

## **COMPLIANCE INSPECTION REPORT**

# **Longueuil Township Waste Disposal Site**

SOLID NON-HAZARDOUS WASTE DISPOSAL SITE (now Champlain Township)

REPORT PREPARED BY THE CORNWALL OFFICE OF THE MINISTRY OF THE ENVIRONMENT, EASTERN REGION

Inspected by: Gerry Murphy Inspection: October 20, 1999

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### MINISTRY OF THE ENVIRONMENT

# SOLID NON-HAZARDOUS WASTE DISPOSAL SITE INSPECTION REPORT

**COMPANY/MUNICIPALITY:** Old Twp. of Longueuil, presently amalgamated Twp. of

Champlain

**SITE ADDRESS:** Part of Lot 59, Registered Plan # M-100

**CONTACT NAME:** Robert Lefebvre **TITLE:** Clerk-Treasurer, Champlain Township

**CONTACT TELEPHONE:** (613) 678-3003 **FAX:** (613) 678-3363

**SITE LOCATION:** The Waste Disposal Site is located approximately 3 km south of the

Village of L'Orignal with the entrance to the site off the Cassburn Rd.

**SITE NAME:** Longueuil Township Waste Disposal Site

**INSPECTION DATE:** October 20, 1999

DATE OF LAST INSPECTION: July 12 & 20, 1995

## 1.0 CERTIFICATES OF APPROVAL

- CofA #A471601 last issued March11, 1980 (Appendix "1F")

  Note: Only condition on the March 11, 1980 CofA is that the site be registered on title.

  The site was registered on May 20, 1980, Instrument #15606.
- There is no record of financial assurance on MOE files.

What is the approved total area of the site?

• The approved total area of the site is 25 Ha.

What is the approved landfilling area (footprint) of the site?

• The approved landfilling area (footprint) has never been documented, but as outlined in the previous compliance report, there exists buffer areas within the perimeter of the site that consist of approximately 760 m to the east, 120 m to the north, 30 m to the south and west.

• Based on the total area of the site (25 Ha) & the approximate amount of buffer area (11.85 Ha), there remains approx.13.15 Ha of landfill area (footprint), as demonstrated by this calculation.

Total site = 25 Ha which = 250,000 sq. metres
Buffer area within site = 11.85 Ha = 118500 sq. metres
Landfill area (footprint) = 13.15 Ha = 131500 sq. metres

**NOTE**: 10,000 sq. metres = 1 hectare

Since, in the 1995 Compliance Report the buffer areas where not disputed, the landfill area is as calculated above, but can be altered based on the information that is to be supplied in the yet to be completed Operation & Development Plan.

Does the site have an approved capacity?

• This site does not have an approved capacity. The site is approved to serve the Twp. of Longueuil and the Village of L'Orignal, with a combined population of approximately 3300 people.

### 2.0 INSPECTION OBSERVATIONS

Has the footprint been flagged and/or is clearly identifiable?

• The footprint has not been flagged and is not clearly identifiable. This was discussed with the Reeve (John Wilson) and the Road Superintendent (Ray Villeneuve) at the time of the compliance inspection. Mr. Wilson agreed to flag the boundaries of the current landfilling area, especially the areas to the south and north that maintain a minimum required separation distance (buffer) of 30 metres.

Are wastes being deposited outside of the footprint?

• There does not appear to be any waste within the minimum approved 30 metre separation distance of the waste disposal site. Once the Operation & Development Plan are completed and approved, this will dictate the amount of separation distance required from the landfilling area to the eastern boundary of the waste disposal site. The current working face of the landfilling area is moving from west to east.

Is access to the site controlled?

- Access to the site is regulated by Certificate of Approval #471601 issued July 31, 1972 (Appendix "1B").
- Access is controlled by a locked gate, with an attendant on site during open hours to the public.

Are wastes being adequately covered?

• The CofA (471601) dated July 31, 1972 (Appendix "1B") states: "That the wastes are deposited in the specified area, compacted and covered once each week with six (6) inches of cover material". In an August 1, 1973 letter from the then Acting Director W. Williamson to the Twp. of Longueuil (Appendix "1C") he states: "All waste materials shall be covered with six (6) inches of earth cover material, twice a month, by a proper landfilling operation.

Is there evidence of burning?

• The municipality does burn clean woodwaste in a controlled and supervised fire, in a designated section of the site.

Is there any obvious evidence of groundwater/surface water impact?

• At the time of the Compliance Inspection there were no obvious signs of ground/surface water impacts, but a complete hydrogeological investigation would be required to determine the extent of contamination from the site. Refer to F. Crossley's memorandum of October 10, 1997, after his review of the Neil Levac Engineering report of February, 1997 (Appendix "2"). Also enclosed (Appendix "3") is a November 3, 1997 letter from Neil Levac to the attention of Reeve Roger Ravary, pertaining to the Hydrogeological Characterization Study and outlining a meeting that N. Levac had with F. Crossley.

If a leachate control system is required for this site, is it operational?

• Presently, there is no requirement for a leachate control system, since a full hydrogeological investigation has not been completed to determine a need or not.

If a methane gas control system is required for this site, is it operational?

• A complete hydrogeological assessment is required to determine if a methane gas control system is required.

Is there evidence that wastes other than solid non-hazardous wastes are being deposited at the site?

• At the time of the compliance inspection, an untagged refrigerator unit was observed within the white goods disposal area. This was dicussed with the Reeve, followed-up by a letter dated November 3, 1999, to the Township (Appendix "4"), that included a copy of Regulation 189/94 (Refrigerants) and explaining the approved handling and disposal methods of refrigerants.

### 3.0 REVIEW OF OUTSTANDING ISSUES

- 1) Complete a full hydrogeological site assessment
- 2) Complete an Operational/Development Plan as required for the site.
- 3) Amend existing CofA to incorporate the currently used area method of fill as opposed to the approved trench method.

# 4.0 SUMMARY OF INSPECTION FINDINGS (HEALTH/ENVIRONMENTAL IMPACT)

• Was there any indication of a known or anticipated human health impact during the inspection and/or review of relevant material, related to this Ministry's mandate?

Yes No 🛭

• Was there any indication of a known or anticipated environmental impact during the inspection and/or review of relevant material?

Yes ⊠ No

**Specifics:** Preliminary investigation by Neil Levac Engineering indicates an anticipated environmental impact.

• Was there any indication of a known or suspected violation of a legal requirement during the inspection and/or review of relevant material which could cause a human health impact or environmental impairment?

Yes ⊠ No

Specifics: The improper handling of refrigerant containing appliances have the potential for creating an environmental impairment.

### 4.1 ACTION(S) REQUIRED

• The municipality is aware of these outstanding issues and are currently developing a strategy to bring these issues into compliance. The municipality is to report, in writing, to the Cornwall Area Office by December 31, 1999, stating their intention as to the timing of these outstanding issues.

### 5.0 OTHER INSPECTION FINDINGS

- 1) Waste tires are to be disposed of through a recycling company.
- 2) Ensure proper segregation and coverage of municipal waste, as outlined in conditions of the CofA.

## 5.1 ACTION(S) REQUIRED

• The municipality is aware of the above inspection findings and is currently developing a strategy to deal with these situations. The municipality is to report, in writing, to the MOE Cornwall Area Office, by December 31, 1999 of their intention as to the timing of these issues.

OCCURRENCE REPORT #: 9940002147 - refrigerants 9940002148 - to amend C of A

PREPARED BY:	
ENVIRONMENTAL OFFICER:	Gerry Murphy
	Lum, Mun
	(Signature)  Kingston/Cornwall Area Office
	(District/Area Office)
	1/01-26/29
	(Date)
REVIEWED BY:	
DISTRICT SUPERVISOR:	R. J. Robertson
	( Kobertson
	(Signature)
	( Vor-26/29
	(Date)

**REPORT MAILED OUT ON:** 

Nov 76/99

NOTE: "This inspection does not in any way suggest that there is or has been compliance with applicable legislation and regulations as they apply or may apply to this facility. It is, and remains, the responsibility of the owner and/or the operating authority to ensure compliance with all applicable legislative and regulatory requirements."

# **APPENDICES**

Appendix "1A" Provisional Certificate of Approval No. 471601 - issued February 4, 1971
Appendix "1B"
Appendix "1C" Provisional Certificate of Approval No. 471601 - issued August 1, 1973
Appendix "1D"
Appendix "1E" Provisional Certificate of Approval No. 471601 - issued August 1, 1975
Appendix "1F" Provisional Certificate of Approval No. 471601 - issued March 11, 1980
Appendix "2"
Appendix "3" Letter dated November 3, 1997 from Neil Levac to Reeve Roger Ravary re: Hydrogeological Characterization Study
Appendix "4"

# **APPENDIX "1A"**

Provisional
Certificate of Approval
No. 471601

(issued February 4, 1971)



## **Department of Energy and Resources Management**

# PROVISIONAL CERTIFICATE OF APPROVAL FOR A WASTE DISPOSAL SITE

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Certificate No. 471601

Under The Waste Management Act, 197	70 and the regulations and subject to the limita-
tions thereof, this Provisional Certificate of App	proval is issued to
Township of I	Longueuil
L*Original,	Ontario.
	Site
located	
	•••••••••••••••••••••••••••••••••••••••
subject to the following conditions	••••••
1. Trench and fill operation to be co	onducted with weekly coverage.
2. Burning to be carried out only wit	th the permission of the Air
Management Branch.	••••••
3. Restricted hours enforced, superv	ised during open hours.
	••••••
	······································
This Provisional Certificate expires on the	e 15th day of August
19.71	•
Dated this4thday of	Pebruary // 1971.
Dated tills	Manan
	Director, Waste Management Branch

# **APPENDIX "1B"**

Provisional
Certificate of Approval
No. 471601

(issued July 31, 1972)



## **Ministry of the Environment**

	For Head	Office Use
	0	R
_	2nd Sheet	
W	aste Manage	ment Branch
	RECEI	VED
<i>                                     </i>	AL Jul 28	3 1972
	OTTA	<b>NA</b>

EASTERN REGION

# PROVISIONAL CERTIFICATE OF APPROVED FOR A WASTE DISPOSAL SITE

Appendix "B"

Provisional Certificate No. 471601

Township of Longueuil,	*******
I Cricinal Contario	•••••
the Landfill	Site
ated Lot 59, Plan N-100	*****
piect to the following conditions	
	)
of Section 10, Subsection 1 of Ontario Regulation 824, by taking the	•••••
following action :-	
Provision of an access road to the disposal area in the trench. (Item	1)
Provision of supervision at the site and particularly in the disposal a	rea.(Item
Township of Longueuil.  I Variational, Ontario  for the Londfill  located Lot 50, Flan N-100  subject to the following conditions  1. That specific attention be given to Items (1), (12), (13), (15) and of Section 10, Subsection 1 of Ontario Regulation 624, by taking the following action:  Provision of an access road to the disposal area in the trench. (I Provision of supervision at the site and particularly in the disposal matthetic wastes are deposited in the specified area, compacted and each week with aix (6) inches of cover material. (Item 13)  SUBJECT AS WILL TO THE CONDITIONS SET OUT ON THE ATTACHED SHEET  This Provisional Certificate expires on the Slat day of July  Dated this Sat day of July 19.72	red once
each week with six (6) inches of cover material. (Item 13)	•••••
SUBJECT AS WELL TO THE CONDITIONS SET OUT ON THE ATTACHED SHEET	
This Provisional Certificate expires on theday of	, 1973
subject to the following conditions.  1. That specific attention be given to Items (1), (12), (13), (15) and (16)  of Section 1C, Subsection 1 of Ontario Regulation 524, by taking the  following action:  Provision of an access road to the disposal area in the trench. (Item 1)  Frovision of supervision at the site and particularly in the disposal area (I  That the wastes are deposited in the specified area, compacted and covered on  each week with six (6) inches of cover material. (Item 13)  SUBJECT AS WILL TO THE CONDITIONS SET OUT ON THE ATTACHED SHEET.  This Provisional Certificate expires on the Slat day of July 19.72  Dated this. Set day of July 19.72	
a Decora	Mess
Director, Waste Management Branch	h
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## **Department of the Environment**

For Head Office Use		
0	R	
2nd Sheet		
#		

# PAGE 2

The following conditions are additional to the conditions shown on Provisional tificate of Approval Number 471601 for a Naste Dispusal Site and to Township of Longueull and dated July 31st, 1972.  Provision of signs at the site for guidance and control. (Item 15)  Provision of a fence and a lockable gate to control public access. (Item 16)	
Certificate of Approval Number 471601	for a Waste Disposal Site
issued toTownship of Longueviland	dated July 31st, 1972.
Provision of signs at the site for guidance	ce and control. (Item 15)
Provision of a fence and a lockable gate t	to control public access. (Item 16)
	•••••••••••••••••••••••••••••••••••••••
	•••••••••••••••••••••••••••••••••••••••
•	
	Director, Waste Management Branch
/Page 2 of 2	Page

# APPENDIX "1C"

Provisional
Certificate of Approval
No. 471601
(issued August 1, 1973)



## **Ministry of the Environment**

Waste Management Branch
RECEIVED

AU6 9 1973

OTTAWA EASTERN REGION

# PROVISIONAL CERTIFICATE OF APPROVAL FOR A WASTE DISPOSAL SITE

Appendix "1C"

· .		Provisional Certificate No. 4.716.01
Under 1	The Environmental Protection Act	t, 1971 and the regulations and subject to the
limitations th	nereof, this Provisional Certificate o	f Approval is issued to
· · · · · · · · · · · · · · · · · · ·	Township of Longueuil	
	L'Original, Ontario	
for the	Landfill	Site
located	Lot 59, Plan 100-M	
	Township of Lonqueuil	
subject to the	e following conditions	
• • • • • • • • • • • • • • • • • • • •		
·.		
This Prov	visional Certificate expires on the 3	lstday ofJuly, 1974
Dated this	s. lst day of August	
		J Womann
		Director, Waste Management Branch

Phone: 965-7752

August 1, 1973

Township of Longueuil L'Original Ontario

Dear Sir:

This site (facility) does not meet the standards required by the Environmental Protection Act and Regulation.

A Provisional Certificate of Approval No. 471601 has been issued with an expiry date of July 31, 1974 During this period the following improvements shall be implemented and maintained:

The access and on-site are to be improved and maintained in a manner which will permit regular vehicle traffic to travel readily on such roads under normal whather conditions.

All waste materials shall be covered with six (6) inches of earth cover material, twice a month, by a proper landfilling operation.

The operation of the site (facility) will be inspected periodically prior to the expiry date of the certificate. Failure to comply with this program of upgrading the site (facility) may result in refusal to reissue this certificate or such other action as is available under the Act.

Yours truly,

W. Williamson P. Eng.

Acting Director.

# **APPENDIX "1D"**

Provisional
Certificate of Approval
No. 471601
(issued August 1, 1974)





Provisional Certificate No.

# PROVISIONAL CERTIFICATE OF APPROVAL WASTE DISPOSAL SITE

Ministry of the Environment

Under The Environmental Protection Act, 1971 and the regulations and subject to the limitations thereof, this Provisional Certificate of Approval

Township of Longueuil, R. R. #1, L'Orignal, Ontario. Appendix" 10"

located for the

Correbty of Longueuil Lot 59, Plan 100-M Landfill

subject to the following conditions:

All waste materials shall be covered with six (6) inches of earth cover material, twice per month, by a proper landfilling operation.

DIRECTOR, SECTION 3 (a) E.P.A. This Provisional Certificate expires on the ......day of ...... Dated this Lat. day of August. 19 74

# NOTICE

Ontario

TO: Township of Longueuil, R. R. #1, L'Orignal, Ontario.

You are hereby notified that Provisional Certificate of Approval No. 471601 has been issued to you subject to the conditions outlined therein.

The reasons for the imposition of these conditions are as follows:

For the conservation of the natural environment.

You may by written notice served upon me and the Environmental Appeal Board within 15 days after receipt of this Notice, require a hearing by the Board.

This Notice should be served upon:

Environmental Appeal Board,
365 Bay Street, AND
Suite 300,
Toronto, Ontario.
M5H 2V3

The Director, Section 3a, E.P.A., Ministry of the Environment, 135 St. Clair Ave. West, Toronto, Ontario. M4V 1P5.

DATED at Toronto this let day of August

, 19 74.

Director, Section 3a, E.P.A.,

Ministry of the Environment.

MOE 14 -251 7-74

# **APPENDIX "1E"**

Provisional
Certificate of Approval
No. 471601
(issued August 1, 1975)







Provisional Certificate No.

471601

Ministry of the Environment

# PROVISIONAL CERTIFICATE OF APPROVAL WASTE DISPOSAL SITE

Under The Environmental Protection Act, 1971 and the regulations and subject to the limitations thereof, this Provisional Certificate of Approval is issued to:

Township of Longueuil, R. R. l, L'Orignal, Ontario.

for the landfill located Lot 59, Plan 100-M
Township of Longueuil,
County of Prescott, and Russell.

subject to the following conditions:

JUN 2 5 1975

CORNWALL

Appendix "IE"

This Provisional Certificate expires on the 31st day of 75

Dated this day of August , 19 75

DIRECTOR, SECTION & (a) E.P.A.

Environment Branch	Issue
	Re-issue
Ontario	Up-grade
NOTE: This form shall be submitted by the Regional Enginee supporting information.	r to Head Office along with the application form and all
WASTE DISPOSAL SITE X	WASTE MANAGEMENT SYSTEM
Lot 59, Plan 100-M	SERVING
Twp of Longueuil	
Re-1asue	A 471601
ISSUE Certificate of Approval Provisional Certification	PROVISION CERTIFICATE TO EXPIRE ON July 31, 1976
CONDITIONS	
Ontario  RECOMMENDATION OF REGIONAL ENGINEER  NOTE: This form shall be submitted by the Regional Engineer to Head Office along with the application supporting information.  APPLICANT  Township of Longueuil - R. R. 1, L'Orignal, Ontario  FOR THE  WASTE DISPOSAL SITE  LOCATED AT  Lot 59, Plan 100-M  Twp of Longueuil  DATE APPLICATION RECEIVED  Re-issue  ISSUE Certificate of Approval Provisional Certificate of Approval	
R	
MINISTRY BE THE ENVIRONMENT	
MAY 2 6 1915	
CORNWALL	
CIRCULATE TO	
Ontario  RECOMMENDATION OF REGIONAL ENGINEER  NOTE: This form shall be submitted by the Regional Engineer to Head Office along with the application supporting information.  PPUCANT  Township of Longueuil - R. R. 1, L'Orignal, Ontario  OF THE WASTE DISPOSAL SITE   WASTE DISPOSAL SITE   Lot 59, Flan 100-M  Twp of Longueuil  ATE APPLICATION RECEIVED   Re-lasue  SSUE Certificate of Approval Provisional Certificate of Approval   MINISTRY OF TRE ENVIRONMENT  MANY 2 6 1975  CORNWALL  REGIONAL ENGINEER  WASTE MANAGEMENT SYST  SERVING  FOR THE WASTE MANAGEMENT SYST  SERVING  PROVISION  MINISTRY OF TRE ENVIRONMENT  MANY 2 6 1975  CORNWALL	
·	

DATE May 15/75

Refuse Application

REASONS

SIGNED

Suspend

Revoke

MMh

Refuse to re-issue

Regional Engineer

REGION

Southeastern

Cert. No.

# **APPENDIX "1F"**

Provisional
Certificate of Approval
No. 471601
(issued March 11, 1980)



Appendix"F"

# PROVISIONAL CERTIFICATE OF APPROVAL WASTE DISPOSAL SITE

Under The Environmental Protection Act, 1971 and the regulations and subject to the limitations thereof, this Provisional Certificate of Approval is issued to:

Township of Longueuil Box 298 L'Orignal, Ontario KOB 1KO

for the use and operation of a 25 hectare landfilling site

all in accordance with the following plans and specifications:

Located: Part Lot 59, Registered Plan Number M-100

Township of Longueuil

Counties of Prescott and Russell

which includes the use of the site only for the receiving and disposal of the following categories of waste (NOTE: Use of the site for additional categories of wastes requires a new application and amendments to the Provisional Certificate of Approval) domestic, commercial, and non-hazardous solid industrial wastes.

and subject to the following conditions:

1. No operation shall be carried out at the site after sixty days from this condition becoming enforceable unless this Certificate including the reasons for this condition has been registered by the applicant as an instrument in the appropriate Land Registry Office against title to the site and a duplicate reigstered copy thereof has been returned by the applicant to the Director.

registered

.

Director, Section 39,



# NOTICE

TO:

Township of Longueuil Box 298 L'Orignal, Ontario KOB 1KO

You are hereby notified that Provisional Certificate of Approval No. A 471601 has been issued to you subject to the conditions outlined therein.

The reasons for the imposition of these conditions are as follows:

The reason for the condition requiring registration of the Certificate is that Section 46 of the Environmental Protection Act, 1971 prohibits any use being made of the lands after they cease to be used for waste disposal purposes in order to protect future occupants of the site and the environment from any hazards which might occur as a result of waste being disposed of on the site. This prohibition and potential hazard should be drawn to the attention of future owners and occupants by the Certificate being registered on title.

You may by written notice served upon me and the Environmental Appeal Board within 15 days after receipt of this Notice, require a hearing by the Board.

This Notice should be served upon:

The Secretary,
Environmental Appeal Board, AND
1 St. Clair Ave. West,
5th Floor,
Toronto, Ontario.

M4V 1K7

The Director, Section 3a, E.P.A. Ministry of the Environment,

DATED at Toronto this 11th day of March

, 19<sup>80</sup>

Director,

### MUNICIPAL WASTE DISPOSAL SITE

### What is permitted

- a) Domestic Waste 80% of what could be dumped should encompass such matter.
- b) Commercial and old car tires
  NON-HAZARDOUS wooden crates
  SOLID Industrial Wastes

### What is not permitted

- NO derelict motor vehicles or farm equipment and Council is responsible for the control of the dumping of such materials.
- NO used car oil (not solid waste material)

(copy of provisional Certificate of Approval for the Municipal Waste Disposal Site attached hereto)

## THE LAND TITLES ACT

Application to Register Notice of a Provisional Certificate of Approval -- Waste Disposal Site.

TO THE LAND REGISTRAR AT L'ORIGNAL, in the County of PRESCOTT, ONTARIO.

I, JEANNE CHARLEBOIS, CLERK TREASURER, of the TOWNSHIP OF LONGUEUIL,
the registered owner of Parcel 59,
in the Register for Section P-M 100, Township of Longueuil,
hereby apply to have entered on the Register for the said Parcel
a Notice of a PROVISIONAL CERTIFICATE OF APPROVAL -- Waste Disposal Site.

The evidence in support of this Application consists of:

1) A copy of the PROVISIONAL CERTIFICATE OF APPROVAL -- Waste Disposal Site.

The address of the Applicant for service is:

R.R. NO. 2, Bay Road, L'Orignal, Ontario, KOB 1KO.

Dated at L'Orignal, Ontario, this 20th day of May, 1980.

Jeanne Charlebois, Clerk Treas.

20151 # annualing

# **APPENDIX "2"**

Memorandum dated October 10, 1997 from Frank Crossley - Technical Support Section

(Re: Hydrogeological Characterization Study)

Ministry of Environment and Energy

133 Dalton Avenue P O Box 820 Kingston ON K7L 4X6 Ministère de l'Environnement et de l'Énergie

133 avenue Dalton C P 820 Kingston ON K7L 4X6



October 10, 1997

1-613/549-4000 1-800/267-0974 Fax: 613/548-6908

MEMORANDUM

TO:

G.A. Murphy

Sr. Environmental Officer

Abatement Section Cornwall Area Office

Eastern Region

FROM:

F. Crossley

Hydrogeologist

**Technical Support Section** 

Eastern Region

RE:

Hydrogeological Characterization Study

Longueil Township Waste Disposal Site

Lot 59, Plan M-100, A471601

Having reviewed the above-noted Hydrogeological Report dated February, 1997 by Neil Levac Engineering Limited (NLE), I offer the following comments. This is the initial hydrogeological investigation/assessment of this waste disposal site operation.

The site is licenced under Certificate of Approval, A471601. The licenced area is 25 hectares. NLE state that the footprint of the site is approximately 1.53 hectares. The site is licenced to receive domestic, commercial and non-hazardous solid industrial waste.

The consultants had four boreholes drilled of which three were multi-level (2). Therefore there are seven groundwater monitoring points. The borehole depths range from 3.66 to 4.88 metres. The borehole logs show that the overburden consists of a sand unit underlain by a till unit. The till unit is mainly described as a silty sand. All the boreholes were terminated within the overburden and at presumed bedrock refusal with the exception of BH3. The underlying bedrock consists of interbedded limestone and shale (Ottawa Group).

NLE determined the following physical hydrogeological characteristics at the site:

Estimated hydraulic conductivity (rising head test) range from  $7.2 \times 10^{-4}$  to  $3.6 \times 10^{-3}$  cm/sec. in the sand unit.

- Estimated hydraulic conductivity (rising head test) range from 7.4 x 10<sup>-6</sup> to 1.4 x 10<sup>-5</sup> cm/sec. in the till unit.
- The consultants did not determine the horizontal hydraulic gradient.
- The vertical hydraulic gradients are downwards.
- The shallow and deeper groundwater flow is towards the northeast.

The shallow and deeper groundwater flows may vary (i.e. east, northeast, north) as the monitoring wells are located in a line.

The water quality results are summarized in Table 1 of the report. Additional chemical parameters should have been analyzed to provide a more representative characterization of the water. Numerous typical leachate indicator parameters (i.e. conductivity, total dissolved solids, alkalinity, hardness, barium, etc.) were not provided.

It is assumed that the purpose of BH1 is to provide background water quality information. In reviewing the water quality analysis from this monitoring well, the results show that the water is not representative of background water quality. Impacts from the waste disposal site operation may be occurring due to proximity of the waste to this monitoring well.

BH3-2 is located within the "fill" while BH3-3 is located below the "fill". The water quality results from these monitoring wells show elevated concentrations of some leachate indicator parameters. This monitoring well is located in an assumed upgradient location from the active waste disposal site operation. Also the material referenced as "fill" is described as "glass and thin". Presumably "thin" should actually be tin (i.e. cans). The water in this monitoring well may not be representative of leachate.

BH2B, BH4-1 and BH4-2 are located in a presumed downgradient location, with respect to groundwater flow, of the waste. The water quality analyses results show elevated concentrations of some leachate indicator parameters.

The consultants apply Guideline B-7 to the waste disposal site operation. NLE state that the reasonable use of the surficial groundwater downgradient of the site is not for domestic consumption as the downgradient (north) property is an old landfill site (Village of L'Orignal). Allowing exceedances of the Reasonable Use Limits at the property boundary of the Longueil Township waste disposal site, decreases the dilution of the upgradient groundwater to reduce the impacts of leachate from the L'Orignal waste disposal site operation. Therefore allowing the exceedance of the Reasonable Use Limits on the upgradient waste disposal site operation would

impact the downgradient waste disposal site operation. Therefore the Reasonable Use Limit should apply based on drinking water use. Applying the Reasonable Use Limit to the downgradient monitoring wells (BH4-1 and BH4-2), there are some slight exceedances however they are not considered significant at this time. Further monitoring will be required to determine if these exceedances are persistent.

I offer the following conclusions and recommendations:

- It is recognized that this is the first hydrogeological investigation/assessment of this waste disposal site operation however the following information has to be determined:
  - The background water quality has to be established. This may require the installation of an additional monitoring well as the water quality in the present background monitoring well is not representative of background water quality.
  - The leachate water quality has to be established. This may require the installation of an additional monitoring well as the water quality in the present leachate monitoring well is not representative of leachate water quality.
  - Additional monitoring wells are required to determine the groundwater flow and the extent, both horizontal and vertical, of the leachate contamination plume.
- I do not agree with the consultants opinion that the Reasonable Use Limits related to drinking water purposes do not apply. While I acknowledge that the adjacent downgradient property has been used for landfilling purposes, allowing exceedances of the Reasonable Use Limits from the Township of Longueil waste disposal site operation would impact the Town of L'Orignal's waste disposal site operation.
- Presently the waste disposal site operation is in compliance with Guideline B-7, Reasonable Use Concept.
- I concur with the consultants that a groundwater monitoring program (water levels and analyses) be implemented. I concur with the frequency of two times per year. The chemical parameter should be expanded to include typical leachate indicator parameters.

F. Crossley

/sh

cc: R.J. Robertson

- File SI PC LO Plan 100 121/GW-07-04, Longueil Township

- FC/TMS#28130

# APPENDIX "3"

# Letter dated November 3, 1997 from Neil Levac to Reeve Roger Ravary

(Re: Hydrogeological Characterization Study)

### DELIVERED BY HAND

Our File Ref. L9618

Appendix"3"

November 3, 1997

Corporation of the Township of Longueuil 925 Highway #17

P.O. Box 343

L'Orignal, ON

KOA 1KO

Attn: Mr. Roger Ravary, Reeve

RE: Hydrogeological Characterization Study

Waste Disposal Site - MOEE A471601

Township of Longueuil

ation Study
471601

Out 30|97 mily June of Kingston - Present N. Lame
L. Lamoy

Dear Sir:

Pursuant to our review of the attached letter from MOEE dated October 10, 1997 and our meeting of October 30, 1997 with Mr. Frank Crossley in regards to the above mentioned project, we offer the following comments:

- 1.0 Our Hydrogeological Characterization Study dated February, 1997 was the first one of its kind performed on the subject site.
  - 1.1 Our main goal for the original site review was to, with limited background information and budget, determine the general site characteristics of the subject property as related to landfill activities.
  - 1.2 The results of this investigation have given us the opportunity to verify the landfill's compliance with current provincial policies (Guideline B-7, Reasonable Use Concept) and its potential for expansion. Based on the results obtained, we are now in a position to confirm that the property is in compliance and that it is likely to sustain expansion, thus requiring us to, as recommended by MOEE, pursue further monitoring of the site.

Page 1 of 2

- 2.0 As part of the additional monitoring, we propose the following be carried out in phases:
  - 2.1 Phase I: Sampling of existing monitoring wells.

-It is proposed that the existing monitoring wells be sampled and verified for the parameters as discussed in the MOEE letter in addition to some of the parameters we had already verified (are there consistencies?).

- 2.2 Phase II: Installation of additional monitoring wells.
  - -Pending on the results of Phase I, we propose that additional monitoring wells be installed along the North & South property lines.
  - -These wells will allow us to examine the subsurface soil conditions at the property boundaries, beyond the active landfill site location.

Finally we wish to confirm that the results we have obtained in our first study are positive. However, as mentioned in our report and by the MOEE, bi-annual sampling should be implemented as part of the landfill operations.

Please find attached our proposal for the additional site works.

If you have any questions or comments, please contact the undersigned.

Yours truly,

Neil A. Levac Engineering Ltd.

Neil A. Levac, P. Eng.

NALAs

cc: Mrs. Jeanne Charlebois, Clerk-Treasurer

enclosure

E-mail: levaceng@istar.ca 1-2884 Laporte, Rockland, ON, K4K 1M6 144 Main East, Hawkesbury, ON, K6A 1A3 Fax:(613)446-1427 Tel:(613)446-7777 Tel:(613)632-4583

# Estimated Cost of Works

*	TOTAL ESTIMATED COST (not including disbursements & G.S.P.)	00L LT\$
Note:	(atolla) insertings gailling for drilling equipment (allow)	000 2\$
<b></b>	ESTIMATED COST (not including disbursements & G.S.T.)	009 11\$
	Chemical Analysis	2000,00
	Report / Recommendations	2800,00
	Survey/Supervison and Sampling	2800,00
	Drilling & Monitoring Wells Supplies	00,000h
II	Installation and Sampling of Additional Monitoring Wells	***
•	ESTIMATED COST (not including disbursements & G.S.T.)	001 <del>1</del> \$
	Chemical Analysis	T200'00
	interpretation & Report	7800,00
	Sampling	90'008
I	Sampling of Existing Monitoring Wells	
HVZE	DESCIBLION	ESTIMATE

Meetings with authorities (MOEE / Township) to be charged on an hourly rate basis.

Our File Ref: L9618

# **APPENDIX "4"**

Letter dated November 3, 1999 from Gerry Murphy - MOE Cornwall Area Office to Township Clerk-Treasurer, Robert Lefebvre

(Re: Meeting and Site Inspection of Old Longueuil Township WDS)

### Ministry of the **Environment**

113 Amelia Street Cornwall ON K6H 3P1 Telephone: (613) 933-7402 Fax: (613) 933-6402

### Ministère de l'Environnement

113 rue Amelia Cornwall ON K6H 3P1 Téléphone: (613)933-7402 Télécopieur: (613)933-6402



November 3, 1999



Mr. Robert Lefebvre, Clerk-Treasurer Champlain Township 948 Pleasant Corner Road Vankleek Hill, ON K0B 1R0

Dear Sir:

Re: Meeting and Site Inspection of the old Longueuil Twp. Waste Disposal Site, currently located in the amalgamated Champlain Township

On October 22, 1999, I first met with Mrs. Jeanne Charlebois, Deputy Clerk, and discussed outstanding issues noted in the previous Compliance Inspection Report of July 1995. Since the Inspection Report, the township (old Longueuil Twp.) retained the services of a consultant (Neil A. Levac Engineering) to conduct various surveys at the site to commence the formulation of an Operation & Development Plan as required by the MOE.

Part of the Operation & Development Plan includes a hydrogeological study of the site which was originally reported by Golder Associates in their proposal to the Township of Longueuil on January 25, 1996 and subsequently reported on by Neil A. Levac Engineering in their November 18, 1996 Hydrogeological Characterization Study proposal. Both the Golder and Levac proposals where reviewed and commented on by our Hydrogeologist, Frank Crossley, of the Technical Support Section. These comments were then forwarded to the township for their follow-up.

The Township of Longueuil then submits, to this Ministry, the Levac Engineering Site Hydrogeological Characterization Study report dated February 1997, which was reviewed by Frank Crossley, with comments forwarded to both the municipality and Levac Engineering for follow-up.

On October 30, 1997, in a letter from Neil Levac to Roger Ravary (Reeve), Neil discusses the outcome of a meeting he had with Frank Crossley pertaining to the follow-up on the Characterization Study. This was the last correspondence this Ministry received from the municipality.

A second meeting and inspection of the waste disposal site was carried out on October 22, 1999, with the Champlain Township reeve (John Wilson) and the Road Superintendent (Ray Villeneuve). The above-mentioned reports and follow-up were briefly discussed. The site is currently approved to accept waste from the former Township of Longueuil and the former Village of L'Orignal. The original certificate of approval dated February 4, 1971, explains that the trench and fill method of operation is to be carried out at this site. I have not located any information noting an amendment to change to the area method of operation. If, the yet to be completed Operation & Development Plan for the site does not show an increase in volume, the amending of the original certificate of approval to incorporate the area method of fill would be subject to a discretionary hearing and would not be subject to Environmental Assessment requirements.

As for the handling and disposal of refrigerants, enclosed is a copy of Ontario Regulation 189/94. As was suggested, there appears to be two ways to go with regard to an approved method of emptying these appliances of refrigerant. One would be to have the owner of the appliance retain the services of an Ozone Depletion Prevention (ODP) card member to come to the location where the appliance is stored and properly remove the refrigerant and then tag the appliance, which would show this appliance as being refrigerant free. Then the tagged appliance could be disposed of at the local approved waste disposal site and stored with other white goods (stoves, washers, etc.). The second method would involve the municipality accepting these refrigerant appliances, storing them in a separate secure area of the site and hiring an ODP card member to come to the waste disposal site to empty these units. Please inform me of your intention regarding the disposal of these products.

Tires, as agreed, will be disposed of through a recycling company.

At the time of the inspection it was evident that the segregation of wastes could be improved.

Should you have any questions regarding this letter, please do not hesitate to call at Ext. 232.

Yours truly,

Gerry Murphy

Sr. Environmental Officer

GM:sp Encls.

S:\GROUPS\WORDPRO\Gerry Murphy (Gam)\Letters\LONGUEUI

### Ministry of the Environment

113 Amelia Street Cornwall ON K6H 3P1 Telephone: (613) 933-7402 Fax: (613) 933-6402

### Ministère de l'Environnement

113 rue Amelia Cornwall ON K6H 3P1 Téléphone: (613)933-7402 Télécopieur: (613)933-6402



M250-5

November 26, 1999

Mr. Robert Lefebvre, Clerk-Treasurer Champlain Township 948 Pleasant Corner Road Vankleek Hill, ON K0B 1R0

Dear Sir:



The Longueuil Township Waste Disposal Site was inspected on October 20, 1999, by Gerry Murphy, Senior Environmental Officer, for this office.

Enclosed is a copy of the inspection report. Some deficiencies were noted during the inspection that do not comply with Ministry Regulations and do not conform with Ministry Guidelines and which require some action. These deficiencies can be found in the section of the report titled "Action Required".

The report contains recommendations to assist you in correcting these deficiencies and I ask that you provide this office with a detailed schedule for abatement for addressing the operational concerns outlined in the inspection report. Please send me this schedule by December 31, 1999.

If you have any questions or comments, please contact Gerry Murphy at this office at extension 232.

Yours truly,

R.J. Robertson Area Supervisor

GM:sp Enclosure

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