2. NEPEAN LANDFILL CONTAMINATED GROUNDWATER & TRAIL ROAD LEACHATE TREATMENT AND DISPOSAL

COMMITTEE RECOMMENDATIONS AS AMENDED

That Council approve:

1. **The creation of a programme to investigate new and emerging technologies for the on site treatment of leachate from the Trail Road Landfill site and leachate contaminated groundwater from the Nepean Landfill site; and that the workplan for this program be the subject of a report to Planning and Environment Committee and be circulated for comment.**

2. **That staff be directed to include a submission of $500,000 in the 2000 Capital Budget to fund this programme.**

DOCUMENTATION

1. Director, Engineering Division, Environment and Transportation Department report dated 30 Jun 99 is immediately attached.

2. An Extract of Draft Minute, 13 Jul 99, follows and includes a record of the vote.

REGION OF OTTAWA-CARLETON | MEMORANDUM
RÉGION D'OTTAWA-CARLETON | NOTE DE SERVICE

Our File/N/Réf. **50** 14-96-0002-V
Your File/V/Réf.

DATE 30 June 1999

TO/DEST. Co-ordinator
Planning and Environment Committee

FROM/EXP. Director, Engineering Division
Environment and Transportation Department

SUBJECT/OBJET **NEPEAN LANDFILL CONTAMINATED GROUNDWATER & TRAIL ROAD LANDFILL LEACHATE TREATMENT AND DISPOSAL**

DEPARTMENTAL RECOMMENDATION

That the Planning and Environment Committee recommend to Council:

1. **The creation of a programme to investigate new and emerging technologies for the treatment of leachate from the Trail Road Landfill site and leachate contaminated groundwater from the Nepean Landfill site;**

2. **That staff be directed to include a submission of $500,000 in the 2000 Capital Budget to fund this programme.**

BACKGROUND

On 14 April 1999, Council carried the following recommendations from the Planning and Environment Committee:

1. Approve the off-site conveyance of leachate from the Trail Road Waste Facility and leachate contaminated groundwater from the Nepean Landfill site by pipeline to the R.O. Pickard Environmental Centre for treatment and disposal;

2. Authorize the Environment and Transportation Department to undertake a pipeline route selection process.

3. That staff explore options for a biological treatment pilot project of leachate and contaminated groundwater including partnering with the research community, the private sector and interested communities and that a report be brought to Committee within a year at most.

4. That staff prepare a report on the feasibility of using a constructed wetland to manage contaminated groundwater for the Nepean Landfill site, and that RMOC seek participation with the private sector, Environment Canada or NRC in a pilot project to assess new and emerging technologies to treat leachate with a constructed wetland, and that this report be forwarded to the Committee considering the "landfill optimization study".

Council further carried the following motions:

RESOLVED THAT the following words be added to Recommendation No. 1: "subject to monitoring and ongoing reporting to Council by the Region's Health Department".

RESOLVED THAT the RMOC seek participation with the private sector, Environment Canada and /or the broader research community in a pilot project to assess and explore biological treatment, or other new and emerging technologies to treat leachate with a constructed wetland, or other technologies, and that this report be forwarded to the Committee considering the "landfill optimization study".

The following motion (Motion No. 66) was put to Council and lost, but was forwarded for reconsideration at the 28 April 1999 Council meeting:

BE IT RESOLVED THAT, subject to design approval, RMOC construct an engineered wetland at the Nepean Landfill site to treat the contaminated groundwater.

On 28 April 1999 Council re-considered Motion No. 66 and carried the following motion:

RESOLVED THAT Council refer Motion No. 66 to the Planning and Environment Committee for further reconsideration as to:

- Current comment from MOE
- Review of the Bufferlands Study

DISCUSSION

Background

The Region's landfill sites generate two separate and distinct wastewater streams that must be managed in a cost-effective and environmentally responsible manner. The percolation of rainwater and snow melt through the garbage at the Trail Road Landfill produces a high strength leachate that is captured in the landfill liner of Stage 3 and in Stage 4 in the future. The leachate

is currently transported by tanker trucks to the R.O. Pickard Environmental Centre for treatment. Groundwater in the bufferland near the unlined Nepean Landfill site is contaminated with leachate that is migrating away from the site and has periodically discharged to the surface outside the Region's property. In order to correct this problem, it has been approved by Council to proceed with the construction of a pipeline to transport both wastewater streams to the central wastewater collection system and eventual treatment at the R.O. Pickard Environmental Centre. The first phase will be a route selection process that will include extensive public consultation.

As part of the closure and long term management of the Nepean Landfill, the MOE required that the Region obtain additional bufferlands and mitigate the effects of leachate contamination of the groundwater. It should be noted that the contaminated groundwater is a relatively low-strength wastewater compared to either the Trail Road leachate or typical domestic sewage. It was initially proposed by staff to construct an engineered wetland to treat the groundwater and this project was first identified in the 1997 Capital Budget. However, with the proposal of a pipeline for leachate it was recognized that an opportunity existed to combine the two wastewaters for transport and ultimate treatment at the R.O. Pickard Environmental Centre thus avoiding the cost of constructing and the complexity of operating an engineered wetland, while still ensuring an environmentally responsible means of treatment and disposal. The cost of the wetland has been estimated at approximately $700,000 plus an additional $100,000 for the required environmental assessment study.

Engineered Wetlands

An engineered wetland is basically a constructed marshland that utilizes vegetation and animal life to simulate a natural wetland. Treatment of the wastewater is accomplished by a combination of biological, physical, chemical and adsorption processes. Engineered wetlands have been used fairly extensively and successfully in the treatment of domestic wastewaters. Like any other treatment process, the suitability of an engineered wetland for the treatment of a particular wastewater, such as leachate or leachate contaminated groundwater, must be based on a consideration of the characteristics and limitations of the technology. The limitations of biological treatment systems are of particular concern since process upsets can result in lengthy periods of poor performance while the biological process re-establishes itself. Unlike the activated sludge biological treatment process employed at the R.O. Pickard Environmental Centre, a wetland process cannot be easily adjusted for changes in wastewater characteristics or weather conditions. For most contaminants in wastewater, the performance of a modern secondary treatment plant like the R.O. Pickard Environmental Centre would be superior to an engineered wetland. The advantages of natural systems for wastewater treatment lie in lower capital and operating costs and their simplicity of operation.

It should be recognized that the use of wetland for the treatment of wastewaters such as leachate or leachate contaminated groundwater is an emergent technology, with very limited application experience in cold climates. The actual treatment processes involved in an engineered wetland are not as well understood as are the physical, chemical and biological processes employed in traditional treatment plants and as a consequence it would be necessary to conduct pilot treatability tests for the waste stream prior to final facility design. This would involve testing

different plant species to assess relative performance, the effects of temperature and weather on the effluent quality, etc., over a period of at least two growing seasons.

With respect to the applicability for treating the groundwater at the Nepean Landfill site, there is a concern that the wetland would not be capable of consistently meeting the effluent criteria that would be imposed by the MOE for discharge to the Jock River, particularly in the winter. Although this could be mitigated by the addition of a storage lagoon, the option remains to discharge the wetland effluent to the leachate pipeline and ensure the protection of the Jock River from any treatment upset. It should be noted that the construction of an engineered wetland in the Nepean/Trail Road bufferland may generate objections from local landowners concerned about odours, mosquitoes and visual impacts.

Assessment of Local Wetland Treatment Facilities

On 28 May 1999, staff conducted a tour of several local wetland treatment facilities. In attendance were Regional staff, several engineering consultants, staff from Alfred College, a representative from the MOE, three members of the Citizen Review Committee for Waste Management of Ottawa-Carleton and one member of the Sewer Action Committee for Barrhaven.

The tour visited the Huneault Landfill site where a relatively weak leachate is treated using a peat filter followed by an engineered wetland. The intent of the system was to produce an effluent that could be discharged directly to an adjacent natural marshland. However, the effluent produced has been of inadequate quality for discharge, primarily because of elevated levels of boron, and is currently used for dust suppression on the landfill property. The system is only operated during the frost-free period and receives approximately one-third of the total leachate from the site. The remainder is trucked to the R.O. Pickard Environmental Centre for treatment. The peat filter appears to play a major role in the treatment process in removing contaminants. However, after four to five years of operation it is reaching saturation for a number of contaminants and the effluent quality from the entire system is deteriorating. The operator plans to replace the peat filter next winter at an estimated cost of $100,000.

The tour next visited the Dignard Dairy Farm where an engineered wetland is used to treat the wastes from over 200 cattle in the form of manure and runoff from the cattle yard. The process consists of series of deep and shallow ponds that discharge to a surface overland flow system. Although the strength of the wastewater is very high, the flow rate through the system is very slow resulting in virtually no final discharge. No process performance data was provided but the effluent is apparently of high quality.

The tour then proceeded to the Alfred College facility in Alfred which is affiliated with the University of Guelph and now houses the Ontario Rural Wastewater Centre (ORWC). The OWRC is a centre for research to promote environmentally sustainable development of rural and unsewered areas through the use of effective wastewater treatment and disposal techniques with emphasis on low cost natural treatment processes. Alfred College was involved in the design and operation of the Dignard Dairy Farm wetland and is developing a research wetland treatment system at the Alfred sewage lagoon site. This consists of a series of shallow and deep ponds with a number of experimental polishing systems to evaluate different materials for contaminant

adsorption. The facility was under construction with plants having just been planted and consequently it was not receiving wastewater effluent from the lagoons.

On-site Pre-treatment of Leachate

The September 1998 study conducted by CG&S entitled "Leachate Treatment and Disposal Options" recommended that the Region consider the use of on-site pre-treatment of the leachate prior to transporting it to the R.O. Pickard Environmental Centre for final treatment in order to alleviate public concerns with the conveyance of raw leachate. It was estimated that this option would increase the 20 year cost of construction and operations by approximately $2.2 million. The suggested process train included an equalization basin, primary treatment with chemical precipitation, biological treatment using the activated sludge process and mechanical dewatering of the resulting sludge. An engineered wetland, with a lagoon for winter storage, could be considered as an alternative to an activated sludge process, but the other process steps would still be required. The dewatered sludge may present a disposal problem since it would likely be classified as a hazardous waste.

On site pre-treatment would have the added benefit of potentially bringing the leachate into compliance with the Region's Sewer Use By-law. Laboratory data indicates that the By-law limits are exceeded for BOD_5 and total nitrogen, and periodically exceeded for total suspended solids and chlorides. There are also a number of chemicals present in trace amounts that are not approved for discharge and the By-law as it presently exists has no mechanism for accepting this material. The CG&S study indicated that the best available treatment technologies for removing these contaminants could cost from $3.6 to as much as $8.75 million, with annual operating costs up to $800,000.

Comments from the Ministry of the Environment

The MOE has provided further comments on the issue of management of Trail Road leachate and groundwater contamination in the Nepean Landfill Bufferland as detailed in the attached correspondence and summarized below:

- The MOE continues to support the construction of a pipeline to convey both wastestreams to the R.O. Pickard Environmental Centre for treatment.
- The Ministry would support a research initiative and assist with technical staff support and chemical analytical work, but is unable to contribute any direct funding.
- The Pilot testing of a constructed wetland with discharge to the pipeline and ultimate treatment at the R.O. Pickard Environmental Centre would not require a Certificate of Approval.
- A Certificate of Approval would be required for a full scale engineered wetland.
- A surface discharge to the Jock River watershed would require an individual surface water assimilation study and full wastewater treatability study.
- The Ministry notes that the Jock River is a Policy 2 watercourse and very stringent discharge quality criteria and monitoring requirement would be imposed.
- The Ministry is very concerned that work proceed as quickly as possible to resolve the groundwater contamination problem and that any work on research not delay the timing of the pipeline.

Observations

Throughout the dialogue that has taken place concerning leachate and contaminated groundwater, Council has indicated its support to continue to be leaders in the protection of the environment and in support of new and developing technologies. This is consistent with other initiatives such as the water treatment pilot plant operation at Britannia, the Cogen facility at the R.O. Pickard Environmental Centre, and the Carlsbad Springs trickle feed water distribution system.

The question becomes how best to achieve similar goals in this case. An engineered wetland would cost in the order of $800,000 to treat contaminated groundwater that only barely exceeds the Provincial Water Quality Objectives (PWQO). As an alternative, that funding could be directed to a research programme to look at both leachate and contaminated groundwater to investigate, bench test, and potentially to pilot selected technologies in order to evaluate the net environmental impact after pre-treatment at the landfill and final treatment at the R.O. Pickard Environmental Centre. Building from the strength of our wastewater treatment facility, environmental benefits could be leveraged by seeking on site solutions specifically designed to work in conjunction with the R.O. Pickard Environmental Centre rather than in isolation.

Leachate Treatment Research Programme

In order to implement any of the options for on-site treatment of either leachate or leachate contaminated groundwater, and also to comply with Council direction to involve the private sector, government agencies, research institutions and other stakeholders in the assessment of new and emerging technologies, funding for a research programme will be needed. The programme could include some or all of the following:

- a preliminary screening of technologies for detailed analysis and pilot testing, including engineered wetlands, treatment lagoons, physical/chemical treatment, activated sludge, attached growth biological processes, microfiltration, reverse osmosis, peat filtration, membrane filtration, etc.
- invite government agencies such as the MOE, Environment Canada, etc. to participate.
- invite research institutions such as the NRC and local universities to participate.
- invite private sector firms to contribute by participation in pilot process and equipment demonstrations.
- conduct pilot testing.
- evaluate surface water and groundwater factors specific to the Jock River watershed.
- evaluate and publish results.
- forward appropriate recommendations to Committee and Council.

A budget of $500,000 is recommended to fund the programme and would include the cost of additional technical staff, consultants, laboratory testing, construction of facilities for pilot testing of various technologies, test equipment, materials and supplies, etc.

Approved by
J. Miller, P.Eng.

DWM/jw

Attach.

Ministry of the Environment

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Ontario

June 24, 1999

Mr. Pat McNally
Director, Solid Waste Division
Region of Ottawa-Carleton
Trail Waste Facility
4475 Trail Road
Nepean, Ontario
K0A 2Z0

Dear Mr. McNally,

RE: Leachate Management - Trail Waste Facility and Nepean Landfill Site

This is further to your letter of June 22, 1999 in which you asked for this Ministry's position or comment on a number of questions related to leachate and contaminated groundwater management at the above sites. I have now had an opportunity to review these questions and discuss them with and obtain input from staff in other Branches of this Ministry.

This Ministry supports the findings of the report entitled "Region of Ottawa -Carleton Trail Road landfill Site Leachate Treatment and Disposal Options" to construct a pipeline to convey both the leachate and contaminated groundwater to the R.O. Pickard Centre for treatment. Research into the treatment of leachate and leachate contaminated groundwater by alternative methods is also encouraged. While this Ministry is unable to commit any direct funding for a partnership program at this time, support services could be provided. This would include chemical analytical work and technical reviews and advice.

With respect to research, a pilot scale engineered wetland would be an option worth some consideration. It should be noted however, that discussions with Ministry staff have indicated that constructed wetlands have seasonal operational difficulties and would therefore require secondary facilities to ensure that discharge criteria are not exceeded at any time. Provisions would therefore be necessary to collect the effluent from the pilot plant for further treatment at the R.O. Pickard Centre prior to discharge. A Certificate of Approval would not be required for a pilot plant with no direct discharge to surface water or groundwater.

.../2

The construction of a full-scale engineered wetland would require a Sewage Works Certificate of Approval. To determine the required discharge criteria, an individual surface water assimilation study would be required as well as a full wastewater treatability study. Considering the discharge point (i.e. a seasonally dry drain) which discharges ultimately to the Jock River (a degraded Policy 2 receiving water); very stringent discharge criteria and monitoring requirements would be applicable.

This Ministry is very concerned that work proceed on the proposed pipeline as soon as possible. This groundwater contamination problem was originally identified in 1995. In May 1997 the Ministry and Region of Ottawa-Carleton agreed on an abatement program with a scheduled return to compliance date of 1999. Any work on research programs should not interfere with the timing of the pipeline installation. Recent progress with respect to the contaminated groundwater at the Nepean Landfill Site is unsatisfactory and must be resolved without further delay.

I would appreciate meeting with you by September 30, 1999 to review and formalize a revision to the schedule for the project.

Yours truly,

S. Burns
District Manager

DSH/th

Extract of Draft Minute
Planning and Environment Committee
13 July 1999

NEPEAN LANDFILL CONTAMINATED GROUNDWATER & TRAIL ROAD LANDFILL LEACHATE TREATMENT AND DISPOSAL

- Director, Engineering Division Environment and Transportation Department report dated 30 June 1999

Pat McNally, Director, Solid Waste Division and Jim Miller, Director, Engineering Division provided Committee with an overview of the staff report (copy of the slide presentation is held on file with the Regional Clerk).

Councillor van den Ham asked staff if they felt it was necessary for the Region to invest this amount of money to initiate work on emerging technologies or should the Region wait for private industry or other agencies to develop these technologies. Mr. McNally advised the work being done by other municipalities or the private sector, with respect to issues such as contaminated groundwater or leachate, would tend to be specific to the nature of the liquid they are dealing with, however, some general concepts and broad lessons could be learned from these projects. Mr. McNally advised, if the intention is to pre-treat either the contaminated groundwater from Nepean or the leachate from Trail Road, bench scale testing and pilot testing would be necessary and then a decision on whether or not to enter into a full scale operation would have to be made.

Councillor McGoldrick-Larsen stated she felt the staff report was rather negative towards the wetland operations. She noted it stated there was no process performance data for the Dignard Dairy Farm, when in fact it had been studied, and both the Alfred Agricultural College and the Ministry of Environment (MOE) are very satisfied with it as a pilot project. As well, the Dairy Farm is being used as an example at international conferences on wetland construction. Mr. Miller confirmed this however, he stated staff had not had the opportunity to peruse the data.

Councillor McGoldrick-Larsen referring to Councillor van den Ham's comments with respect to the investment of dollars into researching pretreatment of leachate, suggested this investment should be looked at as a possibility for saving significant dollars in the future. As well, the Councillor felt the treatment of leachate and groundwater contamination should be looked at as two separate issues and the financial analysis should be done separately so that the exact costs of each can be known.

The Committee then heard from the following delegations.

Joe King, indicated Roger Pyper was unable to remain at the meeting and read a statement on his behalf and on behalf of the Barrhaven Sewer Action Committee (BSAC).

In his statement, Mr. Pyper relayed the South Nepean community's frustration with the length of time (i.e. in excess of five years) the issue of leachate contaminated groundwater and the problems associated with it, had been going on. Mr. Pyper spoke of contaminants that are not treated effectively at the R.O. Pickard Environmental Centre. Specifically, he noted arsenic is released on a regular basis into the Ottawa River and is a constituent of the contaminated

groundwater that surfaces around the Trail Road Landfill. Arsenic is not degraded in River water or groundwater nor does it settle out, rather, arsenic accumulates over time in the brain and he emphasized this was not acceptable to the community.

Mr. Pyper went on to speak of the community's "lack of confidence" in Regional staff. He noted staff had stated they do not have expertise in constructed wetlands or in new and emerging technologies for the sustainable management of leachate or contaminated groundwater. Mr. Pyper offered the community's recommendation that the Committee first source professional, experienced, objective and unbiased information and stated the community was ready to assist the Committee in its deliberations. Finally, Mr. Pyper asked that the Committee go back to the Dillon report, review it and proceed with due diligence and speed.

Mr. King then provided his own comments (copy held on file with the Regional Clerk.). He pointed out a number of areas in the staff report, with which he took exception. They were as follows:

- the Region's household waste facility produces a leachate stronger than that of industrial regions such as Hamilton-Wentworth and Windsor-Essex;
- the projected cost of a wetland and on-site treatment for leachate and groundwater (i.e. 1.2 million) is less than half the cost of the pipeline;
- staff's concerns about process upsets in a constructed wetland are unfounded. Constructed wetlands are more shock resistant than aqueous sludge processing plants;
- in the report, staff refer to the operation of constructed wetlands as both complex and simple;
- the testing staff cite as needing to be done, has already been done by both the private and public sector;
- staff have accepted the findings of the consultant with respect to there being an acquitard north of the landfill that protects the river from the landfill contaminants;
- recommended that contaminated groundwater be removed at the leading edge of the plumb. Treated water could then be fed back into the groundwater at or near the source of the contamination;
- staff have dismissed the use of an anaerobic digester for on-site pretreatment as recommended in the Gore and Storie report;
- concerned about the suspended chlorides in the leachate and their link to cancer;
- urged Committee to read the MOE letter carefully. MOE is prepared to accept a "made in RMOC" solution and are interested in due diligence and speed;
- staff are recommending Council approve spending money on a system that is not environmentally sustainable;
- a detailed constructed wetland proposal specific to Trail Road groundwater that was presented two years ago by Nepean staff to RMOC staff, was "squashed".

Councillor Munter asked the speaker to clarify what it was he wanted the Committee to do. Mr. King stated the community wants (and the MOE requires) the Region to move quickly to bring this issue to conclusion. He requested that the Dillon report be brought back and presented to the Committee, as was discussed by Council in April.

Councillor Legendre referring to the speaker's comments that the staff report spoke of both the simplicity and complexity of operating a constructed wetland, asked staff to provide an explanation. Mr. Miller noted from a design point of view, staff believe constructed wetlands are complex; they are generally part of a treatment process and have to be specific to the waste. The intention is to use the natural, biological process without induced energy and in most cases without induced chemicals and that is where the natural systems give the impression they are simple. Mr. Miller went on to say this is an emerging technology and staff are not experts in this area, but the track record indicates more work is required, specific to the characteristics of Trail Road Landfill site.

Mr. McNally noted he had received a telephone call from Mr. Richard Hill, the closest neighbour to the landfill and he conveyed to the Committee his comments. Mr. Hill indicated he had too many things on the go and could not attend the meeting. He remains concerned about the impact of a wetland on the value of his property and he advised that he had put his house up for sale. He commented that despite assurances and suggestions that he should work within the system, he has expressed frustration with the results to date and he said if the wetland does go ahead, perhaps an alternate location could be looked at.

Ernie Lauzon and Werner Daechsel, The Citizen Review Committee for Waste Management of Ottawa-Carleton appeared before the Committee and provided copies of their submission (held on file with the Regional Clerk). Mr. Lauzon expressed his committee's support in principle, for the staff recommendations. He said however, the work plan must be reviewed by the public and Council prior to its implementation.

Mr. Lauzon went on to review a number of omissions from the staff report, that his committee felt should be included. They were:

1. that treated leachate for recharging the aquifer from which the contaminated groundwater is taken;
2. that treated leachate for on or near site forest irrigation; and
3. that an anaerobic digester be provided to pre-process leachate which is captured in the landfill liner of Stages 3 and 4 before returning it to the cell from which it is taken or further on-site or off-site processing.

Mr. Lauzon stated the Review Committee feels there is a research scam. He said the staff report creates a bias that negates the opportunity for real research by ruling out full on-site treatment through the insistence that the central sewage plant has to be included. He felt there were many preconceptions, such as, that for most contaminants, ROPEC would be superior to a constructed wetland; that ROPEC without tertiary treatment would outperform a well designed, constructed wetland with respect to biologically reestablishing itself in the event of a process upset; and that sub-surface constructed wetland would not perform adequately for the Trail Road site specific conditions during the winter period.

In conclusion, he felt a committee should be established involving Councillors, staff and the public. He said every time the Region undertakes a study, it is tendered and then it comes back to the public and that is not what the public wants. He suggested it would be much more beneficial to get the public involved at the outset.

Councillor Stewart noted the Committee had just heard that the public and the MOE want to move ahead on this issue. She asked if what the speaker was suggesting would take any more time. Mr. Lauzon stated he was sure that everyone had the same objectives and involving the public at the front end would not take any more time than what is currently proposed by staff.

Responding to questions from Councillor Stewart, Mr. Miller stated on some projects, where it was appropriate, liaison committees have been used. He said staff are very much predisposed to the appropriate level of public consultation and are committed to dealing with this as rapidly as possible. He confirmed it was staff's intent to keep the community and the advisory committee informed and on side, for the remainder of the process.

Mr. Daechsel expressed his opinion that the Region "went off kilter" when, after the Dillon report was adopted, nothing happened. Subsequently, another very expensive report was commissioned, which he felt was not as good as the Dillon report with respect to the issue of contaminated groundwater. Mr. Daechsel urged the Committee to proceed with both the Dillon report and the Gore & Storie report, on a parallel basis.

Councillor Stewart asked staff to advise on the status of the Dillon report. Mr. McNally replied the Dillon report was presented as an information report to Committee in November, 1996 and staff advised the implementation of the recommendations contained therein could take two to three years. He said the report was very much a preliminary feasibility study that suggested a wetland could adequately treat contaminated groundwater. As staff were dealing with the issue of contaminated groundwater, it became evident there was also a problem with leachate being produced at Stage 3. In June, 1998, staff came forward with the pipeline solution which they felt would solve both problems. Since that time, there has been ongoing debate on these issues.

Councillor Munter indicated he would be moving a motion to amend recommendation 1 by adding the words "on-site" before the word "treatment" and by adding to the end, "and that the workplan for this program be the subject of a report to Planning and Environment Committee and be circulated for comment".

Councillor McGoldrick-Larsen urged the Committee to support this motion. She said she was pleased to hear that staff intend to have regular dialogue with the community and she asked that staff treat the community group that has been participating in this issue all along, as a working group. She felt all of the parties involved have to be willing to work together and that the community should acknowledge the Region's (staff, Committee and Council's) willingness to move forward on this matter.

Extract of Draft Minute
Planning and Environment Committee
13 July 1999

Moved by A. Munter

That Recommendation 1 be amended to read:

1. **The creation of a programme to investigate new and emerging technologies for the on-site treatment of leachate from the Trail Road Landfill site and leachate contaminated groundwater from the Nepean Landfill site; and that the workplan for this program be the subject of a report to Planning and Environment Committee and be circulated for comment.**

CARRIED

The Committee then considered the report recommendations as amended.

That the Planning and Environment Committee recommend to Council:

1. **The creation of a programme to investigate new and emerging technologies for the on-site treatment of leachate from the Trail Road Landfill site and leachate contaminated groundwater from the Nepean Landfill site; and that the workplan for this program be the subject of a report to Planning and Environment Committee and be circulated for comment;**

2. **That staff be directed to include a submission of $500,000 in the 2000 Capital Budget to fund this programme.**

CARRIED **as amended**