THE CONSOLIDATED HEARINGS ACT, 1981;

SECTION 13 THEREOF

IN THE MATTER OF
AN APPLICATION TO
THE LIEUTENANT GOVERNOR IN COUNCIL
BY
THE CORPORATION OF THE TOWN OF MILTON

- AND -
IN THE MATTER OF
An application by the Regional Municipality of Halton for:

a) the acquisition of land for the construction, operation and maintenance of a sanitary landfill site to contain 7.96 million cubic metres of waste in the Regional Municipality of Halton by one of two alternative methods as follows:

(i) landfilling at the site referred to in Halton's Environmental Assessment as Site F in the City of Burlington;

(ii) landfilling at the site commonly referred to in Halton's Environmental Assessment as Site D in the Town of Milton.

March 22, 1989

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A P P L I C A T I O N

OF THE

CORPORATION OF THE TOWN OF MILTON

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I

SUMMARY AND GROUNDS OF APPLICATION

This Application is brought by the Corporation of the Town of Milton, pursuant to Section 13 of the Consolidated Hearings Act, Statutes of Ontario, 1981, Chapter 20. The Corporation of the Town of Milton was accorded status at the first meeting of the Joint Board and took part in all proceedings before the Joint Board. By this Application, the Town of Milton requests that the Lieutenant Governor in Council order a new Hearing by the Joint Board as to part of the matters in respect of which the Joint Board was established and recission of all approvals for Site D. The matters requested to be heard are described and listed as follows:

1. A determination of the method of construction and placement of monitoring wells for short-term pumping tests and long-term monitoring of groundwater quality at Site D in the Town of Milton as a matter of expert hydrogeological interpretation and opinion.

2. A determination of a range of possible results from short-term pumping tests at Site D and the appropriate conclusions to be drawn from such results as a matter of expert hydrogeological interpretation and opinion.

3. A determination of the co-relation between the results of short-term pumping tests and a permeability calculation for the unweathered upper till at Site D as a matter of expert hydrogeological interpretation and opinion.

4. A determination of the method of construction of a liner of native glacial till and specifications therefor as a matter of expert geotechnical engineering opinion as to interpretation and design.

5. A determination of the groundwater monitoring program to identify, delineate and characterize the movement of landfill-derived contaminants at Site D in accordance with the interpretation and opinion of experts in hydrogeology, landfill design and geotechnical engineering.

6. A determination of the likelihood of inducing fractures in the unweathered upper till at Site D by excavating for landfill as a matter of expert geotechnical engineering interpretation and opinion.

The grounds for requesting a further Hearing to make the foregoing determinations in summary form are as follows:

approved in Seymour case

a) The design and operation of the landfill at Site D in Milton, as proposed by the Region of Halton and approved by the Joint Board, is based on the relatively new concept of an hydraulic trap for leachate containment and collection.

b) The hydraulic trap concept, as proposed, relies on engineering to collect leachate (system of pipes) which will fail within the contaminating life-span of the landfill. The primary safety feature in the event of failure is the existence of four metres of unweathered glacial till material at the base of the landfill as constructed. The four metres of unweathered glacial till material was investigated by the proponent's hydrogeologist Sobanski and said by him to be unfractured and relatively impermeable.

c) In its reply case, the proponent called another hydrogeologist, Feenstra, who advanced the hypothesis that there was "a reasonable possibility of fracturing" in the unweathered upper till. It was his evidence that if such fractures existed the permeability of the unweathered upper till could be higher

meet & fact that for rejected hypothesis

no direct ✓

than earlier supposed and contaminant escape could consequently be far more rapid than had earlier been supposed. The proponent's hydrogeologist advanced no direct evidence of the existence of fractures. His hypothesis was supported by inference from other work at other sites done by other hydrogeologists. The existence of fracturing in unweathered clay tills had been the subject of relatively recent scientific investigation at landfill sites. He also expressed the opinion that excavating weathered upper till to construct the landfill cells could release pressures and cause fractures in the remaining unweathered upper till and that this should be investigated by a geotechnical engineer.

d) In April of 1988 when the Consolidated Hearing was in process the Town of Milton had excavated a test pit and observations of fracturing in the unweathered upper till at Site D had been made.

timing

e) Following the reply evidence of Feenstra the Town of Milton brought a Motion for Leave to reopen its case and introduce evidence with respect to the finding of fractures in the test pit. The Order and Leave sought was refused by the Joint Board. In its Reasons for Decision, the Joint Board rejected the hypothesis of the proponent's hydrogeologist, Feenstra, but accepted his evidence as to the best method of determining vertical hydraulic conductivity through the unweathered upper till (pumping test).

undecision ✓

f) In its Decision and conditions of approval (notwithstanding the rejection of the fracturing hypothesis) the Joint Board made provision for testing for same and provided for design and engineering contingencies in respect of the existence of fractures in the unweathered upper till.

g) The evidence to be gathered and the measures to be

see Jeffrey's article on approvals

implemented, if any, are left to the determination of the proponent and the Director of Approvals under the Environmental Protection Act. In accordance with the Decision of the Joint Board, there will be no Hearing with attendant cross examination and the right to call contrary opinion evidence and make submissions with respect to the matters to be determined. The result is that important issues of public health and safety will not have a public hearing.

b.s.

The petitioner understands that other applications are likely to be made by other parties and will respond to other applications in accordance with their tenor. In the event that parties bring applications for judicial review in respect of the Decision of the Joint Board, the applicant, The Corporation of the Town of Milton, would submit that a decision on this application ought not to be taken without the Lieutenant Governor in Council giving consideration to the nature of the application for judicial review and the relief sought in same to determine whether the decision of the Court should be awaited.

II

GENERAL BACKGROUND

The Region of Halton has been making efforts to establish a new landfill site since its inception in 1974. It has the obligation to provide waste disposal facilities under the provisions of the Regional Municipality of Halton Act.

Planning Act approvals for a landfill site in the Town of Milton were obtained by Ontario Municipal Board Decision and Order dated June 15, 1979 and the Region of Halton thereafter applied for a Certificate of Approval for the said lands under the provisions of the Environmental Protection Act. Amendments to the Environmental Assessment Act and regulation were made, the effect of which was to require the then Minister of the Environment to make a determination as to which statute (Environmental Assessment Act or Environmental Protection Act) would apply in respect of the Halton landfill selection. After receiving submissions the Minister determined that an environmental assessment under the Environmental Assessment Act would be required.

The Regional Municipality of Halton proceeded with Environmental Assessment and on November 20, 1986 gave written notice of an intended undertaking to the Hearings Registrar under the Consolidated Hearings Act. The Hearing leading to the Decision and Reasons for Decision herein commenced on the fifth day of May 1987 and concluded with the release of the Decision of the Joint Board on the 24th day of February, 1989.

The Corporation of the Town of Milton is an Area Municipality of the Regional Municipality of Halton. As a party to the Hearing, the Corporation of the Town of Milton retained counsel and consultants and led a case as part of the Hearing. The Town of Milton, through its counsel, supported the position of the Region of Halton to investigate two sites and propose two

sites in the alternative to the Joint Board. The Town also supported the Region of Halton in its preference (albeit marginal) for landfilling at Site F in Burlington and took a position that the environmental assessment conducted by the Region of Halton was adequate and in conformity with the provisions of the Environmental Assessment Act.

The case put forward by the Town of Milton in a very general sense was that Site F in Burlington was preferable for landfilling in accordance with planning principals and existing planning policies and documents, including the Foodland Guidelines.

Among the consultants retained by the Town of Milton were experts in matters of hydrogeology, geology and geotechnical engineering. Assistance was given in respect of the technical and groundwater aspects of the proposals at both sites and the Town led such technical evidence as part of its case. From a groundwater contamination prospective, the evidence called by the Town supported landfilling at Site F in Burlington as being preferable to landfilling at Site D in Milton.

so did → WBCG - Bowen (not cross X by Milton)

The City of Burlington also retained groundwater experts. As part of its case it led groundwater expert evidence which supported the proposition that landfilling at Site D in Milton was preferable to landfilling at Site F in Burlington.

The Region of Halton retained consultants with respect to hydrogeology and design and engineering of landfills at the two proposed sites. Groundwater evidence was first led in the case by the Region of Halton. Groundwater evidence was then called by the Town of Milton and the City of Burlington then called its groundwater experts. The order of events had been determined after submissions before the Board by all parties and the order was determined by decision of the Board after hearing

submissions from the affected parties. The Region of Halton, as proponent, was required to lead its case and was entitled to call reply evidence after the cases of the other parties had been led.

The integrity of the unweathered upper till was a key design feature at Site "D".

The subject of possible fracturing in the unweathered upper glacial till at Site D in Milton was first raised in the cross examination of the groundwater experts called by the City of Burlington as part of its case. John Petrie of the Conestoga Rovers Associates firm was cross examined by David Estrin, counsel for the Town of Milton, as to deep fractures in till material which he had reported in earlier published work having to do with another location. Subsequently, the hydrogeology/ hydrogeochemistry consultant of the Region of Halton made further inquiries and ultimately developed the opinion that there was a resaonable possibility that such deeper fractures existed in the unweathered upper till at proposed Site D in the Town of Milton. His opinion in that regard was expressed in a witness statement in writing which was distributed to all parties on the afternoon of August 23, 1988.

Consultants retained by the Town of Milton had opened a test pit on land comprising part of proposed Site D at Milton on April 6, 1988 and closed same on April 7, 1988. Fractures were observed in the test pit and at least one of the fractures extended deep into the unweathered upper till. The observations in the test pit occurred in excess of five months prior to the release of the Feenstra witness statement.

The Town of Milton had been accorded a limited right of reply in respect of the Burlington case. It did not call reply evidence with respect to the findings in the test pit. It's reply case was concluded prior to distribution of the Feenstra

witness statement.

On the 30th of September, 1988 the Town of Milton moved the Board for Leave to reopen its case and call evidence of the findings in the test pit as being relevant to the hypothesis put forward by the proponent's hydrogeologist/hydrogeochemist, Feenstra. The Board refused Leave and final submissions proceeded.

III

EVIDENCE BEARING ON THE FRACTURE HYPOTHESIS AND ITS IMPLICATIONS FOR PUBLIC HEALTH AND SAFETY AT SITE D

The only other evidence heard by the Joint Board with respect to the existence of fractures in the unweathered upper till at Site D was the evidence of the proponent's hydrogeologist/ hydrogeochemist, Stan Feenstra. His evidence was called as reply evidence by the Region of Halton, commencing August 29, 1988. His testimony in reply was completed on September 16, 1988. His evidence was outlined by a witness statement in writing which was marked as Board Exhibit No. H-936. He stated that he was giving evidence both as a hydrogeologist and as a hydrogeochemist (Appendix B, page 1).

He described what hydrogeologists had understood about the extent of fracturing of clay tills in Ontario prior to certain recent investigations (Appendix B, pages 2 through 9). The proponent's original hydrogeology theory with respect to Site D was based on the findings of the University of Waterloo in the area of the Sarnia Clay Plain. It was taken almost as a given that the weathered zone was slightly more permeable and extended to a depth of approximately four to five metres. The basis of hydrogeology understanding at that time in 1985 or 1986 was that the weathered zone extended to approximately four to five metres and the weathered zone was cracked and any features of weathering, colour change or fracturing did not extend any deeper than that.

Mr. Feenstra made reference to the work done by John Petrie (expert witness in hydrogeology called by the City of Burlington) in respect to a clay till in the Waterloo, Ontario

area called the Maryhill Till. He took from Mr. Petrie's work as his main point that open fractures may exist, permeable fractures may exist in a clay till material, and even a clay till material that is not a surficial deposit at a depth of ten to fifteen metres and that pumping tests suggest that such fractures may be open at that considerable depth (Appendix B, pages 10 and 11).

He stated that there was no direct evidence for fracturing at Site D and, specifically, the studies undertaken by Trow (proponent's hydrogeologists) weren't directed at obtaining evidence of fracturing. There was some evidence from Site D however that could bear on the possibility of fracturing. Some of the evidence was confirming evidence and some of it was contradictory (Appendix B, pages 13 and 14).

After dealing with the existing evidence, he expressed his opinion that, based on the findings at several other sites, being the Maryhill Till at Waterloo and the Vandalia Till in Illinois, the Halton till in Peel and the most significant extent of the findings of the research of Mr. Ruland in the Clay Till in the Sarnia area, there was a reasonable possibility that fractures existed in the unweathered till at Site D in Milton (Appendix B, pages 15 and 16).

He then performed some calculations which were based upon the existence of certain fractures and certain values of hydraulic conductivity and expressed the opinion that, after a period of one year, the concentrations of contaminants exiting a landfill under failure conditions would be arriving at the base of the fractured unweathered upper till at significant concentrations with respect to the input concentrations and, in periods of less than a year, contaminants would be able to find their way through the cracks very readily (Appendix B, pages 17 and 18).

He expressed the opinion that there was one other aspect of the presence of fractures which needed to be addressed and that was the possibility of heaving and some stress relief during the excavation and construction of the landfill. He expressed the opinion that these concepts were largely in the domain of geotechnical engineering and that he, as a geologist/ hydrogeologist was quite aware of the processes but not capable of doing a detailed evaluation of their significance at Site D. It was his recommendation that the phenomenon and consideration be given careful attention by a geotechnical engineer prior to the consideration of a landfill at Site D (Appendix B, pages 18, 19 and 20).

Mr. Feenstra then summarized his opinion for the Board that, in the event of a failure of the hydraulic trap and the unweathered upper till being fractured, there could result very rapid movement of leachate contaminants through the unweathered upper till into the underlying granular units (Appendix B, pages 21 and 22).

He expressed his views as to how the hypothesis should be approached from the point of view of a hydrogeologist and what could be done to investigate the existence of fractures (Appendix B, pages 23 through 27).

In the result, Mr. Feenstra expressed the opinion that landfilling at Site D could be done but that it was his opinion, as a hydrogeologist, that Site F in Burlington would be preferable to Site D for the proposed regional landfill (Appendix B, pages 28 through 30).

Mr. McQuaid, counsel for the City of Burlington, cross examined Mr. Feenstra on the 14th of September, 1988 and in the course of his cross examination advised the Board that the City of Burlington would be bringing a Motion seeking an Order for

further investigation of Site D at Milton. Copies of a Notice of Motion had been delivered to parties but not filed with the Board.

On September 16, 1988, prior to Burlington making a formal Motion, Dr. Kingham, speaking for the Board, stated as follows:

> "I would just like to make an observation because this matter has been of concern to the Board for the last year and a half. This has been pointed out many times. This is quite a new departure in terms of Hearings.
>
> Throughout this Hearing and especially over the past few weeks, this Board has been concerned about the proper place of (scientific uncertainty) in the legal process of deciding fairness and social equity with respect to complex technological issues.
>
> As you are all aware, we have the ultimate responsibility and obligation of assigning weight to evidence, including the scientific evidence brought before us. We have heard a great deal of evidence concerning the hydrogeology of Sites D and F. The data presented to us have assisted in our assessment of that evidence. Throughout the Hearing we have also received hypotheses about the - this is not the first and I don't think it will be the last in the broader context of Hearings - we have received hypotheses about the likely hydrogeology at these sites.
>
> From time to time it has occurred to the Board that the measurement of additional parameters would assist us in assigning the proper weight to the evidence presented. We asked ourselves and on occasion the witnessses whether or not additional tests would materially and clearly assist in our appreciation of the evidence. An example of this is found at pages 32,096 to 32,103 of the transcript of this Hearing. In each case we concluded upon review of all the evidence to that point that we could properly judge the value of the evidence based on the data available.
>
> This kind of question has come to the surface again in the past few weeks. Again we have asked ourselves whether it would be necessary to have more data collected to test the hypothesis and, if so, whether the data collected would materially assist us in arriving at an unequivocal decision on the weight to

be accorded to the evidence at hand.

It is sometimes desirable under the circumstances to have all the information one can get. The scientist always wants more data to better understand the phenomenon he is trying to describe. In this case, as we considered whether or not we should on our own initiative order additional data be collected, we concluded that it would be unreasonable to do so because the total evidence available was sufficient to assign appropriate weight to the various proposals before us.

In so concluding we were mindful of the fact that hydrogeology is still an evolving field. By the time we exhaust all possible tests concerning one hypothesis, another may emerge which may also demand testing. We feel that such (ad infinitum) possibilities could only be justified if meaningful data had not been collected in the first place. We do not feel this is the case in this Hearing.

This is how this Board has approached this difficult issue over the past year and a half. While our own conclusions do not preclude parties from taking whatever actions they consider necessary, we thought an understanding of our approach might be helpful at this time and I think we will adjourn for a few minutes until we hear reply."

(Appendix B, pages 31, 32 & 33)

Shortly thereafter, on the same day, the City of Burlington withdrew its Motion for an Order for further testing at Site D (Appendix B, pages 34 and 35).

Immediately thereafter, counsel for the Town of Milton requested time to obtain instructions in respect of certain evidence which it had proposed to call on the Burlington Motion to reopen the investigation of Site D (Appendix B, pages 36 & 37).

Subsequently, on the 30th day of September, 1988 the Town of Milton brought Notice of Motion seeking Leave to call the evidence of Nicholas Eyles, PhD, a quaternary geologist, as to

observations in a test pit at the proposed Site D, Milton (Appendix B, pages 38 through 45).

On the Motion, the Board received a witness statement, together with certain photographs which became Exhibit M-962, before the Board (Appendix B, pages 46 and 47). The Board's ruling as given by the Chairman, H.H. Lancaster was as follows:

> "It has been suggested a number of times throughout this Hearing that the purpose of the Environmental Assessment Act is to ensure that the Board Hearing and Application has all the information necessary to make its decision on behalf of all parties concerned.
>
> Mr. Garrod re-emphasized that purpose this morning when he suggested that this forum should not be a dispute between parties. In this case, between municipalities and Halton. In gathering this information we understand that the Regional Municipality of Halton has acted in the spirit of the Act and, in particular, with respect to hydrogeology they allowed for observations and participation by the other parties to the Hearing. This helped the Board to have a clear understanding of the evidence brought before us.
>
> The Board now understands that additional hydrogeological studies were undertaken on April 6th and 7th of this year. With the exception of the Milton parties, other parties were not informed of the test and this result and were not invited to participate in it. Within thirty hours the T-shaped hole, more than eight metres deep, had been dug, examined and filled in again. In subsequent days, particularly on April 12, 1988, counsel for the party on whose behalf the test pit had been dug was cross examining a witness on the hypothetical existence of fractures in clay tills across southern Ontario. The witness stated that he had no evidence to support such a hypothesis but that "if evidence were provided by yourself or the proponent, one would have to consider that fracturing with respect to assessing site suitability."
>
> It was not suggested to the Board at that time or at any time since then that such evidence was available. When the expert witness for the proponent, Mr. Feenstra, proposed an hypothesis about fracturing in such tills, he also stated that he had no data to support such a hypothesis in the vicinity of Site D.

Again, it was not suggested to the Board that such data might exist. When cross examined about his hypothesis by counsel for the City of Burlington about the extent of the testing necessary to prove his hypothesis, Mr. Feenstra gave evidence that conclusive evidence could not be assured with even five test pits.

Additional tests of a different kind would be needed to clearly support or refute that hypothesis.

Now the Board has been asked to consider a Motion to admit additional evidence, evidence that was known to the parties since on or about April 7th of this year, evidence that was collected in the absence of experts for the other parties, evidence that has not been alluded to in the months since it was gathered, evidence for which the hydrogeologist in charge is not present to testify.

The witness statement of Dr. Eyles confirms the general hydrostratigraphy in the area. It describes some fractures and concludes that a single test pit is in adequate to define the frequency spacing and ultimate depth of the pentration of such fractures. The first observation is not at issue and the second is itself qualified by the inadequacy of the data base. This confirms the evidence of the proponent of the hypothesis, Mr. Feenstra, about the significance of a single test pit result.

As previously, throughout this Hearing, the Board has considered whether the admission of evidence would materially assist in its deliberations. We are mindful of precedents brought to our attention by Ms. Cronk that suggests that such evidence could be admitted although our acceptance of this approach is tempered by the suggestion in Sopinka and Lederman and I quote "the evidence must be newly discovered evidence which reasonable diligence could not have discovered during the trial."

We are mindful as well of Ms. Vigod's reference to cases where such evidence has not been admitted.

Taking all these factors into account and especially the discretion allowed us under the legislation we conclude that the evidence proposed to be introduced by Dr. Eyles should not be admitted because it will not clearly assist us in arriving at our decision. We rule against the Motion to have such evidence introduced at this late date."

(Appendix B, pages 48, 49 and 50, and part of page 46)

The witness statement of Dr. Eyles concluded:

"on the basis of this test pit that at Site D there are fractures extending below the weathered zone through the upper till and that some of these may extend into the lower till. However, on the basis of the one test pit, it is not possible to determine the frequency or spacing of such fracturing."

IV

DECISION AND REASONS OF THE BOARD

In dealing with the subject of hydrogeology, the Board arrived at its own opinion on matters of hydrogeology and hydrogeochemistry. It recognized the complexity of the area but undertook to attempt to present hydrogeology and hydrogeochemistry in a straight-forward and comprehensible form. The Board found that seven hydrogeologists had presented evidence and that Feenstra had been called by the Region as an expert witness to present evidence on hydrogeochemistry (Appendix A, page 55). The Board specifically found that the upper four metres of the upper till was weathered and that the lower four metres was not weathered. The Board also found that there were two granular units in the lower till from which adjacent landowners generally draw water for domestic and agricultural uses (Appendix A, page 60).

Further, the Board found that the Region's hydrogeologists were certain that they had not missed any significant subterranean hydrogeological features at Site D (Appendix A, page 63).

The Board noted the differences between the clay till at Sarnia and the clay till at Milton. The Board also noted the skepticism which Mr. Feenstra viewed certain confirmatory evidence of fracturing (Exhibit A, page 67). The Board further found that Mr. Feenstra held that the tritium data did not support the existence of pre-1952 water in the upper granular unit and that, if fractures exist, they have not allowed a significant tritium effect at depth (Exhibit A, page 68).

In the result the Board found as follows:

> "Having considered all the evidence, the Board does not find support for Mr. Feenstra's hypothesis

> about fracturing in the vicinity of Site D. To the contrary, the bulk of the evidence supports the conclusion that groundwater moves very slowly through the unweathered upper till. By Mr. Feenstra's own admission, there is no way to conclusively prove or disprove his hypothesis. Notwithstanding his statement on this matter, counsel for the Town of Milton sought leave to introduce test pit evidence of the sort which Mr. Feenstra had averred would not help to clarify the situation."

(Appendix A, page 69)

The Board further observed:

> "This Board is of the view that according great weight to an unprovable hypothesis introduced at the very end of evidence in a two-year long Hearing might be interpreted by others who may have to participate in the environmental assessment process as a strategy for success. This legacy is not one we seek."

(Appendix A, page 69)

The Board then observed:

> "The best way to decide the magnitude of the controlling vertical hydraulic conductivity at Site D would have been to take direct measurements across the unweathered upper till layer in the field. Although such measurements were not performed either by the proponent or by consultants for the Town of Milton, they could be ordered as part of a site preparation process."

(Appendix A, page 69 and 70)

In respect of Mr. Feenstra's hypothesis that the construction of the landfill could itself induce fractures in the unweathered upper till, the Board found that the timing for the introduction of this hypothesis was not the best possible and that it could have been and should have been introduced during the proponent's original case. (Appendix A, page 70)

Notwithstanding the rejection of the fracturing hypotheses put forward by the proponent's hydrogeologist, the

Board structured tests and contingencies for them in its decision. The Board granted approval to proceed with landfilling at Site D, subject to the conditions set out in the Decision, pursuant to Section 38 of the Environmental Protection Act, and Sections 12 and 14 of the Environmental Assessment Act. The conditions relating to the fracture hypotheses are condition 2 (Design and Operations), condition 5 (Site Preparation), condition 12 (Groundwater Monitoring), condition 16 (Off-Site Contaminant Attenuation Contingency Zone). (Appendix A, pages 177 through 194).

By condition 2, the Board left matters of final design to the Director of Approvals, Ministry of the Environment. In condition 5, the Board designed twelve monitoring wells to be used for short-term pumping tests and long-term groundwater quality monitoring and left the interpretation of results of pump and response tests to the Director of Approvals.

By condition 12, the design of the groundwater monitoring program was, in part, accomplished by the Board and, in part, left to the approval of the Director of Approvals, Ministry of the Environment.

By condition 16, the Board created a property purchase scheme which it described as an off-site contaminant attenuation contingency zone. In essence, the owners of adjacent property most likely to be affected by groundwater contamination were given the option to require the Region of Halton to purchase their properties at fair market value within three years from the date of release of the Decision (February 24, 1989).

V

GROUNDS FOR RECISSION OF THE BOARD'S DECISION

Your Applicant submits for consideration the following grounds for recission of the Joint Board's Decision:

a) Under Section 30(1) of the Environmental Protection Act, R.S.O. 1980, Chapter 141, the Director shall, before issuing a Certificate of Approval, require the Environmental Assessment Board, by notice in writing, to hold a Hearing. Under Section 33(1) of the said Act, the Environmental Assessment Board shall hold a Hearing with respect to the subject matter of the Notice from the Director and the Environmental Assessment Board, pursuant to Subsection 4 of Section 33, shall serve Notice of its Decision together with reasons therefor on the parties to the Hearing and the Director shall implement the Decision.

b) Where the Consolidated Hearings Act, 1981, S.O. Chapter 20, applies the Joint Board duly appointed has the authority and the duty to hold a Hearing and to make and issue a Decision in respect of matters considered by the Joint Board. Under Section 5, Subsection 2 of the Consolidated Hearings Act, the Joint Board may make any Decision that might be made by a Tribunal that has a power right or duty to hold a Hearing in respect of which the Joint Board Hearing was held or that might be made by any body or person after the holding of the Hearing, including but not limited to the granting of any authority or directing the granting or issuing of a permit or license and the imposition of terms and conditions.

c) A Joint Board was duly constituted in this case. The jurisdiction of the Director and the Environmental Assessment Board under Part V (Waste Management) of the Environmental Protection Act (being the jurisdiction of the Environmental

Assessment Board and the Director, under Sections 30 and 33 of the Environmental Protection Act) became a single jurisdiction reposed in the Joint Board, constituted under the Consolidated Hearings Act. The Decision of the Board is final, subject only to Appeal to the Lieutenant Governor in Council by way of Application.

d) The Board erred in rejecting the fracturing hypotheses given in evidence by the Proponent's hydrogeologist/ hydrogeochemist, Feenstra. There was no opinion evidence to the contrary to which any expert witness had specifically directed his mind. There was evidence of direct field testing which supported the existence of such fractures which was excluded by the Board for reasons expressed.

e) The Board further erred in designing conditions of approval which clearly recognize the fracturing hypotheses and delegated to the Proponent and the Director of Approvals the function of determining hydraulic conductivity as a result of fracturing. In effect, the Board has undertaken the function of testing for and designing a landfill and its contingency engineering, in part, at Site D in Milton. Decisions which are the exclusive province of the Board in its adjudicative jurisdiction have been delegated to the Director of Approvals under the Environmental Protection Act. Decisions with respect to design and engineering which should only be made on evidence on the record from qualified experts have been made by the Board. The Board has become its own expert and has, in part, designed and engineered the facility, and control of the adjudicative function has been delegated to the Director under the Environmental Protection Act.

f) The Board erred in failing to allow a full Hearing in respect of the matter of fracturing, including the right of the parties to call their own evidence in regard thereto and in

regard to matters of design of the landfill and design of the contingency measures in the event of failure. The level of public confidence which is implicit in the provisions of the Environmental Statutes cannot be said to have been satisfied.

VI

CONCLUSION AND ORDER SOUGHT

Your Applicant concludes and submits that there has not been compliance with the Hearing provisions of the Consolidated Hearings Act and the Environmental Protection Act. Your Applicant concludes and submits that its citizens do not have confidence in the result of the Hearing. In the result, your Applicant seeks the following Order in addition to recission of the approval of Site D.

1. That the Lieutenant Governor in Council order a new Hearing as to the matter of fractures at Site D in the unweathered upper till and that the Proponent conduct investigation in respect thereof.

2. That the Hearing consider and determine the method of construction and placement of monitoring wells for short-term pumping tests and long-term monitoring of groundwater quality at Site D in the Town of Milton as a matter of expert hydrogeological interpretation and opinion.

3. That the Hearing consider and determine the co-relation between the results of short-term pumping tests and a permeability calculation for the unweathered upper till at Site D as a matter of expert hydrogeological interpretation and opinion.

4. That the Hearing consider and determine the method of construction of a liner of native glacial till and specifications therefor as a matter of expert geotechnical engineering opinion as to interpretation and design and the effect of same on the hydraulic trap.

5. That the Hearing consider and determine a groundwater monitoring program to identify, delineate and characterize the movement of landfill-derived contaminants at Site D, in accordance with the interpretation and opinion of experts in hydrogeology, landfill design and geotechnical engineering.

6. That the Hearing consider and determine the likelihood of inducing fractures in the unweathered upper till at Site D by excavating for landfill as a matter of expert geotechnical engineering interpretation and opinion.

All of which is respectfully submitted.

Of Counsel,
for the Corporation of
the Town of Milton