable to choose a landfill site out of six candidate sites while presenting less than 1% of supporting technical data for the chosen site;

- (k) that it is acceptable to ignore the slope of the site and the leachate pressure ("springs") causing surface water contamination;
- (l) that it is logical and rational to eliminate from consideration all pits and quarries as inherently too difficult for adequate leachate control, except one, and then prefer that one over normally acceptable sites;
- (m) that it is acceptable to not allow for shipping in to Site F appropriate (clay) cover material when almost nothing but crushed shale is available from excavating the landfill area;
- (n) that it is alright to omit the need to transport cover material to Site F although that affects assessments of other factors, e.g. traffic, costs, air quality and social impact;
- (o) that it is acceptable not to consider separately drained refuse cells for the landfill structure (conceptual design);
- (p) that it is acceptable to place landfill over the areas which along would allow access for controlling existing underground leachate problems of other deposits.

This list of omissions and shortcuts in the basis of the landfill design, while not exhaustive, makes these points:

- The design basis is totally inadequate,
- it sacrifices environmental concerns for meeting predetermined objectives, and
- therefore, ranking Site F as the best choice of the six candidate sites is totally unacceptable from either the technical or the Public Health and Safety point of view.

Report of the Solid Waste Management Committee to the West Burlington Citizens Group at the Annual Meeting, Tuesday, March 6, 1984

As Acting Chairman, I would like to bring the WBCG up to date on the activities of the SWMC since the last annual meeting of 1983.

The committee was formed one year ago in response to concerns that had arisen from a number of activities taking place in the landfill area on the North Service Road in Aldershot. These were:

- 1) Bayview site - this was closed in 1972 and was turned into a riding area and park. However, leachate from the site has been detected and is now down to Highway 403. The cost of the cleanup is estimated at approximately 1/2 million dollars. The decision to proceed with the cleanup has been delayed until some answers have been obtained regarding other lands in the area, namely National Sewer Pipe property immediately to the south of it.
- 2) present landfill site - this was opened in 1972 and has been operated by the Region since 1974. In 1980, the Region requested "a small expansion" because they had been unsuccessful in obtaining approval for a long term site. Approval for a 2 phase expansion was granted over the objections of local residents. Since then, other landfill sites in Halton have been closed and as of January 1, 1983, all of Halton's garbage has been shipped to this site - approximately 500,000 tons/year - with the knowledge that capacity will be reached by the summer of 1984. The Region now proposes a further 4 phase expansion to tide it over until the long term plan is in place, supposedly in about 4 years.
- 3) National Sewer Pipe - a private company - made application to the government in 1982 to open and operate a new, private landfill site adjacent to the Bayview and present landfill sites. Decision has been delayed to determine whether this site might be considered under the Environmental Assessment Act as a long term site for the Region.

2.....

Therefore, this community is being faced with not one, not two, but three issues related to the disposal of garbage in this area that could affect us now as well as later generations for years to come.

The committee's first effort was to organize a petition. With over 3300 names it was submitted to the provincial government to express our concern and to register our active opposition to any expansion or to any new sites in the area.

Since that time, we have continued to attend both city and regional Solid Waste Management Committee meetings and council meetings, submitting briefs to register our opposition but at the same time making positive contributions to the issues. Because of the many questions raised, the Region has hired a toxicologist to test for more exotic substances than had been done before.

In August, the City of Burlington took the same stance as your Committee, registering its opposition to the proposed expansion of the site, arguing that no effort had been made to solve the environmental and social concerns and that the Region had had sufficient time to find other means of disposal. Both the City and this Committee recommended the export proposal - 75% of the Region's garbage to go to an Energy from Waste plant in New York and 25% to go to landfill here. This was to be an interim measure and would mean that instead of a 4 phase expansion, it could be limited to phases A and B which we considered to be less threatening and we could live with. Regional Council, however, has opposed any option other than the expansion of the West Burlington landfill site.

The Region has known for years that it was running out of landfill space. As recently as March, 1983, the Ministry of the Environment advised the Region that it could not expect to obtain an Emergency Exemption for expansion, if the need was known at that time. In spite of this, the Regional Chairman approached the Minister of the Environment, Hon. A. Brandt, in order to request an exemption for an EPA hearing. Again the committee fought hard against allowing this, arguing that there must be an environmental hearing as there were many questions about the site that had not been answered, leachate monitoring being one of them as well as the fact that local residents of the area had been assured in 1980 that if any further expansions were requested there would be a hearing.

3.....

Mr. Brandt informed the Region that hearings must be held, however, he also stated that if it became necessary, an emergency permit might be issued. This could be merely the first step toward approval being rubber stamped.

The Present

On February 15, 1984, the Region made formal application to the Ministry of the Environment for a 4 phase expansion and it appears that the hearings will likely take place in early May.

Because the hearings are semi-judicial in nature, we have been advised to obtain legal counsel. This has now been done and we have retained the services of the Canadian Environmental Law Association which is a legal aid clinic to assist the public in cases such as ours. This is an important step as it will provide us with the advice and guidance necessary to take part in the proceedings.

With regard to the National Sewer Pipe property, it was announced yesterday that it will be one of the 6 sites to be examined for a long term landfill site under the Environmental Assessment currently being undertaken by the Region. We are extremely concerned about this because it is the only pit and quarry site and the consultants are not using the same set of criteria to examine it as they are using for the other 5 sites. This announcement means that we are going to be faced with not only a short term landfill problem - the expansion, but also with a long term - 20 years. We are going to need all the resources we can get in order to protect our community and prevent it from becoming the "Dump Capital of Halton".

Dorothy Pocock
Acting Chairman

TO THE MAYOR AND MEMBERS OF BURLINGTON CITY COUNCIL

Our objective today is - to present a petition
and - to explain why it was taken.

The wording of the petition is as follows:

"WE, THE RESIDENTS OF WARD 1 IN BURLINGTON OPPOSE ANY MORE SOLID WASTE LANDFILL SITES IN WARD 1.

WE OPPOSE HALTON REGION'S PLAN TO EXPAND THE EXISTING SOLID WASTE LANDFILL SITE.

WE OPPOSE THE NATIONALSEWER PIPE CO. APPLICATION TO REMOVE THEIR PROPERTY FROM THE PARKWAY BELT WEST PLAN IN ORDER TO OPERATE A LANDFILL SITE ON THE LAND ADJACENT TO THE CURRENT LANDFILL SITE."

The petition was taken door to door in WARD 1 BURLINGTON only. This is an area west of King Road. The petition includes only signatures of voters over 18 years of age. We have received 3,341 signatures on that petition!

WE FEEL THAT THIS VERY GOOD RESPONSE IS TOO HIGH TO IGNORE.

A copy of the petition together with a covering letter has already been sent to:

MR. CLAUDE BENNETT - MINISTRY OF MUNICIPAL AFFAIRS AND HOUSING

MR. KEITH NORTON - MINISTRY OF THE ENVIRONMENT

We have presented a copy and the letter to the CHAIRMAN AND MEMBERS OF HALTON REGIONAL COUNCIL.

We plan to present a copy and letter to the HON. G. KERR, MLA, BURLINGTON SOUTH.

Since January 1, 1983, all of Halton's garbage is being trucked to the existing site in WARD 1 (due to close in April, 1984).

We are here to register opposition to the application by N.S.P. REFERRED TO earlier in the wording of our petition.

Our group has an interest in the STAGE 1 report of the Halton Environmental Assessment Of Landfill Component of Halton Solid Waste Mnaagement System, and our committee on solid waste management has submitted a brief to Walker Wright Young and Associates. Specific sites have been named including N.S.P. contrary to the study terms of reference. We question the objectivity of the next stage when in Stage 1, sites are named. There have also been so-called newsletter drops by N.S.P. in WARD 1, which would have us believe that the biggest concern is a lack of action on the part of government, to their application.

OUR PETITION REFUTES THAT!

We understand that Regional staff is meeting with N.S.P. and the Province on May 19 to decide HOW TO TREAT THE N.S.P. APPLICATION.

We are concerned that WARD 1 has taken its fair share of Halton Region's garbage and the STAGE 1 REPORT on page 51 states that "THE FEASIBILITY AND SUCCESS OF THE CONTAINMENT OPTION WILL REMAIN IN DOUBT FOR MANY YEARS UNTIL SUCCESS CAN BE ASCERTAINED" over time. This does not reassure a community at the bottom of the hill and downstream from the proposed N.S.P. landfill site.

I will now introduce those members of our committee who are present.

Sincerely,



R.E. LUXON, PRESIDENT OF WEST BURLINGTON CITIZENS GROUP (WARD 1 RATEPAYERS ASSOCIATION)

Solid Waste Committee
West Burlington Ratepayers Assoc.
Ward One
595 Kingswood Place
Burlington, Ontario
L7T 2W6

April 29, 1983

Dear Sir:

3,500 information letters were circulated to the homes, rental accommodations, and small businesses in Ward One. This was followed with a petition by the new Solid Waste Committee set up under the auspices of The West Burlington Ratepayers Association. The number of names on this petition indicates there is very serious concern about any further expansion of landfill sites in Ward One.

The concern of this letter will point out the problems we are experiencing and also the consequences of any further expansions of garbage landfill sites by the region or any private operators.

A committee has been formed under the auspices of the West Burlington Ratepayers Association (designated as Ward One of Burlington). The scope of this committee is directly related to Site A which is the Regions only landfill site and also includes the National Sewer Pipe proposal to take 52 acres out of the parkway belt for the purpose of creating a privately owned and operated landfill site.

The Bayview landfill site is closed, and the Regional Landfill site, now on it's third extension supposedly will be completely filled by 1984, when this operation is completed we will have in excess of 300 acres of landfill garbage in this area designated as site A.

A meeting was held Wednesday, February 16, 1983 with the ratepayers of Ward 1. There were 250 people in attendance who very strongly opposed the expansion of site A beyond the 1984 limits.

I will list their objections and proposals.

1. Oppose any ammedment which would remove any property out of the Parkway Belt regulations for the purpose of Solid Waste Landfill sites.
2. To oppose any further Landfill sites in Ward One.
3. To maintain or improve the quality of life in Ward One.
4. To promote the use of alternative methods of solid waste disposal.
5. Definite opposition to privately operated Landfill garbage site.

6. If landfill sites are to be approved the Regional Council and the Burlington Council must look at the proposal of multiple landfill sites.
7. Due to the N.S.P. changing their original request for 145 acres down to 52 acres in various stages, people would be very suspicious of future plans of expansion.

I would like to point out some further problems pertaining to further development of Site A.

1. At the present time the Bayview dump that is closed, is in serious trouble and will have to be harnessed at the expense of the Burlington taxpayers only at a very high cost.
2. At the present Region's site, they have had to put in a leachate and draining system to divert waste back to the Burlington sewer plant which is compounding the problems at the plant.
3. Vents are being installed to the height of the completed landfill in order to vent the methane gasses.

In reference to all the hole drilling in order to take soil samples for analysing, it would be assumed that a big measure of common sense and logic must be used in studying the findings.

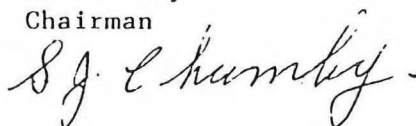
1. On the west of the Regional landfill site is the Falcon Creek drainage basin, on the east side of the closed Bayview site and the N.S.P. proposal is the Indian Creek drainage basin.
2. Due to the fact that you cannot keep burying garbage and waste on the side of a hill in front of the escarpment and make it acceptable, it is logical that all surface drainage and underground drainage comes down through a residential area making it's way into the Burlington Bay through the Burlington Canal into Lake Ontario right past the water intake to our filtration plant.

Due to the location of site A in conjunction with the escarpment and the prevailing winds, most of the methane gases and the dirt and dust created would be carried over the residential area of Ward One and Ward Two. It would have a very detrimental effect on property values. This has been proved to be a fact in a number of other areas.

We sincerely hope that you will seriously analyse all the concerns mentioned in this letter as we have a very worried, highly populated residential area within one half mile of the existing landfill site. Any further landfill sites or expansions should not be allowed in Ward One.

Yours truly,

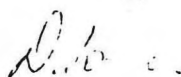
S. Chumley
Chairman



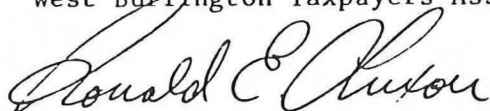
Jamie Edwards
Vice Chairman



D. Pocock
Secretary



Ron Luxon
President
West Burlington Taxpayers Association



WHAT'S ALL THIS GARBAGE ABOUT?

READ WHY WE SHOULD BE WORRIED ABOUT YET ANOTHER DUP SITE IN WARD ONE

1. Bayview Park King Road -
 - . a dump 1943 - 1971
 - . this park now has leachate migrating south of Hwy #403
(WARD 1 report Oct. 1981)
 2. A second solid waste landfill site was begun on the North Service Road -
 - . As of January 1, 1983 all of Halton Region's garbage is
trucked to this site.
 - . This site will be full by April 1984.
 3. A privately owned company, National Sewer Pipe -
 - . had made application for an amendment to the PARKWAY BELT WEST PLAN to allow NSP to operate a solid waste landfill site on another 51.5 acres (20.6 hectares) on the North Service Road west of King Road.
 - . This site "A" was rejected at the OMB hearing on the basis of unsuitable soil conditions (HYDROGEOLOGY) (Acres Consulting Services Ltd. report to the City of Burlington September 1982).
 4. Our CONCERN is -
 - . that we have already passed the saturation point of solid waste (GARBAGE) landfill in WARD 1 where there is natural drainage on the slope between the escarpment and Burlington Bay. This is where liquid runoff and seepage will drain through the residential area into an already polluted bay heading for our drinking water intake!
 - . THIS IS ENVIRONMENTALLY UNACCEPTABLE!
- DID YOU KNOW THAT -
- a) Before 1974 there were 6 landfill sites in Halton, now there is only one - WARD 1
 - b) All Halton Region's garbage is now trucked to WARD ONE -
in 1983 an estimated 205,000 tons or 1 million tons in 5 years
 - c) Man has not been successful in controlling leachate and we do not know its affect on you and yours in 5, 10, or 100 years
 - d) More and more garbage dumps are becoming environmental horror stories.

REQUESTED ACTION -

SUPPORT THE FIGHT AGAINST FURTHER SOLID WASTE LANDFILL SITES
IN WARD ONE WHEN A REPRESENTATIVE OF OUR SOLID WASTE
MANAGEMENT COMMITTEE CALLS ON YOU TO SIGN THE PETITION!

Sincereley,

RON LUXON
PRESIDENT, WEST BURLINGTON
CITIZEN'S GROUP

SID CHUMLEY
CHAIRMAN SOLID WASTE
COMMITTEE

WE OPPOSE THE N.S.P. APPLICATION TO REMOVE LAND FROM THE PARKWAY BELT WEST PLAN IN ORDER TO OPERATE A LANDFILL SITE ON THE LAND ADJACENT TO THE CURRENT LANDFILL SITE.

[illegible]

HELP **STOP Dumping** **ON** **BURLINGTON** **HELP**
HALTON PLANS TO ADD
A MILLION TONS OF GARBAGE

TO THE BURLINGTON LANDFILL SITE
THAT WOULD WORSEN THE EXISTING LEGACY OF PROBLEMS

- * LEACHING LIQUID IS HEADED UNDERGROUND TOWARDS RESIDENCES, PARKS AND THE BAY
- * LEACHATE DRAINING TO SEWERS ENTERING THE BAY.
- * A PERMANENT MOUNTAIN OF GARBAGE.
- * FOUR MORE YEARS OF HAULING AND NOISE.
- * LONG TERM THREAT TO DRINKING WATER.
- * NATIONAL SEWER PIPE LANDS ARE NOW AN OFFICIAL CANDIDATE SITE FOR THE 20 YEAR PLAN.

YOUR CITIZENS GROUP HAS RETAINED A LAWYER UNDER THE CANADIAN ENVIRONEMTAL LAW ASSOCIATION TO REPRESENT YOU AT THE PENDING ENVIRONEMTAL HEARINGS.

WE NEED FUNDS AND CANVASSERS TO HELP COLLECT THEM, TO PAY FOR INDEPENDENT ANALYSIS AND TECHNICAL ADVICE.

SEND YOUR CHEQUE \$20. PER FAMILY OR \$50. PER BUSINESS OR WHATEVER YOU CONSIDER YOU CAN SPARE.

PAYABLE TO : THE WEST BURLINGTON CITIZENS GROUP
111 LYNN COURT
BURLINGTON, ONTARIO
L7T 1B3

PLEASE PRINT

NAME.....

ADDRESS.....

AMOUNT.....

POSTAL CODE.....PHONE.....

I WILL HELP CANVASS ☐



The Corporation of the
City of Burlington

City Hall:
426 Brant Street, Burlington, Ontario, Canada
Mailing Address:
P.O. Box 5013, Burlington, Ontario, Canada L7R 3Z6

Telephone: 335-7697

File No.: 75.01-1

February 16, 1983

Mrs. Dorothy Pocock
534 Ann Avenue
Burlington, Ontario
L7T 2S6

Dear Mrs. Pocock:

SUBJECT: Citizens Advisory Committee to Review the National Sewer
Pipe Applications

Please be advised that the Council of the Corporation of the City of Burlington, at its regular meeting held Monday, February 14, 1983 enacted the following resolution:

THAT the Council of the Corporation of the City of Burlington recommend to the Minister of Housing and Municipal Affairs that:

- a) Mr. Urmas Soomet of 4180 Sutherland Crescent,
Burlington, L7L 5G4;
- b) Mr. Gordon F. Logan of 3540 Commerce Court,
Burlington, L7N 3L7;
- c) Mrs. Dorothy Pocock of 534 Ann Avenue, Burlington,
L7T 2S6;

be appointed as representatives on the Citizens Advisory Committee to review the National Sewer Pipe Application, for an amendment to the Parkway Belt West Plan, to allow for the establishment of a landfill site.

The aforementioned recommendation will be forwarded to the Minister of Housing and Municipal Affairs for his consideration, following which you will be notified of the outcome by the Ministry.

Yours truly,

A handwritten signature in cursive script, reading "Helen MacRae".

Helen MacRae, M.P.A.
CITY CLERK AND DIRECTOR OF
ADMINISTRATIVE SERVICES

WJM/1f



1 St Clair Ave West 1 ouest, avenue St. Clair
5th Floor 5e étage
Toronto Ontario Toronto (Ontario)
XXXXXXXXXX XXXXXXXXXX
416/965-2531 416/965-2531
(416) 323-4806

CH-86-02(F)

HALTON WASTE DISPOSAL FACILITIES HEARING
APPLICATION FOR FUNDING

The following information will be required by the Funding Panel. Also, please refer to the Funding Criteria contained within the Order in Council.

Applications must be submitted to the Chairman of the Funding Panel on February 23, 1987. Attach further pages as necessary.

1. Name of Individual or Organization:

Milton Area Citizen's Coalition

2. Address: c/o Stephen Garrod, Barrister and Solicitor
62 Yarmouth Street
P.O. Box 1505
Guelph, Ontario, N1H 6N9

3. Telephone Number: (519)837-0500

4. If an umbrella organization, please list all member groups and identify a contact person for each group and their addresses and telephone numbers.

- a) Tremaine Britannia Citizens' Group c/o Sherry Blakelock
5423 Britannia Road, Milton, Ontario, L9T 2Y1 (416)878-1747
- b) Boyne Britannia Citizens' Group c/o Amy Tomosky
4476 #25 Highway, Milton, Ontario, L9T 2X5 (416)878-5814
- c) Site D Farmers' Group c/o Peter Lambrick, Box 171
Campbellville, Ontario, LOP 1B0 (416)854-9957

5. If an organization or group, please list the names and addresses of the members of the Board of Directors or the Executives and identify the person who is to receive the funding on behalf of the organization or group and who will be responsible for submission of the final report to the Funding Panel.

See attached page 3.

6. Reasons for requesting funding. Please explain how you or your organization satisfy the funding criteria set out by the Order in Council. (Use extra pages if necessary).

The Region of Halton has identified two sites which will be before the Joint Board for consideration; one in Milton and one in Burlington. Although the consultants for the Region of Halton have identified the Burlington site as the preferred site, their position is that there is not much difference between the two sites and either would be acceptable for the establishment of a waste disposal site. // *

The Milton Area Citizens' Coalition is made up of 3 separate groups. The current membership of the groups is estimated to be:

Boyne Britannia Citizens' Group - 50 households
Tremaine Britannia Citizens' Group - 200 households
Site D Farmers' Group - 11 households or farm operations.

Continued on attached page 4.

7. Please attach a budget for your participation in the hearing showing the amounts projected to be needed for the items listed for which funding may be available. Please be as specific as possible.

See attached page 5.

8. If your budget includes amounts projected for expert witness fees, please identify the name and/or the expertise of the witness you would like funding for, if possible. Please indicate why you believe that this evidence would be of assistance to the Board in making its decision.

The Coalition has not yet made a final decision regarding which specific experts it will hire within the topics indicated in the budget. Discussions have been held with many consultants and the choice has been narrowed down but not finalized. The Coalition intends to make a final decision by the end of February or early March, once funding has been finalized. The fees for the consultants being considered range from \$600.00/day to \$130.00/hour. //

These areas of evidence are of primary concern to the members of the Coalition. The Town of Milton will not be covering these areas in its case; therefore, the Coalition must presents its own evidence in order to reply to the reports and evidence of the Region's consultants and to present a balanced case for the Board's consideration. //

Coalition Executive:

Mrs. Amy Tomosky
5576 #25 Highway
Milton, Ontario
L9T 2X5
(416)878-5814

Mrs. Sherry Blakelock
5423 Britannia Road
R.R. #6
Milton, Ontario
L9T 2Y1
(416)878-1747

Mr. Peter Lambrick
Box 171
Campbellville, Ontario
L0P 1B0
(416)854-9957

Mr. Bob Scott
5215 1st Line
Milton, Ontario
(416)845-1681

Mrs. Evelyn Gillies
5543 #25 Highway
Milton, Ontario
L9T 2X5
(416)878-9817

Person Responsible for Funding and Reports:

Stephen Garrod, Esq.
Barrister and Solicitor
62 Yarmouth Street
Box 1505
Guelph, Ontario
N1H 6N9
(519)837-0500

✓ The members of these groups are people living in the immediate vicinity of the proposed waste disposal site in the Town of Milton. These people will be directly affected by any decision to approve a waste disposal site in this location.

The Region of Halton is estimating that over \$1.5 million will be required for legal fees and expert witnesses for the hearing. It estimates that the hearing will take about 120 days.] *

The Town of Milton has allocated \$500,000.00 for lawyers and consultants for this hearing. They will focus on 4 areas of evidence: |

1. planning and economic assessment;
2. hydrogeological investigation;
3. agricultural rehabilitation;
4. airport hazard assessment.

The Coalition does not intend to call any expert evidence that would duplicate expert evidence called by the Town. However, the Region of Halton has produced 5 separate reports detailing various social impacts that are of critical interest to the Coalition. Approximately half of the hearing time could reasonably be used to deal with these social impact issues. The Town of Milton is not addressing these in its case. The Coalition therefore considers it critical to retain expert assistance to address the areas of social/environmental impact assessment and heritage features assessment. //

* noise trouble ✓

The Town has agreed to loan the Coalition \$20,000.00 in order to assist the organization of its case. This amount must be repaid from funds received subsequently from any other source. Efforts to convince the Town to grant the funds rather than to loan it to the Coalition have been unsuccessful.

↗ can be written off.
loan
\$ 12,000
Burlington.

|| The Coalition has received a Group Certificate for Legal Aid to cover 50% of legal fees and 50% of disbursements, excluding expert witnesses. The balance of the funds required for legal representation and disbursements and the total amount required to retain expert witnesses must therefore be paid by the Coalition.

— we have note for disbursements

The members of the Coalition are actively involved in fundraising. The Coalition has raised approximately \$15,000.00 to the present time, with fundraising efforts to continue throughout 1987. Fundraising activities have included an auction sale, a food booth at the Milton Fair, a symphony concert and a quilt raffle.

*] equiv.

The Burlington Ratepayers will be represented on a daily basis throughout the hearing by the Canadian Environmental Law Association which is funded as a clinic by the Ontario Legal Aid Plan. The Burlington Group therefore will receive free legal representation at the hearing. We understand that the City of Burlington has given the Burlington Ratepayers a grant in the amount of \$12,000.00, and that the City of Burlington has allocated \$800,000.00 to present its case at the hearing. ✓

Evidence on social/environmental issues will be led throughout the hearing by the Region of Halton, the City of Burlington, the Burlington Ratepayers and the Coalition. It will therefore be necessary to be in attendance throughout most of the hearing in order to adequately address these areas. In addition, the Coalition will call lay evidence on topics that will not be limited to the ones on which it intends to present expert evidence. At a minimum, it is estimated that the Coalition should be represented at the hearing for eighty days.

If the Coalition does not receive additional financial assistance, it will be impossible to participate in the process on an equal basis with the Burlington Group. Unless the Coalition is able to participate equally, the Board may be presented with an unbalanced perspective of the impact of its decision on the residents around each site. //

The Coalition intends to make a significant contribution to this decision making process and will ask the Board for an award of costs at the end of the hearing. Any costs received will be used to repay the loan from the Town, the Legal Aid account and any funds received from the Crown through this Funding Panel, to the extent that the cost award allows.

7. PROPOSED BUDGET

A. Legal Counsel:

preparation	40 days
attendance at hearing	<u>80 days</u>

120 days

120 days @ \$438.00/day (legal aid rate)

\$52,560.00

B. Expert witnesses:

(i) Social Impact Assessment	
25 days @ \$800.00/day	\$20,000.00

(ii) Environmental Impact Assessment	
15 days @ \$600.00/day	9,000.00

(iii) Heritage Features Assessment	
10 days @ \$600.00/day	<u>6,000.00</u>

35,000.00

C. Disbursements:

Transcript (120 days @ \$100.00/day)	12,000.00
Long Distance Telephone Charges	2,000.00
Photocopying	1,000.00
Mileage (120km X 27.5) X 80 days	2,640.00
Courier	500.00
Typing, letters, postage	500.00
Meals (\$7.00/day X 80 days)	<u>560.00</u>

19,200.00

TOTAL FEES AND DISBURSEMENTS:

\$106,760.00
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