LECOMPTE ENGINEERING LTD.

CONSULTING ENGINEERS - INGÉNIEURS CONSEILS

July 7, 2005
Our File: 52035.23

Ministry of the Environment
133 Dalton Avenue
P.O. Box 820
Kingston, Ontario
K7L 4X6

Attention: Mr. Clyde Hammond, Director, Section 34 OWRA

Re: The Nation Municipality
2004 Annual Monitoring Report for the Vars and Limoges Communal Wells

Dear Mr. Hammond,

Enclosed please find a copy of the above-noted report made pursuant to special condition 19 of Permit to Take Water No. 03-P-4045.

The original copy has been submitted to the Clerk of The Nation Municipality. As well, one copy has been forwarded to Mr. Jim Guthmann, at the Transportation, Utilities and Public Works Department Drinking Water Services – Britannia Water Purification Plant, one to the Village of Limoges water treatment plant and one to Golder Associates Ltd.

Yours truly,
LECOMPTE ENGINEERING LTD.

Gaëtan Beauchesne

Gaëtan Beauchesne, P.Eng.

Encl.

Cc: Mary McCuaig, Clerk, The Nation Municipality
Don Munro, MOE Cornwall

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF APPENDICES

1.0 INTRODUCTION

1.1 Background

The Permit to Take Water No. 03-P-4045, which authorizes the Nation Municipality for the taking of water from two wells located on lot 21, concession VII in the Township of Russell, United Counties of Prescott & Russell, was issued on May 5, 2003 by the Director of the Ontario Water Resources Act from the Ministry of the Environment.

The permit has been issued subject to special conditions for which the Permit Holder (the Nation Municipality) was to ensure:

- That a qualified person is retained to develop a groundwater level and water quality monitoring program relative to the Vars/Limoges Communal Well Water Supply
- That the program developed above is carried out in consultation with the City of Ottawa and submitted to the Director of the OWRA
- That the physical and chemical data collected in accordance with the monitoring program report is summarized as an annual report by a qualified person and the annual report shall contain an analysis of the long term trend analysis and the ambient groundwater conditions.

The Nation Municipality retained the services of Lecompte Engineering Ltd. to complete the Annual Monitoring Report for the Vars and Limoges Communal Wells. Sections 3.0 to 5.0 of this report were completed by Golder Associates Ltd. A copy of Permit to Take Water No. 03-P-4045 is included in Appendix 8.

1.2 Study Objectives

The objectives of the study is primarily to ensure that the potential impacts of the water taking on the well water source is monitored and that the data collected by the monitoring program is evaluated on an annual basis. Secondly, the information collected is available to the Ministry of the Environment and the City of Ottawa for review purposes. Finally, the study is to ensure that the Ministry is notified of any potential occurrence of impacts on the water resources and that the Ministry has an opportunity to review the continued water taken as approved under this permit if it may interfere with other established uses.

This report meets all special conditions of the Permit to Take Water No. 03-P-4045.

2.0 METHODOLOGY

2.1 Well Installations

.1 Limoges Well No. 1

Supply Well No. 1 is a 250 mm diameter, 24.5 meter deep drilled well complete with an outer protective steel casing of 500 mm in diameter extending 6.0 meters below the ground surface. The annular spacing between the inner well casing and outer protective casing is filled with cement grout. The well was completed by Envirotechau Limited of Montreal, Quebec, a certified well driller in 1994. The well is enclosed inside a pumphouse with a concrete floor located approximately 250 mm above the surrounding ground level at the site. The well casing is raised above the floor by 200 mm on which the pump unit sits securely on the casing and concrete pedestal. The well is located on a parcel of land, 45 meters wide by 112 meters deep, owned by The Nation Municipality.

The stratigraphy of the soil at both wells was obtained from Golder Associates Ltd. Report No. 931-2894, dated September 1994 and is as follows:

Table 1 - Stratigraphy of Soil at Limoges Well No. 1

Nomenclature	Depth (m)	Thickness (m)
Ground Surface	0.00	
Brown mottled *silty fine sand*	0.40	0.40
Brown pinkish mottled grey *silty clay*	3.30	2.90
Grey *silty clay*	4.10	0.80
Compact grey *medium to compact sand* Trace silt	6.10	2.00
Loose to compact black-greyish *medium to compact sand* trace silt	10.7	4.60
Compact to dense black-greyish *sand and gravel* Trace silt	12.2	1.50
Compact grey *fine sand* Trace silt	13.1	0.90
Compact black-greyish *medium to coarse sand* Trace silt	14.9	1.80
Compact black-grey *gravel* *Medium to coarse sand*, trace silt	16.4	1.50

Table 1 - Stratigraphy of Soil at Limoges Well No. 1 (cont'd)		
Nomenclature	**Depth (m)**	**Thickness (m)**
Dense to compact black-greyish *medium to coarse sand* Fine silty sand seams	24.2	7.80
Glacial till Bottom of well	24.5	0.30
Limestone bedrock		
Screen Casing:	14.0	
First section	18.5	4.50
	21.5	
Second section	24.5	3.00

.2 Limoges Well No. 2

Well No. 2 is a 250 mm diameter, 21.5 meter deep drilled well complete with an outer protective steel casing of 500 mm in diameter extending 9.1 meters below the ground surface. The annular spacing between the inner well casing and outer protective casing is filled with cement grout. The well was completed by Forage Metropolitain of St-Timothy, Quebec, a certified well driller in 1998. The well is enclosed in a precast concrete chamber. A sump pump is located inside the manhole chamber in order to evacuate water accumulation resulting from any snow melt or surface and ground infiltration. The electrical and telemetry controls are housed in an exterior weather proof control panel. The well is located on a parcel of land, 12 meters wide by 18 meters deep, owned by The Nation Municipality. The stratigraphy of the soil at Well No. 2 is as follows:

Table 2 - Stratigraphy of Soil at Limoges Well No. 2		
Nomenclature	**Depth (m)**	**Thickness (m)**
Ground Surface Brown *silty fine sand*	0.00 0.30	0.30
Brown pinkish *silty clay* With sand seams	1.90	1.60
Compact grey *fine silty sand*	4.30	2.40
Compact grey *fine to medium sand* Trace silt	10.4	6.10

Table 2 - Stratigraphy of Soil at Limoges Well No. 2 (cont'd)		
Nomenclature	**Depth (m)**	**Thickness (m)**
Compact to dense black-greyish *medium to compact sand* trace silt	13.1	2.70
Very dense black to grey *gravel* *Medium to coarse sand,* trace silt	14.6	1.50
Very dense black to greyish *medium to coarse sand* Trace silt	16.4	1.80
Loose grey *fine to medium sand* Trace silt	18.4	2.00
Dense black-grey *sand and gravel* Trace silt	21.0	2.60
Very dense grey-black *medium to coarse sand* Some gravel, Bottom of well	21.5	0.50
Screen Casing: First section	16.8 21.45	4.65

The construction of both wells is deemed satisfactory to meet O.Reg. 903 .

There is standby power available at both wells.

.3 Vars Well No. 1

Vars production Well No. 1 is a 250 mm diameter, approximately 23.0 metres deep drilled well complete with an outer protective steel casing of 500 mm in diameter extending approximately 17.8 metres below the ground surface. The annular spacing between the outer protective casing and the well hole is filled with cement grout extending 7.6 metres below the ground surface. The well was completed by a certified well driller in November 1991 (not identified).

The stratigraphy of the soil at the well is shown on Figure 4 from Water and Earth Science Associates Ltd. 2492A-PW and is as follows:

Table 3 - Stratigraphy of Soil at Vars Well No. 1		
Nomenclature	**Depth (m)**	**Thickness (m)**
Ground Surface Brown, Loose *Sandy Loam Silt*	0.00 0.40	0.40
Brown loose *Sand*	4.80	4.40

Table 3 - Stratigraphy of Soil at Vars Well No. 1 (cont'd)		
Nomenclature	**Depth (m)**	**Thickness (m)**
Grey *Clay* Medium	6.0	1.20
Grey *Sand & Gravel* packed	8.80	2.80
Grey *Sand & Gravel*	18.30	9.50
Sand & Gravel	19.40	1.10
Gravel	20.60	1.20
Sand & Gravel (fine to coarse *sand* and fine *gravel*)	23.20	2.60
Screen Casing: One Section	18.80 21.85	3.05

.4 Vars Well No. 2

Vars production Well No. 2 is a 250 mm diameter, 23.8 metres deep drilled well complete with an outer protective steel casing of 500 mm in diameter extending 18.3 metres below the ground surface. The annular spacing between the outer protective casing and the well hole is filled with cement grout extending 7.3 metres below the ground surface. The well was completed by Co-op Envirotecheau Limited, of Montreal, Quebec, a certified well driller in April 1994. The stratigraphy of the soil at Well No. 2 is shown on Figure 3 from the record of test holes prepared by Water and Earth Science Associates Ltd. and is as follows:

Table 4 - Stratigraphy of Soil at Vars Well No. 2		
Nomenclature	**Depth (m)**	**Thickness (m)**
Ground Surface Yellow Medium to fine *grained sand*	0.00 3.00	3.00
Brown *Silt & Gravel Till*	4.60	1.60
Sand & Gravel	6.10	1.50
Gravel & Boulders	9.10	3.00

Table 4 - Stratigraphy of Soil at Vars Well No. 2 (cont'd)		
Nomenclature	**Depth (m)**	**Thickness (m)**
Sand & Boulders	10.00	0.90
Brown *gravel*	12.20	2.20
Grey *gravel*	15.20	3.00
Sand & Gravel – some boulders	18.30	3.10
Course *Gravel*	21.30	3.00
Course *Gravel* with thin *silt & sand* layers	23.80	2.50
Fine *Sand, gravel & silt* (Till)	24.40	0.60
Screen Casing: One Section	19.30 23.80	4.50

2.2 Water Level Measurements

Water level measurements in both Limoges communal wells are measured using a pressure transducer and are recorded by the operating authority of the water system (OCWA). The average depth above the transducer for production Well No. 1 and Well No. 2 from 2000 to 2004 is shown as a coloured graph in **Appendix 1**.

The daily water level measurements of the Limoges communal wells as shown in **Figure 1** and **Figure 2** for 2003 and 2004 are included in **Appendix 2**. The 2004 monthly water level measurements with the pumps off and corresponding geodetic elevation for both Limoges and Vars communal wells are shown as **Table No. 7B** in **Appendix 2**. The 2003 data for Vars were not available in **Table No. 7A**.

The 2004 water level measurements of the Vars communal wells were carried out manually by the City of Ottawa operating staff and are recorded on a spreadsheet format included in **Appendix 3** along with **Figure 3** Vars Production Well No. 2 and **Figure 4** Vars Production Well No. 1.

Observation Wells No. 93-7 and No. 93-11 were not monitored in 2003 or 2004 because the casing section above ground was damaged preventing a measurement. However, Observation Well No. 93-9, a private PVC sampling well located

2.2 Water Level Measurements (cont'd)

approximately 200 metres north of the Limoges communal wells, and several nearby private wells in the same aquifer were monitored for water static levels from January 2002 to June 2004. Refer to **Appendix 7** for the data on record. The measurement was carried out by the staff of Lecompte Engineering Ltd.

In 2003 Golder Associates recommended the installation of an additional observation well between the Vars and the Limoges communal wells. During 2004, Lecompte Engineering Ltd. approached the private landowner and advised Golder Associates this well could not be constructed due to land access restrictions.

2.3 Raw Water Quality

The 2004 raw water characteristics for the Vars production wells and Limoges Well No. 1 raw water characteristics for 2003 and 2004 are detailed in **Tables 8A** and **8B in Appendix 4**.

Both Limoges wells and nearby private wells' raw water microbiological characteristics for the year 1994 and Well No. 1 only for the year 2001 January to March are detailed in **Table 9, Appendix 5**.

The Limoges Well No. 1 and Well No. 2 raw water and treated water microbiological results from April 3, 2001 to December 31, 2003 are noted in **Table 10, Appendix 5**.

The raw water microbiological results from the Limoges communal wells for the year 2004 are compiled in **Table 11, Appendix 5.**

2.4 Average Day Flows

The average day flows for 2003 and 2004 from the Limoges and Vars communal wells are recorded in **Tables 12A** and **12B** in **Appendix 6** respectively. It should be noted the average day flow for Vars is approximately one half of the Limoges average day flow.

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Jacques Lecompte, P.Eng.

REPORT ON

LIMOGES COMMUNAL WELLS
2004 ANNUAL REPORT IN SUPPORT OF
PTTW NO. 03-P-4045
NATION MUNICIPALITY, ONTARIO

Submitted to:

Corporation of the Nation Municipality
958 Road 500 West
Casselman, Ontario
K0A 1M0

DISTRIBUTION:

2 copies - Nation Municipality
2 copies - Golder Associates Ltd.

July 2005

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

3.0 MONITORING PROGRAM RESULTS

Golder Associates Ltd. (Golder) was retained specifically to complete the following sections of the 2003/2004 annual report for the Limoges communal wells. Under the Permit to Take Water issued for the wells (no. 03-P-4045), the annual report is to contain an analysis of the long-term trends and the ambient groundwater conditions at the Limoges well field, as well as addressing any impacts of the water taking on nearby wells, including the Vars well field. The objective of this report is to provide an analysis of groundwater quality and groundwater elevation trends at the Limoges wells, and to provide an assessment of any interference on nearby wells.

Water levels in the Limoges wells as measured in 2003 and 2004 generally follow seasonal trends. Taking of water from the Limoges well field does not appear to be impacting seasonal water levels in the aquifer.

Chemical water quality at the Limoges wells is good. Water treatment is effective in decreasing occasionally detected bacterial levels to below the ODWQS. From the bacterial data in 2004 alone, the Limoges wells do not appear to be GUDI wells (groundwater under the direct influence of surface water).

Due to similarities in the water levels trends between the Vars and Limoges well fields, it is difficult to assess if pumping of the Limoges wells has had any significant effect on water levels in the Vars wells. If any was present, it has not resulted in a negative impact to either well.

Monitoring of water levels in nearby observation wells would be useful for determining if precipitation trends are dictating the water levels in the esker, or if water taking from the Limoges and Vars well fields is driving the water level trends.

Due to property ownership issues, an appropriate site for construction of an observation well midway between the Vars and Limoges well fields could not be located. It is recommended that this task be removed from the monitoring plan for the Limoges wells.

Monthly monitoring data from Vars and Limoges should be promptly forwarded monthly to the hydrogeologist for review as outlined in the monitoring program. This would ensure that any problems with water quality or quantity could be reviewed in a timely manner, and all appropriate parties could be informed.

Lecompte Engineering Ltd. (LEL) provided the following data to Golder:

- Daily water levels in Limoges wells nos. 1 and 2;
- Monthly average water levels in Limoges wells nos. 1 and 2 and Vars wells nos. 1 and 2;
- Average daily flows from Limoges well no. 1 and Vars well no. 1;
- Summary of microbiological analyses from Vars wells nos. 1 and 2, 1994-2004; and,
- General chemistry analyses, Limoges well no. 1 and Vars wells nos. 1 and 2.

The City of Ottawa provided Golder with chemical and groundwater level data from the Vars wells, for 2003 and 2004.

3.1 Limoges Observation Wells

Observations wells 93-7 and 93-11 were not monitored in 2003 or 2004 due to damage to their well casings. Wells 93-9 was monitored, however Golder has not yet received the data as of May 25, 2005. The pilot holes adjacent to the communal wells were equipped with pressure transducers by LEL and were used as proxies to measure the water levels in the adjacent production wells.

3.2 Discussion of Aquifer Water Levels and Water Budget

3.2.1 Long-Term Water Level Trends

Long-term water level trends in Limoges wells nos. 1 and 2 were assessed by comparing transducer water levels from 2000 to 2004. A monthly average water level above each transducer was calculated and plotted as shown in Figure 2.

Since May 2001, water levels in Limoges well no. 1 followed a seasonal pattern, tending to peak in May or June of each year, declining between 2 to 4 metres until the fall, and rising again through the following spring. Water taking from this well tended to be highest from May through September, and when water taking rates were highest, the corresponding water levels declined. In summary, water levels in this well tend to rise with the spring melt and decline with increased water demand through the summer. No water taking volumes are available for Limoges well no. 2 since water is taken primarily from well no. 1, however the water levels are very similar to those in well no. 1, indicating that water levels in well no. 2 are also influenced by the water taking from well no.1.

3.2.2 Surface Water Observations

No surface water observations were made as a program for monitoring surface water was not outlined in the monitoring program dated October 3, 2003. Apart from roadside ditches, there are no significant surface water bodies within 400 metres of the Limoges wells.

3.2.3 Precipitation Surplus

A water balance for the Limoges area was estimated using the method described in Thornthwaite and Mather (1957), with calculations shown in Tables 1 and 2. Precipitation and temperature records were taken from Environment Canada's records for the Ottawa Airport weather station. Using this method, it was estimated that 978.2 mm of precipitation fell in 2003, of which 607.8 mm was lost to evapotranspiration, and 370.4 mm was available for infiltration. In 2004, an estimated 907.1 mm of precipitation fell, of which 599.7 mm was lost to evapotranspiration and 307.4 mm was available for infiltration.

Figure 1 shows the approximate limits of the Sarsfield esker complex. Its area is approximately 1,800,000 m^2. Assuming that 25 percent of the precipitation that fell on the esker infiltrated to the esker, the approximate volume of water that infiltrated was 166,680 m^3 in 2003 and 138,330 m^3 in 2004. It is expected that contributions from adjoining aquitards and bedrock aquifers make up additional unquantified quantities of water available to the aquifer.

3.2.4 Total Taking from Aquifer

Water taking from the Limoges and Vars wells is tabulated in Appendix 6, Table 12 of the LEL report. Using these daily flow rates, total water taking for 2004 was estimated to be a total of 298,044 m^3 for Limoges Well #1 and Vars Well #1. This approximate pumped volume is more than the volume of recharge that was estimated to occur across the esker in 2004; this is because the esker is assumed to receive water from sources other than precipitation, including from the surrounding unconsolidated formations and/or from bedrock. The estimated water budget of the aquifer is considered to be conservative. Given that no operational issues have been identified with regard to quantity, the groundwater contribution from the other sources is considered to be the result of sustainable aquifer development with current usage.

Although pumping rates in 2004 exceeded the precipitation that was conservatively estimated to recharge the esker, water levels increased over 2004, and were generally higher than in 2003. Taking of water from the Limoges well field does not appear to be impacting seasonal water levels in the aquifer.

3.3 Water Quality

3.3.1 Water Quality Comparison with the Ontario Drinking Water Quality Standards (ODWQS)

A water quality sample was taken from Limoges well #1 on May 1, 2003. No health-related parameters exceeded their respective ODWQS limits. Aesthetic objectives were exceeded by the following parameters: colour, iron and manganese. The high levels of iron and manganese naturally present in this water may be responsible for the high colour result. The organic nitrogen concentration in this sample was 0.17 mg/L, only slightly above the operational guideline of 0.15 mg/L.

3.3.2 Long-Term Microbiological Trends

Summaries of microbiological testing at the Limoges wells are provided in Appendix 5, Tables 9, 10 and 11 of the LEL report, as well as in the Golder report entitled "Hydrogeological evaluation for communal water supply, Village of Limoges, Township of Russell and Cambridge, Ontario".

In 1994, water samples were taken from monitoring wells and domestic wells nearby the location of the Limoges communal wells. The results from this testing indicated that at one domestic well fecal coliforms and total coliforms were present and thus above the ODWQS, and at MW2 heterotrophic plate counts (HPC) were above the ODWQS of 500 ct/mL. The remainder of the wells had heterotrophic plate counts above the detection limit, but below the ODWQS.

A pumping test was conducted in 1994, following water quality testing at the above wells. Eight water samples were taken at various intervals during the pumping test; of those eight, five samples had HPC above the detection limit but below the ODWQS.

From January to March 2001, 12 water samples were taken from Limoges well #1 (Appendix 5, Table 9). Of these, one sample showed an HPC exceeding the ODWQS, while six of the remaining samples had HPC above the detection limit, but below the ODWQS.

Raw water and treated water from Limoges wells nos. 1 and 2 were taken between April 2001 and December 2003, and the results are summarized in Appendix 5, Table 10 of the LEL report. Fecal and total coliforms were found occasionally found in the raw water samples, in exceedance of the ODWQS, however the treated water samples had zero fecal or total coliforms. It is noted that the raw water samples at this time were taken following the aeration process; currently samples are taken prior to aeration. HPC exceeding the ODWQS of 500 ct/mL was found occasionally in the raw water samples, and in four of the 476 treated water samples taken. Table 10 states that "when a positive result (HPC counts over 500/ml) was detected, corrective measures were undertaken by operating authority and a second test was done in order to validate

the first test result." HPC of between 1 and 499 ct/mL was often found in the raw and treated water samples.

For the year 2004, samples of the raw water were taken from Limoges wells nos. 1 and 2 for microbiological testing and the results are summarized in Appendix 5, Table 11 of the Limoges report. Total coliforms were detected in three of the 52 samples taken from well #2, and in none of the eleven samples from well #1. No E. coli was detected in either well. Two samples from well #1 and seven samples from well #2 detected background colony counts, but all were below the ODWQS of 200 colony forming units per 100 millilitres.

In summary, HPC and coliforms above ODWQS have historically been detected in raw water at the Limoges wells, but the water treatment process is successful at bringing HPC to within the standard. Sampling prior to aeration has resulted in a decrease in bacteria counts, if any, suggesting that past results were in part biased by aeration.

3.4 Effects of Limoges Well Field on Nearby Wells including Vars

The 2004 water levels in Vars and Limoges wells nos. 1 and 2 can be found in Figure 3. Trends show that water levels in the two well fields follow a similar pattern of increasing water levels through the spring, decreasing water levels in the summer, and increasing levels through the fall and winter. Note that the Vars data is based on measurements taken on one or two days per month, and are not as complete as the Limoges daily water levels.

Average day flows are also shown on Figure 3. At Limoges well #1, the highest daily volumes are taken from May through July 2004. From May to July, daily volumes taken from Vars well #1 are increasing, and these are also three of the months with the highest water taking. Water levels in the Limoges and Vars wells follow a decreasing trend through this time, and water levels in all four wells seem to be decreasing at approximately the same rate from May to July. Limoges well #1 pumps approximately twice the volume pumped by Vars well #1, however the pattern of water extracted from both well fields is similar, making it difficult to determine from this data alone whether or not the Limoges well field is having a significant impact on water levels at the Vars well field.

More frequent water level monitoring at Vars would provide a better idea of any interference between the two well fields, and data from observation wells near the Limoges wells would allow for an analysis of the extent of the drawdown cone created by the Limoges well field.

4.0 CONCLUSIONS

Water levels in the Limoges wells as measured in 2003 and 2004 generally follow trends from past years. Although pumping rates in 2004 exceeded the precipitation that was conservatively estimated to recharge the esker, water levels increased over 2004, and were generally higher than in 2003. Taking of water from the Limoges well field does not appear to be impacting seasonal water levels in the aquifer.

Chemical water quality at the Limoges wells is good, however high levels of manganese and iron are present. Bacteria are sometimes present in raw water samples from the Limoges wells, however water treatment is effective in decreasing bacterial levels to below the ODWQS. From the bacterial data alone, the Limoges wells do not appear to be GUDI wells (groundwater under the direct influence of surface water).

Due to similarities in the water levels trends between the Vars and Limoges well fields, it is difficult to assess if pumping of the Limoges wells has had any significant effect on water levels in the Vars wells. Both well fields tend to take more water in the late spring and summer when water levels decrease.

5.0 RECOMMENDATIONS

Water levels in the one remaining available observation wells listed in the monitoring plan (well 93-9) should be monitored with a pressure transducer and forwarded monthly to the qualified hydrogeologist. Monitoring of water levels in nearby observation wells would be very useful for determining if precipitation trends are dictating the water levels in the esker, or if water taking from the Limoges and Vars well fields is driving the water level trends.

Due to property ownership issues, an appropriate site for construction of an observation well midway between the Vars and Limoges well fields could not be located. It is recommended that this task be removed from the monitoring plan for the Limoges wells.

Monthly monitoring data from Vars and Limoges should be promptly forwarded to the qualified hydrogeologist for review as outlined in the monitoring program. This would ensure that any problems with water quality or quantity could be reviewed in a timely manner, and all appropriate parties could be informed.

It is also recommended that the annual reporting deadline for 2005 be changed to April 15, 2006, and be set at April 15 for all subsequent years. The monitoring program should be amended with the above modifications subject to concurrence by the Ontario Ministry of the Environment.

Golder Associates has prepared Sections 3 through 5 of this report, Tables 1 and 2 and Figures 1, 2 and 3.

GOLDER ASSOCIATES LTD.

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Environmental Scientist

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Principal/Senior Hydrogeologist

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July 4, 2005
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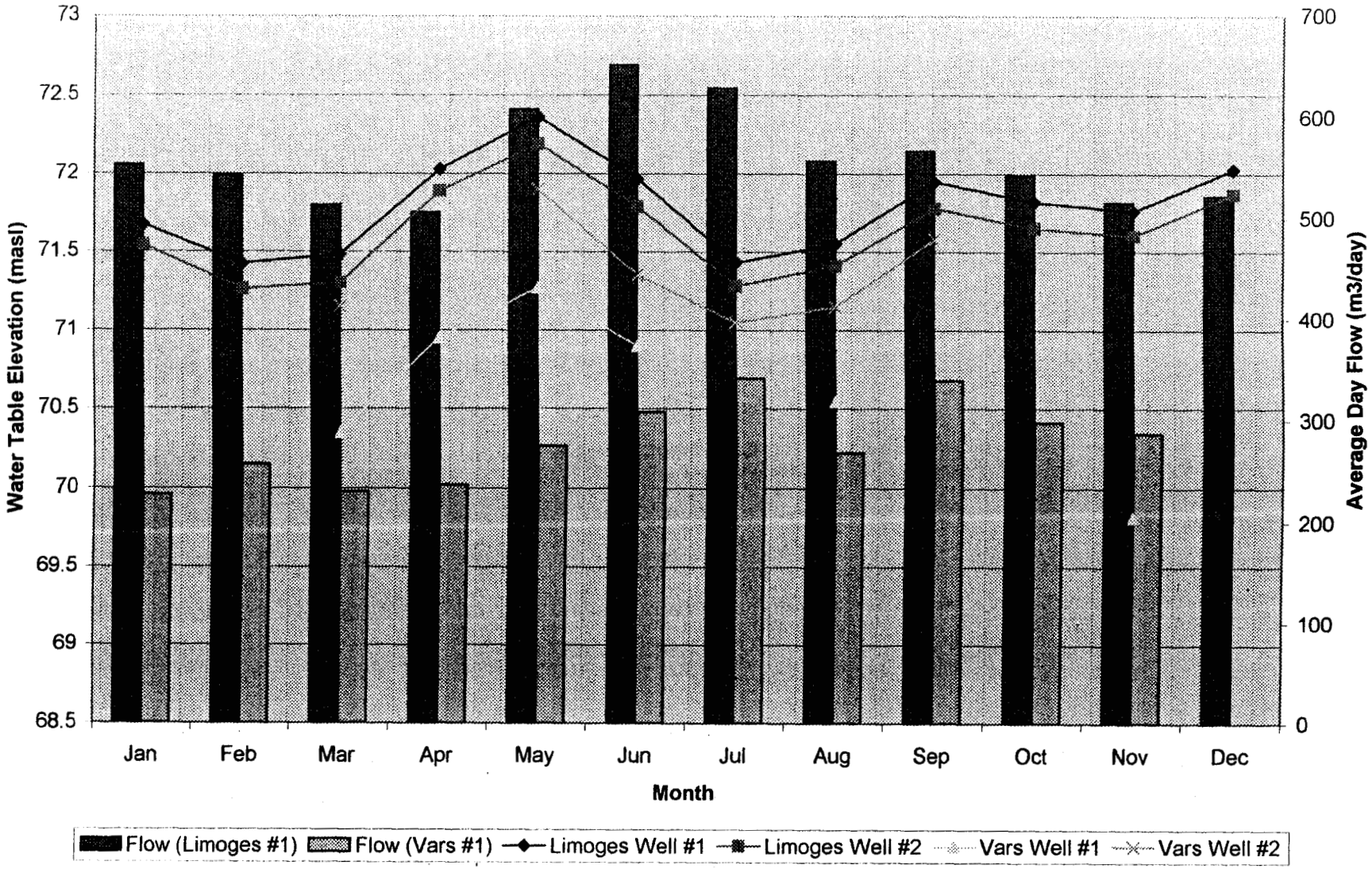
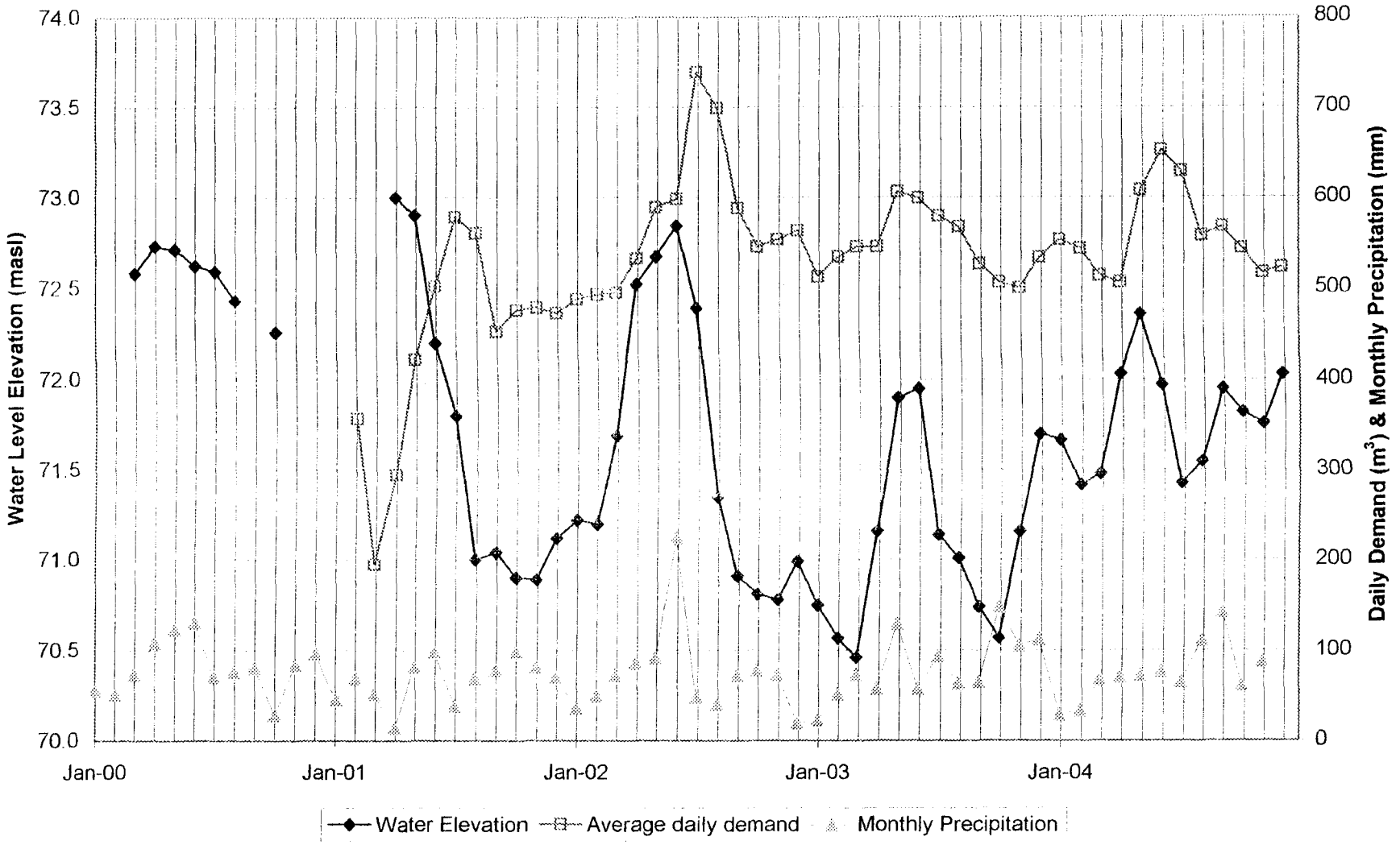
2004 Water Levels and Daily Flows, Vars and Limoges Wells nos. 1 and 2



Limoges well no. 1
Monthly averaged water elevations, daily demand and precipitation



Golder Associates

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Table 1:
2003 Thornthwaite Method Water Balance - Limoges

All Data From Ottawa Airport Weather Station :
Latitude: 45° 19' N

Month	Rainfall (cm)	Temp(C)	I value (Heat Index)	c (Daylight Factor)	E	PET (cm)	Net Water Balance (cm)	PET (mm)	Net Water Balance (mm)
J	2.2	-13.5	0.00	0.8	0	0.00	2.21	0.0	22.1
F	5.2	-12.1	0.00	0.81	0	0.00	5.19	0.0	51.9
M	7.3	-3.8	0.00	1.02	0	0.00	7.30	0.0	73.0
A	5.7	3.8	0.66	1.13	1.63	1.85	3.83	18.5	38.3
M	12.9	13.0	4.23	1.28	6.27	8.03	4.91	80.3	49.1
J	5.7	18.5	7.21	1.29	9.22	11.90	-6.20	119.0	-62.0
J	9.4	20.8	8.61	1.31	10.48	13.73	-4.37	137.3	-43.7
A	6.4	21.0	8.73	1.21	10.59	12.82	-6.46	128.2	-64.6
S	6.5	16.8	6.23	1.04	8.30	8.63	-2.11	86.3	-21.1
O	14.8	7.1	1.70	0.94	3.24	3.04	11.76	30.4	117.6
N	10.5	2.4	0.33	0.79	0.99	0.78	9.74	7.8	97.4
D	11.2	-5.3	0.00	0.75	0	0.00	11.24	0.0	112.4
		Sum I=	37.70						
		a =	1.09						
SUM	**97.82**							**607.8**	**370.4**

Notes:

Heat Index

I= (Temp/5)^1.51

Exponent

a= 67.5*(10^-8)*(I^3) - 77.1*(10^-6)*(I^2) + 0.0179*I + 0.492

Tm

T_m= Mean monthly temperature

E

E= 1.62(10*Tm/sumI)^a

PET

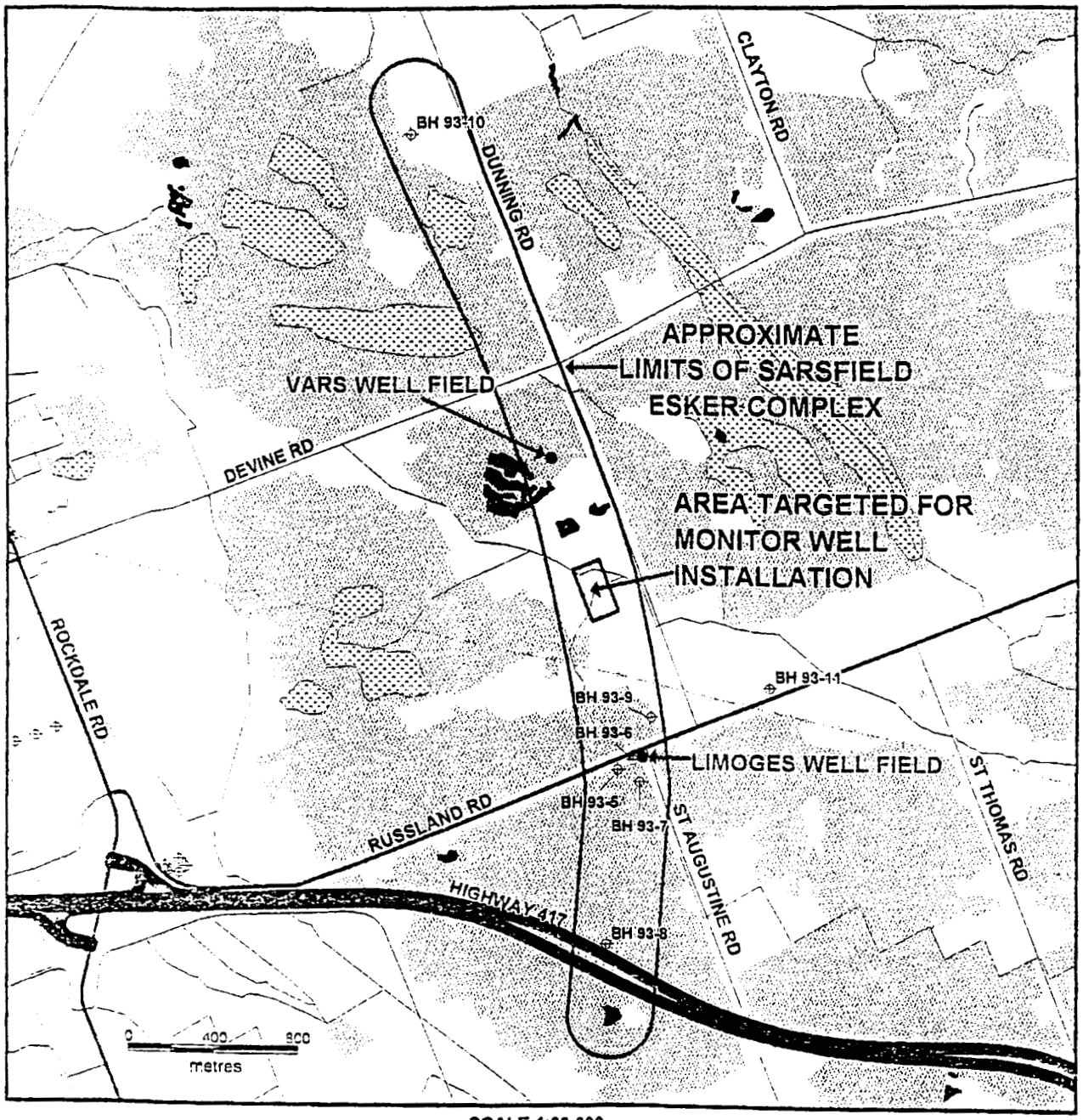
PET= E * Daylight Factor

c

c= based on latitude of 45 degrees (Table III.2)

SITE PLAN

FIGURE 1G



SCALE 1:30,000

LEGEND

- BOREHOLE LOCATION
- RAILWAY
- EXPRESSWAY
- MAJOR ROAD
- LOCAL ROAD
- WATER COURSE
- OPEN WATER
- WETLAND
- VEGETATION

-SPECIAL NOTE-
THIS DRAWING TO BE READ IN CONJUNCTION
WITH ACCOMPANING REPORT

-REFERENCE-
DIGITAL BASEMAP DATA SUPPLIED BY DMTI SPATIAL INC., 2002

Golder Associates
Ottawa, Ontario

Date: SEP/03
Project: 03-1120-638

Drawn: MRL
Chkd: MMG

APPENDIX 1

Limoges Production Well No. 1 – Average Water Depth Above Transducer from Years 2000 to 2004

Limoges Production Well No. 2 – Average Water Depth Above Transducer from Years 2001 to 2004

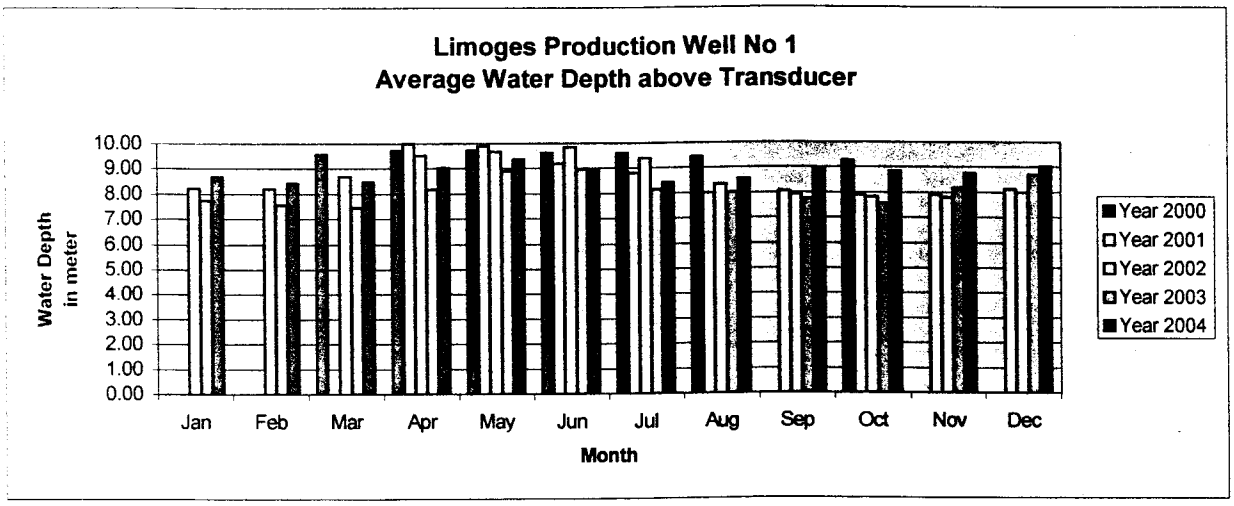
The Nation Municipality
Limoges Production Well Monitoring Program
LEL File No. 53066.21

Limoges Production Well No. 1
Average Water Depth above Transducer with corresponding Average Day Demand

Data	Year 2000		Year 2001		Year 2002		Year 2003		Year 2004	
	Depth	Avg. Day	Depth	Avg. Day	Depth	Avg. Day	Depth	Avg. Day	Depth	Avg. Day
Month	m	cu. m	m	cu. m	m	cu. m	m	cu. m	m	cu. m
Jan					8.22	488	7.75	512	8.67	553
Feb				357	8.20	493	7.57	534	8.42	543
Mar	9.58	#N/A		195	8.69	495	7.46	545	8.48	513
Apr	9.73	#N/A	10.00	295	9.52	532	8.16	545	9.03	506
May	9.71	#N/A	9.90	422	9.67	589	8.90	606	9.36	608
Jun	9.62	#N/A	9.20	502	9.84	598	8.95	599	8.97	652
Jul	9.59	#N/A	8.80	578	9.39	739	8.14	579	8.43	629
Aug	9.43	#N/A	8.00	560	8.35	699	8.01	567	8.55	557
Sep			8.04	453	7.91	588	7.74	526	8.95	567
Oct	9.26	#N/A	7.90	476	7.81	545	7.57	506	8.82	543
Nov			7.89	479	7.78	553	8.16	500	8.76	516
Dec			8.12	473	7.99	563	8.70	533	9.03	522
Average	9.56	#N/A	8.65	435	8.61	574	8.09	546	8.79	559

Note: 1- Water depth of year 1998 = Top of casing - Static w/l - Transducer
(Golder Report) Mar. 8, 1994 = 75.71 - 3.01 - 63.00 piezometer located west of WPS no.1
= 9.70 m

2- Data for the year 2000 are from Lecompte.
3- Data for the year 2001, 2002, 2003 and 2004 are from OCWA operation.
4- The Limoges water treatment plant was commissioned on April 3, 2001.



Prepared by:
LECOMPTE ENGINEERING LTD.

Gaetan Beauchesne, P. Eng.
May 12, 2005

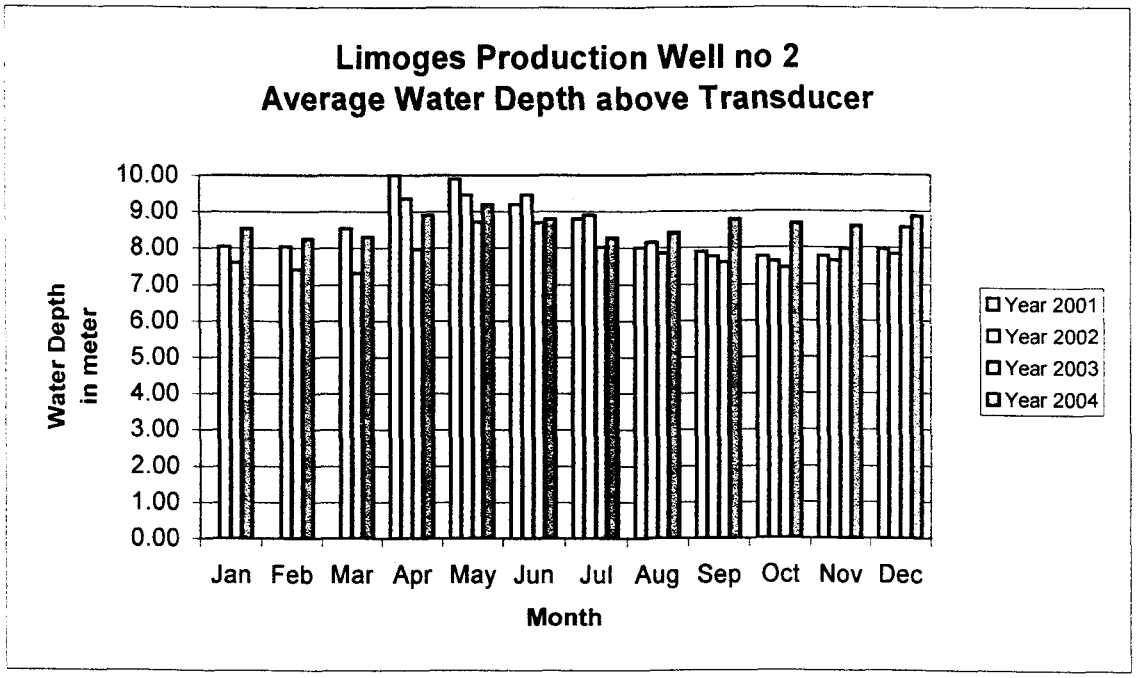
The Nation Municipality
Limoges Production Well Monitoring Program
LEL File No. 53066.21

Limoges Production Well no. 2
Average Water Depth above Transducer with corresponding average day demand

Data	Year 2001 Depth m	Year 2002 Depth m	Year 2003 Depth m	Year 2004 Depth m
Jan		8.05	7.60	8.54
Feb		8.04	7.42	8.26
Mar		8.54	7.30	8.30
Apr	10.00	9.36	7.98	8.89
May	9.90	9.45	8.70	9.19
Jun	9.20	9.45	8.69	8.79
Jul	8.80	8.90	8.03	8.28
Aug	8.00	8.15	7.85	8.41
Sep	7.88	7.76	7.60	8.78
Oct	7.75	7.63	7.44	8.65
Nov	7.76	7.64	7.98	8.60
Dec	7.96	7.84	8.57	8.87
Average	8.58	8.40	7.93	8.63

Note :

1- Data for the year 2001, 2002 and 2003 are from OCWA operation
2- The Limoges water treatment plant was commissioned on April 3rd, 2001.



Prepared by:
LECOMPTE ENGINEERING LTD.

Gaetan Beauchesne, P. Eng.
May 17, 2005

APPENDIX 2

Limoges Well No. 1 and Well No. 2 – Water Level Measurements for Years 2003 & 2004 with Pumps Off – Tables 5A & 5B and Tables 6A & 6B

Limoges and Vars Communal Wells Comparison of Monthly Water Level Measurements for Years 2003 & 2004 – Tables 7A & 7B

Figure 1 – Limoges Production Well No. 1

Figure 2 – Limoges Production Well No. 2

THE NATION MUNICIPALITY
ANNUAL MONITORING REPORT
VARS AND LIMOGES COMMUNAL WELLS
TABLE NO. 5A - APPENDIX 2
Limoges Well No. 1
Year 2003 Water Level Measurement in Meters

Day	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sept	Oct	Nov	Dec
1				7.78	8.64			8.05		7.67		8.50
2	7.97					8.94			7.90	7.61	8.02	8.73
3	7.93	7.61					8.37		7.90	7.66	8.01	8.89
4		7.40	7.48						7.78		8.07	8.88
5		7.55	7.36		8.76			7.98	7.82	7.53	7.94	8.83
6		7.69	7.44					7.97		7.60	8.07	8.82
7	7.81	7.63	7.56	8.06	8.81			7.98		7.60	8.07	
8	7.53							8.10		7.63		8.69
9	7.58			7.96	8.87				7.92	7.63	8.20	8.77
10		7.50		7.93					7.83		8.17	
11		7.52	7.45	7.94				8.10	7.84			8.53
12			7.36			8.95			7.86		7.92	8.68
13		7.54				8.89		8.14			7.72	
14	7.83	7.59	7.58	8.11				8.17		7.49		8.88
15				8.01	9.02			8.07		7.20		
16	7.80				9.10		8.14		7.72	7.47		8.74
17	7.77	7.73	7.32			9.04	8.23		7.82	7.61	8.24	8.63
18		7.56	7.34			8.93	8.22		7.85	7.60	8.28	
19		7.52	7.55						7.72	7.62	8.08	8.62
20	7.53		7.44			8.96		8.02			8.15	8.64
21		7.47			8.94		8.07			7.36	8.25	8.70
22	7.68			8.24	8.97		8.08	7.82		7.50	8.38	8.60
23				8.35			8.10		7.55	7.46		8.62
24	7.78			8.37			8.13		7.62	7.60	8.29	8.50
25		7.63	7.37	8.53					7.52	7.63	8.36	8.47
26									7.68	7.65	8.40	8.50
27		7.60	7.54		9.07			7.81	7.57	7.62	8.49	8.81
28		7.52	7.61				8.06			7.64	8.35	8.85
29	7.70			8.61	8.83		8.06	7.88	7.56	7.65		8.73
30	7.79						8.07		7.66	7.47		8.62
31	7.80									7.81		8.88
# Read.	**14**	**16**	**14**	**12**	**10**	**6**	**11**	**13**	**19**	**25**	**21**	**26**
Minimum	**7.53**	**7.40**	**7.32**	**7.78**	**8.64**	**8.89**	**8.06**	**7.81**	**7.52**	**7.20**	**7.72**	**8.47**
Maximum	**7.97**	**7.73**	**7.61**	**8.61**	**9.10**	**9.04**	**8.37**	**8.17**	**7.92**	**7.81**	**8.49**	**8.89**
Average	**7.75**	**7.57**	**7.46**	**8.16**	**8.90**	**8.95**	**8.14**	**8.01**	**7.74**	**7.57**	**8.16**	**8.70**

YEARLY	
# Read.	187
Minimum	7.20
Maximum	9.10
Average	8.09

NOTE: Pumps Off

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Gaëtan Beauchesne, P.Eng.
May-05
File No. 52035.23.wellmeasure03

THE NATION MUNICIPALITY
ANNUAL MONITORING REPORT
VARS AND LIMOGES COMMUNAL WELLS
TABLE NO. 5B - APPENDIX 2
Limoges Well No. 1
Year 2004 Water Level Measurement in Meters

Day	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sept	Oct	Nov	Dec
1	8.83	8.61	8.30	8.74	9.39		8.59		8.49	8.96	8.65	8.81
2	8.89	8.55	8.14	8.76	9.35	9.12	8.63		8.56		8.70	9.00
3	8.87	8.52	8.27	8.68	9.49	9.23		8.31	8.51		8.73	8.97
4		8.44	8.25	8.63		9.36		8.43			8.71	
5	8.82	8.65	8.25	8.80		9.25		8.50			8.44	
6	8.79	8.50		8.79	9.50	9.17	8.46	8.53		8.96		9.17
7	8.81	8.32	8.30	8.83	9.61	9.17	8.42			9.00		9.13
8	8.55	8.45	8.26	8.83		9.12			8.44	8.97	8.73	8.93
9	8.94	8.47	8.35	8.82			8.44	8.58	8.33		8.86	9.07
10		8.36	8.47	8.82		9.13		8.53			8.88	9.03
11	8.80	8.39	8.45	8.99	9.52			8.47				
12	8.71	8.48	8.30	8.97	9.56		8.39	8.60			8.84	
13	8.61	8.34	8.51	8.95	9.36		8.38	8.60	9.28	8.69		8.86
14	8.82	8.29	8.51		9.40		8.28					9.07
15	8.74		8.45	9.09	9.38		8.23		9.26	8.67	8.85	9.16
16	8.66	8.54	8.62	9.20	9.13		8.29	8.51	9.14		8.79	9.06
17		8.56	8.54	9.14				8.66	9.20		8.80	
18	8.50	8.45	8.52	9.17		8.81		8.63		8.78		
19	8.52	8.30	8.59	9.03			8.48	8.57			8.76	
20	8.61	8.34	8.57	9.24	9.29		8.48	8.65	9.26	8.82		9.01
21	8.69		8.36	9.24	9.35	8.67	8.51		9.20	8.82		
22	8.48	8.29	8.53	9.26	9.39		8.43		9.18		8.75	9.03
23	8.56	8.40	8.49	9.45	9.14	8.66	8.43	8.59	9.22		8.70	8.97
24	8.60	8.36	8.57	9.42				8.69	9.15		8.69	9.06
25	8.66	8.36	8.55	9.46		8.76		8.59		8.74	8.51	
26	8.76		8.59		9.20		8.50	8.61		8.77	8.73	
27	8.64		8.68		9.17			8.52				
28	8.44	8.34	8.81			8.70	8.41		8.93			
29	8.45	8.27	8.78	9.45	9.27	8.65	8.44		9.01	8.69	8.98	9.09
30	8.39		8.74			8.69	8.39	8.53	8.97		9.03	
31	8.49		8.71					8.47				9.06
# Read.	**28**	**25**	**30**	**25**	**18**	**15**	**19**	**21**	**17**	**12**	**20**	**18**
Minimum	**8.39**	**8.27**	**8.14**	**8.63**	**9.13**	**8.65**	**8.23**	**8.31**	**8.33**	**8.67**	**8.44**	**8.81**
Maximum	**8.94**	**8.65**	**8.81**	**9.46**	**9.61**	**9.36**	**8.63**	**8.69**	**9.28**	**9.00**	**9.03**	**9.17**
Average	**8.67**	**8.42**	**8.48**	**9.03**	**9.36**	**8.97**	**8.43**	**8.55**	**8.95**	**8.82**	**8.76**	**9.03**

YEARLY	
# Read.	248
Minimum	8.14
Maximum	9.61
Average	8.79

NOTE: Pumps Off

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Gaëtan Beauchesne, P.Eng.
Revised May 17, 2005
File No. 52035.23.wellmeasure

THE NATION MUNICIPALITY
ANNUAL MONITORING REPORT
VARS AND LIMOGES COMMUNAL WELLS
TABLE NO.6A - APPENDIX 2
Limoges Well No. 2
Year 2003 Water Level Measurement in Meters

Day	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sept	Oct	Nov	Dec
1				7.60	8.48	8.94		7.92	7.73	7.52	7.75	8.34
2	7.83			7.65	8.47	8.82	8.31		7.76	7.46	7.86	8.57
3	7.79	7.47	7.32	7.65		8.85	8.24		7.75	7.51	7.85	8.73
4		7.25	7.34	7.68		8.85	8.16		7.63		7.92	8.71
5		7.41	7.23		8.62			7.84	7.67	7.38	7.79	8.68
6		7.55	7.30		8.58	8.75		7.83		7.46	7.91	8.66
7	7.67	7.49	7.42	7.90	8.65		8.15	7.86		7.46	7.91	8.57
8	7.39			7.78	8.68		8.06	7.95	7.72	7.48	8.00	8.55
9	7.43			7.78	8.72	8.58	8.10		7.78	7.49	8.05	8.62
10	7.49	7.36	7.23	7.77		8.71	8.12		7.70		8.03	8.52
11		7.40	7.30	7.78		8.66	8.01	7.96	7.70		7.71	8.38
12		7.30	7.21		8.51	8.80		7.99	7.71		7.78	8.52
13	7.53	7.40	7.34		8.57	8.74		8.01			7.56	8.71
14	7.69	7.44	7.43	7.95	8.68		8.12	8.02		7.35	7.87	8.73
15	7.61			7.84	8.86		8.07	7.94	7.53	7.06		8.49
16				7.92	8.95	8.86	8.00		7.57	7.32		8.59
17	7.67	7.59	7.17	8.14		8.90	8.09		7.67	7.46	8.08	8.49
18	7.63	7.42	7.21			8.78	8.07	7.85	7.71	7.50	8.12	8.29
19		7.38	7.40			8.75		7.86	7.58	7.44	7.92	8.47
20	7.39	7.45	7.29		8.72	8.81		7.88		7.45	8.00	8.46
21	7.59	7.33	7.10		8.79		7.93	7.80		7.22	8.09	8.70
22	7.55			8.08	8.83		7.93	7.69	7.56	7.35	8.22	8.50
23	7.58			8.18	8.71	8.54	7.96		7.40	7.33		8.47
24	7.64	7.40	7.22	8.22		8.51	7.99		7.48	7.45	8.14	8.54
25		7.49	7.22	8.36		8.49	7.97	7.66	7.38	7.54	8.20	8.50
26		7.47	7.21		8.74	8.42	7.92	7.69	7.53	7.51	8.24	8.61
27	7.68	7.45	7.38		8.89	8.35	7.83	7.66	7.42	7.47	8.34	8.66
28	7.57	7.38	7.45	8.32	8.76		7.92	7.79		7.49	8.20	8.70
29	7.56			8.44	8.69		7.92	7.73	7.41	7.50		8.58
30	7.66			8.53	8.78	8.37	7.94		7.51	7.57		8.47
31	7.65		7.47				7.95			7.67		8.71
# Read.	**21**	**20**	**21**	**20**	**21**	**21**	**24**	**20**	**23**	**26**	**25**	**31**
Minimum	**7.39**	**7.25**	**7.10**	**7.60**	**8.47**	**8.35**	**7.83**	**7.66**	**7.38**	**7.06**	**7.56**	**8.29**
Maximum	**7.83**	**7.59**	**7.47**	**8.53**	**8.95**	**8.94**	**8.31**	**8.02**	**7.78**	**7.67**	**8.34**	**8.73**
Average	**7.60**	**7.42**	**7.30**	**7.98**	**8.70**	**8.69**	**8.03**	**7.85**	**7.60**	**7.44**	**7.98**	**8.57**

YEARLY	
# Read.	273
Minimum	7.06
Maximum	8.95
Average	7.93

NOTE: Pumps Off

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Gaëtan Beauchesne, P.Eng.
May-05
File No. 52035.23.well2measure03

THE NATION MUNICIPALITY
ANNUAL MONITORING REPORT
VARS AND LIMOGES COMMUNAL WELLS
TABLE NO. 6B - APPENDIX 2
Limoges Well No. 2
Year 2004 Water Level Measurement in Meters

Day	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sept	Oct	Nov	Dec
1	8.75	8.41	8.15	8.58	9.24	8.76	8.47		8.34	8.82	8.51	8.64
2	8.73	8.40	7.99	8.50	9.20	8.97	8.49		8.41		8.55	8.83
3	8.72	8.38	8.12	8.50	9.33	9.08		8.16	8.36		8.57	8.80
4	8.70	8.29	8.10	8.50	9.25	9.20		8.28		8.64	8.55	
5	8.67	8.50	8.10	8.64	9.19	9.17	8.24	8.35		8.82	8.29	
6	8.64	8.35	7.89	8.64	9.34	9.07	8.32	8.39		8.81		9.01
7	8.66	8.17	8.14	8.68	9.44	9.03	8.30		8.15	8.84		8.96
8	8.65	8.31	8.10	8.67	9.42	8.99	8.19		8.29	8.81	8.58	8.76
9	8.79	8.32	8.19	8.64	9.32	8.87	8.29	8.43	8.19		8.71	8.91
10	8.60	8.21	8.31	8.64	9.22	8.98		8.37			8.72	8.87
11	8.70	8.25	8.29	8.75	9.37	8.90		8.32				
12	8.56	8.33	8.13	8.82	9.40		8 26	8.44		8.65	8.69	
13	8.47	8.20	8.13	8.79	9.23		8.23	8.45	9.11	8.54		8.71
14	8.68	8.15	8.34	8.69	9.27	8.66	8.14		9.10	8.47		8.86
15	8.59	8.30	8.29	8.93	9.18		8.10		9.10	8.51	8.70	9.01
16	8.51	8.39	8.46	9.04	9.18	8.77	8.15	8.58	8.99		8.64	8.90
17	8.58	8.41	8.38	8.98	9.26			8.52	9.03		8.64	
18	8.41	8.30	8.36	9.03	9.02	8.67		8.48		8.62	8.53	
19	8.37	8.15	8.43	8.87	9.14		8.33	8.42		8.64	8.61	
20	8.47	8.19	8.41	9.09	9.15		8.33	8.50	9.11	8.67		8.86
21	8.54	8.10	8.20	9.08	9.20	8.53	8.36		9.04	8.67		8.85
22	8.33	8.11	8.37	9.09	9.24	8.43	8.29		9.05	8.63	8.59	8.87
23	8.42	8.25	8.34	9.29	9.09	8.52	8.28	8.43	9.06		8.55	8.82
24	8.45	8.21	8.42	9.25	8.93	8.54		8.54	9.00		8.53	8.90
25	8.52	8.20	8.39	9.25	8.94	8.62		8.45		8.59	8.35	
26	8.62	8.28	8.43	9.02	9.05		8.35	8.46		8.62	8.57	
27	8.50	8.21	8.51	9.16	9.02		8.30	8.37	8.76	8.57		
28	8.29	8.19	8.64	9.14	9.02	8.55	8.26		8.78	8.62		
29	8.30	8.12	8.61	9.29	9.12	8.51	8.28		8.86	8.54	8.81	8.92
30	8.25		8.57	9.24	9.10	8.55	8.24	8.38	8.82		8.86	8.97
31	8.20		8.55		9.00			8.33				8.90
# Read.	**31**	**29**	**31**	**30**	**31**	**22**	**22**	**21**	**20**	**20**	**21**	**20**
Minimum	**8.20**	**8.10**	**7.89**	**8.50**	**8.93**	**8.43**	**8.10**	**8.16**	**8.15**	**8.47**	**8.29**	**8.64**
Maximum	**8.79**	**8.50**	**8.64**	**9.29**	**9.44**	**9.20**	**8.49**	**8.58**	**9.11**	**8.84**	**8.86**	**9.01**
Average	**8.54**	**8.26**	**8.30**	**8.89**	**9.19**	**8.79**	**8.28**	**8.41**	**8.78**	**8.65**	**8.60**	**8.87**

YEARLY	
# Read.	298
Minimum	7.89
Maximum	9.44
Average	8.63

NOTE: Pumps Off

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May-05
File No. 52035.23.well2measure

THE NATION MUNICIPALITY
ANNUAL MONITORING REPORT
LIMOGES AND VARS COMMUNAL WELLS
MONTHLY WATER LEVEL MEASUREMENTS AND CORRESPONDING GEODETIC ELEVATION
FOR THE YEAR 2003
TABLE NO. 7A - APPENDIX 2

	Limoges				Vars			
	Well No. 1		Well No. 2		Well No. 1		Well No. 2	
Top of Casing Elevations (m)	76.18		74.29		76.15		76.85	
Pump Intake Screen Elevation (m)	62.00		62.00		N/A		N/A	
Pressure Transducer Setting Elevation (m)	63.00		63.00		N/A		N/A	
Month	**Water Column above the pressure transducer/Geodetic Elev. (m)**				**Distance from the top of the casing to the water level/Geodetic Elev. (m)**			
Jan	7.75	70.75	7.60	70.60	N/A		N/A	
Feb	7.57	70.57	7.42	70.42				
Mar	7.46	70.46	7.30	70.30				
Apr	8.16	71.16	7.98	70.98				
May	8.90	71.90	8.70	71.70				
Jun	8.95	71.95	8.69	71.69				
Jul	8.14	71.14	8.03	71.03				
Aug	8.01	71.01	7.85	70.85				
Sep	7.74	70.74	7.60	70.60				
Oct	7.57	70.57	7.44	70.44				
Nov	8.16	71.16	7.98	70.98				
Dec	8.70	71.70	8.57	71.57				
No. of Readings	**187**	**187**	**273**	**273**				
Minimum	**7.20**	**70.20**	**7.06**	**70.06**				
Maximum	**9.10**	**72.10**	**8.95**	**71.95**				
Average	**8.09**	**71.09**	**7.93**	**70.93**	**N/A**	**N/A**	**N/A**	**N/A**

Notes: 1. Data for the Limoges Production wells are from OCWA operation and are included in Appendix 2
2. Data for the Vars Production wells are from the City of Ottawa, Transportation, Utilities and Public Works Department Drinking Water Services were not available
3. N/A = Not Applicable or Not Available
4. Pumps Off

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File No. 52035.23.wtrlevmeas.03

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ANNUAL MONITORING REPORT
LIMOGES AND VARS COMMUNAL WELLS
MONTHLY WATER LEVEL MEASUREMENTS AND CORRESPONDING GEODETIC ELEVATION
FOR THE YEAR 2004
TABLE NO. 7B - APPENDIX 2

	Limoges				Vars			
	Well No. 1		Well No. 2		Well No. 1		Well No. 2	
Top of Casing Elevations (m)	76.18		74.29		76.15		76.85	
Pump Intake Screen Elevation (m)	62.00		62.00		N/A		N/A	
Pressure Transducer Setting Elevation (m)	63.00		63.00		N/A		N/A	
Month	**Water Column above the pressure transducer/Geodetic Elev. (m)**				**Distance from the top of the casing to the water level/Geodetic Elev. (m)**			
Jan	8.67	71.67	8.54	71.54	NR	-	NR	-
Feb	8.42	71.42	8.26	71.26	NR	-	NR	-
Mar	8.48	71.48	8.30	71.30	5.80	70.35	5.70	71.15
Apr	9.03	72.03	8.89	71.89	5.20	70.95	NR	-
May	9.36	72.36	9.19	72.19	4.88	71.27	4.95	71.90
Jun	8.97	71.97	8.79	71.79	5.25	70.90	5.50	71.35
Jul	8.43	71.43	8.28	71.28	NR	-	5.80	71.05
Aug	8.55	71.55	8.41	71.41	5.60	70.55	5.70	71.15
Sep	8.95	71.95	8.78	71.78	NR	-	5.27	71.58
Oct	8.82	71.82	8.65	71.65	NR	-	NR	-
Nov	8.76	71.76	8.60	71.60	6.33	69.82	NR	-
Dec	9.03	72.03	8.87	71.87	NR	-	NR	-
No. of Readings	**248**	**248**	**298**	**298**	**12**	**12**	**10**	**10**
Minimum	**8.14**	**71.14**	**7.89**	**70.89**	**7.80**	**68.35**	**5.90**	**70.95**
Maximum	**9.61**	**72.61**	**9.44**	**72.44**	**4.80**	**71.35**	**4.90**	**71.95**
Average	**8.79**	**71.79**	**8.63**	**71.63**	**5.50**	**70.65**	**5.40**	**71.45**

Notes: 1. Data for the Limoges Production wells are from OCWA operation and are included in Appendix 2
2. Data for the Vars Production wells are from the City of Ottawa, Transportation, Utilities and Public Works Department Drinking Water Services and are included in Appendix 3
3. NR = No Reading
4. N/A = Not Applicable or Not Available
5. Pumps Off

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May-05
File No. 52035.23.wtrlevmeas

Limoges Well No. 1

Figure No. 1

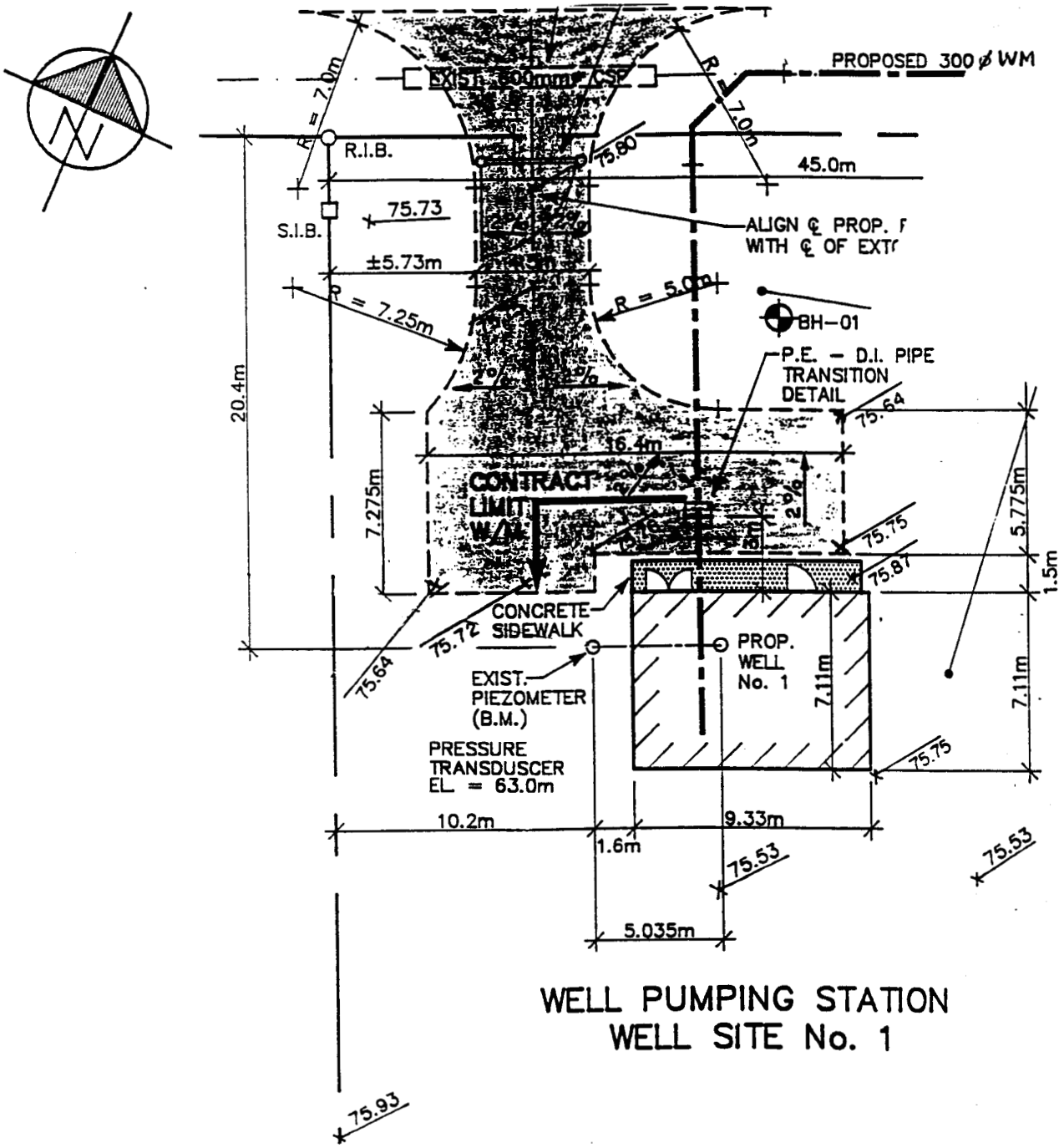
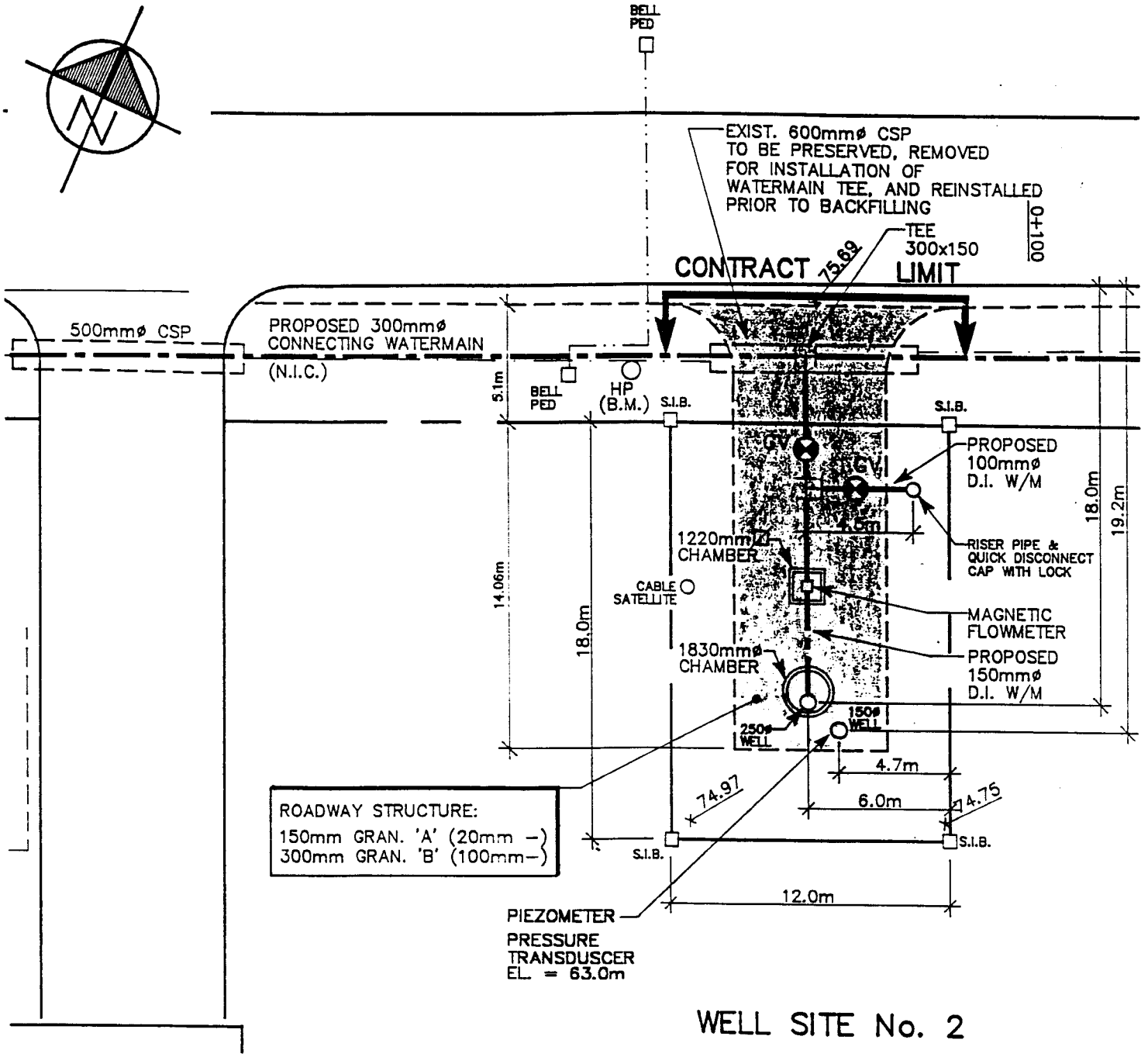


Figure No. 2

Limoges Well No. 2



APPENDIX 3

Vars Production Wells Water Analysis Reports for the Year 2004
Figure 3 Vars Production Well No. 2
Figure 4 Vars Production Well No. 1

FIGURE: 3

RECORD OF TEST HOLE

Vars Well No. 2

COMPLETION DAT
APRIL 27, 1994

PROJECT: VARS PRODUCTION WELL

PROJECT NO.: 3088-4

DRILLING METHOD: CABLE TOOL

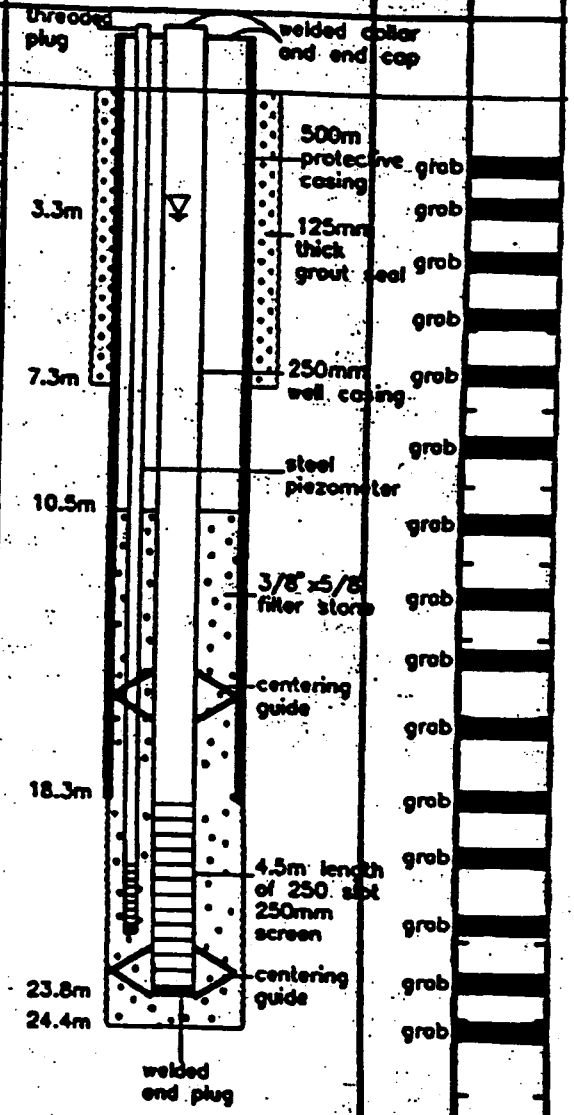
SUPERVISOR: R. MILLER

DRILLING CONTRACTOR: CO-OP ENVIROTECHEAU

DEPTH METRES	ELEVATION METRES	STRATIGRAPHY
0	76.85 masl	
		0 – 3.0m YELLOW MEDIUM TO FINE-GRAINED SAND
		3.0 – 4.6m BROWN SILT/GRAVEL TILL
		4.6 – 6.1m SAND AND GRAVEL
		6.1 – 9.1m GRAVEL AND BOULDERS
		9.1 – 10.0m SAND AND BOULDERS
		10.0 – 12.2m BROWN GRAVEL
		12.2 – 15.2m GREY GRAVEL
		15.2 – 18.3m SAND AND GRAVEL - SOME BOULDERS
		18.3 – 21.3m COARSE GRAVEL
		21.3 – 23.8m COARSE GRAVEL w THIN SILT/SAND LAYERS
		23.8 – 24.4m FINE SAND, GRAVEL AND SILT (TILL)
		24.4m END OF HOLE

LOG

INSTRUMENTATION



TYPE: grab

INTERVAL

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CARP, ONTARIO K0A 1L0

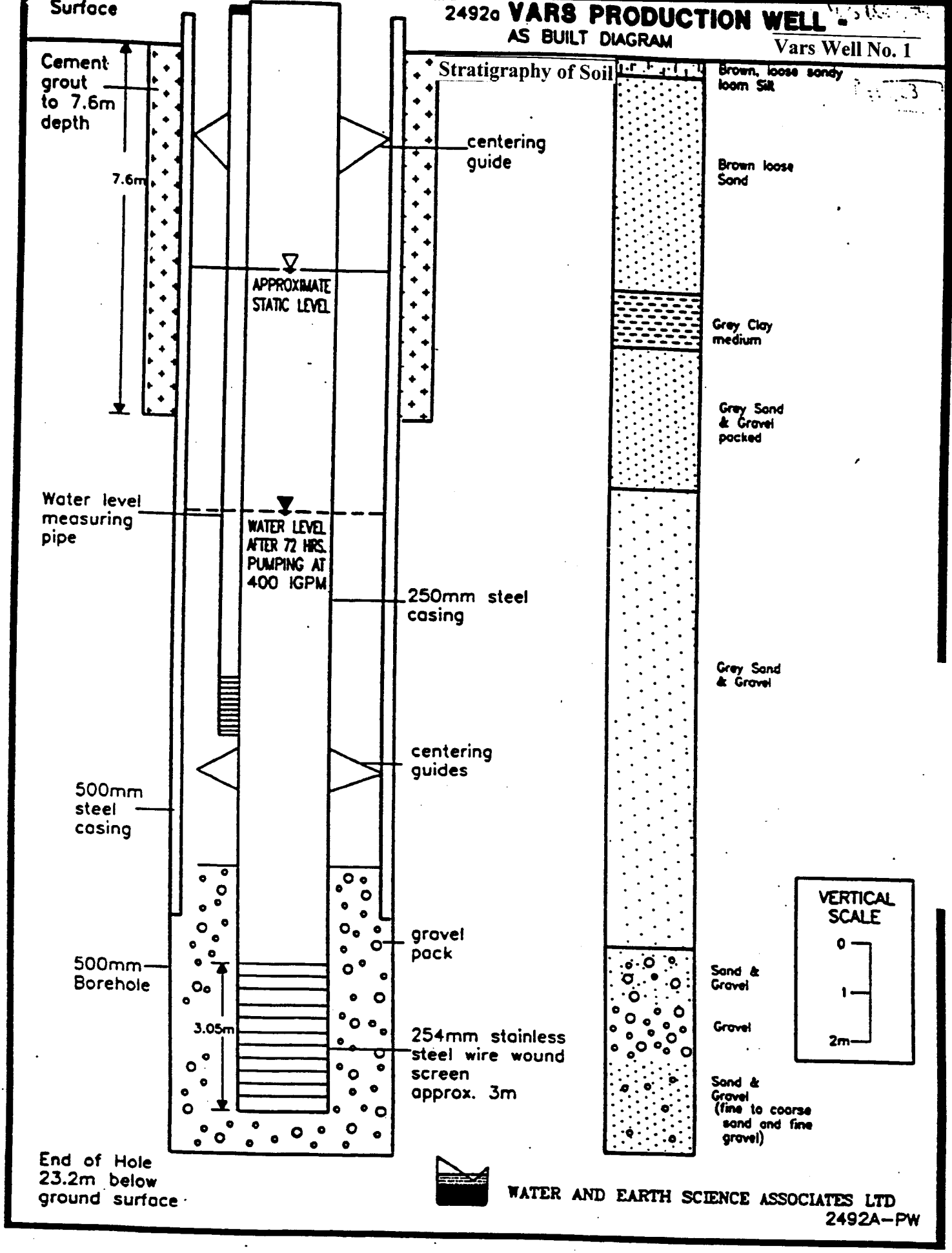
Surface
2492a VARS PRODUCTION WELL -
AS BUILT DIAGRAM
Vars Well No. 1
Stratigraphy of Soil
Cement grout to 7.6m depth
7.6m
centering guide
APPROXIMATE STATIC LEVEL
Water level measuring pipe
WATER LEVEL AFTER 72 HRS. PUMPING AT 400 IGPM
250mm steel casing
centering guides
500mm steel casing
500mm Borehole
gravel pack
3.05m
254mm stainless steel wire wound screen approx. 3m
End of Hole 23.2m below ground surface
Brown, loose sandy loam Silt
Brown loose Sand
Grey Clay medium
Grey Sand & Gravel packed
Grey Sand & Gravel
Sand & Gravel
Gravel
Sand & Gravel (fine to coarse sand and fine gravel)
VERTICAL SCALE
0
1
2m
WATER AND EARTH SCIENCE ASSOCIATES LTD
2492A-PW

Figure 4

APPENDIX 4

Tables No. 8A and 8B

Vars Production Wells No. 1 and No. 2 – Raw Water Characteristics for 2003 and 2004
Limoges Well No. 1 – Raw Water Characteristics for 2003

THE NATION MUNICIPALITY
ANNUAL MONITORING REPORT
VARS AND LIMOGES COMMUNAL WELLS
2003 RAW WATER CHARACTERISTICS

APPENDIX 4
TABLE NO. 8A

Parameter	Units	Vars Well No. 1	Vars Well No. 2	Limoges Well No. 1
pH		7.81	7.6	8.08
Temperature	(°C)	9.1	9.3	7 to 10
Colour	TCU	10.1	-	13.0
Turbidity – unfiltered	NTU	0.26	0.22	2.2
Total Ammonia Nitrogen NH3	mg/L	0.13	0.10	
Chloride – Cl^-	mg/L	37.2	28.3	15.4
Nitrate – NO_3 (as N)	mg/L	0	0	
Nitrite – NO_2 (as N)	mg/L	0	0	
Sulphate – SO_4	mg/L	3.2	10.7	
Total Kjeldahl Nitrogen – TKN	mg/L	0.35	0.07	0.38
Fluoride – F^-	mg/L	0.26	0.13	
Iron – Fe	mg/L	1.18	0.09	0.37
Alkalinity (as $CaCO_3$)	mg/L	193	196	209
Hardness (as $CaCO_3$)	mg/L	169	195	242
Conductivity	µOhms/m	482	452	505
Sulfide	mg/L			ND
Total Dissolved Solids – T.D.S.	mg/L	264	263	298
Dissolved Organic Carbon – DOC	mg/L	0	0	3.5
Total Coliforms	CTS/100mL	0	0	<1
E.coli		0	0	0
HPC	CFU/mL	0	0	<1
Fecal coliforms				
UV254				
Aluminium – Al	µg/L			ND
Arsenic – As	µg/L			ND
Barium – Ba	µg/L			0.00061
Calcium – Ca	mg/L			
Cadmium – Cd	µg/L			ND
Chromium – Cr	µg/L			ND
Copper – Cu	µg/L			ND
Mercury – Hg	µg/L			ND
Magnesium – Mg	mg/L			
Manganese – Mn	mg/L			0.10
Sodium – Na	mg/L			17.9

THE NATION MUNICIPALITY
ANNUAL MONITORING REPORT
VARS AND LIMOGES COMMUNAL WELLS
2003 RAW WATER CHARACTERISTICS

APPENDIX 4
TABLE NO. 8A
(cont'd)

Parameter	Units	Vars Well No. 1	Vars Well No. 2	Limoges Well No. 1
Lead – Pb	µg/L			ND
Selenium – Se	µg/L			ND
Zinc – Zn	µg/L			ND
Total Organic Carbon - TOC	mg/L			5.3
Ethylbenzene	mg/L			ND
Methane	L/m^3			ND
Nitrogen – organic	mg/L			0.17
Odour	Inoffensive			
Phenols	mg/L			ND
Taste	Inoffensive			
Toluene	mg/L			ND
Xylenes	mg/L			ND
Sulphide - H_2S	mg/L			ND

Shortforms:

TCU – True Colour Unit
NTU – Nephelometric Unit
mg/L – milligrams per litre = parts per million (p.p.m.)
ND – Not Detected
µg/L – Micrograms per litre

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Gaëtan Beauchesne, P.Eng.
May 5, 2005
52035.23.parameters

THE NATION MUNICIPALITY
ANNUAL MONITORING REPORT
VARS AND LIMOGES COMMUNAL WELLS
2004 RAW WATER CHARACTERISTICS

APPENDIX 4
TABLE NO. 8B

Parameter	Units	Vars Well No. 1	Vars Well No. 2	Limoges Well No. 1
pH		7.82	7.54	8.08
Temperature	(°C)	8.0	8.6	7 to 10
Colour	TCU	13.8	12.9	13.0
Turbidity – unfiltered	NTU	0.23	0.17	2.2
Total Ammonia Nitrogen NH3	mg/L	0.10	0.07	
Chloride – Cl^-	mg/L	14.8	27.0	15.4
Nitrate – NO_3 (as N)	mg/L	0	0	
Nitrite – NO_2 (as N)	mg/L	0	0	
Sulphate – SO_4	mg/L	0.8	15.2	
Total Kjeldahl Nitrogen – TKN	mg/L	0.33	0.34	0.38
Fluoride – F^-	mg/L	0.26	0.13	
Iron – Fe	mg/L			0.37
Alkalinity (as $CaCO_3$)	mg/L	169	184	209
Hardness (as $CaCO_3$)	mg/L	132	190	242
Conductivity	µOhms/m	404	452	505
Sulfide	mg/L			ND
Total Dissolved Solids – T.D.S.	mg/L	240	263	298
Dissolved Organic Carbon – DOC	mg/L			3.5
Total Coliforms	CTS/100mL	0	0	<1
E.coli		0	0	0
HPC	CFU/mL	1	0	<1
Fecal coliforms				
UV254				
Aluminium – Al	µg/L			ND
Arsenic – As	µg/L			ND
Barium – Ba	µg/L			0.00061
Calcium – Ca	mg/L			
Cadmium – Cd	µg/L			ND
Chromium – Cr	µg/L			ND
Copper – Cu	µg/L			ND
Mercury – Hg	µg/L			ND
Magnesium – Mg	mg/L			
Manganese – Mn	mg/L			0.10
Sodium – Na	mg/L			17.9

THE NATION MUNICIPALITY
ANNUAL MONITORING REPORT
VARS AND LIMOGES COMMUNAL WELLS
2004 RAW WATER CHARACTERISTICS

APPENDIX 4
TABLE NO. 8B
(cont'd)

Parameter	Units	Vars Well No. 1	Vars Well No. 2	Limoges Well No. 1
Lead – Pb	µg/L			ND
Selenium – Se	µg/L			ND
Zinc – Zn	µg/L			ND
Total Organic Carbon - TOC	mg/L			5.3
Ethylbenzene	mg/L			ND
Methane	L/m^3			ND
Nitrogen – organic	mg/L			0.17
Odour	Inoffensive			
Phenols	mg/L			ND
Taste	Inoffensive			
Toluene	mg/L			ND
Xylenes	mg/L			ND
Sulphide - H_2S	mg/L			ND

Shortforms:

TCU – True Colour Unit
NTU – Nephelometric Unit
mg/L – milligrams per litre = parts per million (p.p.m.)
ND – Not Detected
µg/L – Micrograms per litre

Compiled by:
LECOMPTE ENGINEERING LTD.

Gaëtan Beauchesne, P.Eng.
May 5, 2005
52035.23.parameters

APPENDIX 5

Limoges Wells and Nearby Private Wells' Raw Water Characteristics for Year 1994 and Well No. 1 Year 2001 Jan. to March – Table 9
Limoges Well No. 1 and Well No. 2 Raw Water and Treated Water Microbiological Results from April 3, 2001 to December 31, 2003 - Table 10
Raw Water Microbiological Results for the Year 2004 Limoges Communal Wells No. 1 and No. 2 – Table No. 11

APPENDIX 5
TABLE 9
THE NATION MUNICIPALITY
VILLAGE OF LIMOGES
Microbiological Characteristics of Raw Water

Source of Sample	Number of Samples	Number of Samples having			
		Fecal Coli > = 1	Total Coli. > = 1	HPC (SPC) 1-499	HPC (SPC) > = 500
Year 1994 before and at the end of Pumping Tests					
Roy Well	1	0	0	1	0
Lommen Well	1	1	1	1	0
Monitoring Well MW1	1	0	0	1	0
Monitoring Well MW2	1	0	0	0	1
Marshall Well	1	0	0	1	0
Peterson Well	1	0	0	0	0
Jonah Well	1	0	0	1	0
10" Pump Well	8	0	0	5	0
Year 2001 from January to March					
Communal Well No. 1	12	0	0	6	1

Notes: (1) Records of microbiological testings for the year 1994 are from report entitled "Hydrogeological Evaluation for Communal Water Supply – Village of Limoges" prepared by Golder & Associates in September 1994.

(2) Records of microbiological testings at communal well no. 1 are from Seprotech Laboratories.

(3) HPC : Heterotrophic Plate Count & SPC : Standard Plate Count.

Prepared by:
LECOMPTE ENGINEERING LTD.

Gaëtan Beauchesne, P.Eng.
September 30, 2004
52035.23.MNTRGRPT.APP5-TBL9

THE NATION MUNICIPALITY
VILLAGE OF LIMOGES

APPENDIX 5

Raw Water & Treated Water
Microbiological Characteristics
From April 3, 2001 to December 31, 2003
Number of Samples with Positive Results

TABLE NO. 10

Source of Sample	Number of Samples	Safe Results	Poor or Unsafe Results	Number of Samples having			
				Fecal Coli > = 1	Total Coli. > = 1	HPC (SPC) 1-499	HPC (SPC) > = 500
Raw Water (April 2001 to December 2001							
Well 1	39	N/A	N/A	0	8	23	13
Well 2	*	N/A	N/A	*	*	*	*
Treated Water (April 2001 to December 2001)							
WTP	40	40	0	0	0	9	0
Booster	40	40	0	0	0	6	0
F.B.	40	40	0	0	0	8	1
Raw Water (January 2002 to December 2002)							
Well 1	63	N/A	N/A	1	22	44	9
Well 2	*	N/A	N/A	*	*	*	*
Treated Water (January 2002 to December 2002)							
WTP	65	65	0	0	0	18	2
Booster	65	65	0	0	0	14	0
F.P.	65	65	0	0	0	8	0
Raw Water (January 2003 to December 2003)							
Well 1	53	N/A	N/A	4	9	42	9
Well 2	45	N/A	N/A	0	1	27	11
Treated Water (January 2003 to December 2003)							
WTP	54	54	0	0	0	29	0
Booster	54	54	0	0	0	24	0
F.P.	53	53	0	0	0	24	1

Summary:
No unsafe conditions are met at treated water:

- Raw water samples were collected by the operating authority after the aeration process and not at the wells.
- When a positive result (HPC counts over 500/ml) was detected, corrective measures were undertaken by operating authority and a second test was done in order to validate the first test result.
- Raw water wells have standard plate counts between 1 and 499 most of the time.
- Raw water wells no. 1 and 2 experienced a few fecal and total coliform episodes. However, the raw water samples were collected after the aeration process.
- Raw Water at well no. 2 was only sampled and tested for microbiological parameters in the year of 2003.

Prepared by:
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Gaëtan Beauchesne, P.Eng.
May 6, 2005
52035.23.mntrgrpt.tbl5

THE NATION MUNICIPALITY
ANNUAL MONITORING REPORT
VARS AND LIMOGES COMMUNAL WELLS

APPENDIX 5

RAW WATER MICROBIOLOGICAL
RESULTS FOR THE YEAR 2004
LIMOGES COMMUNAL WELLS

TABLE NO. 11

	Limoges Well No. 1			Limoges Well No. 2		
Date	Total Coliform Counts/100mL	Background Colonies Counts/100mL	E.Coli Counts/100mL	Total Coliform Counts/100/mL	Background Colonies Counts/100mL	E.Coli Counts/100mL
06 Jan				Ø	7	Ø
13 Jan				1	Ø	Ø
20 Jan				Ø	Ø	Ø
27 Jan				Ø	1	Ø
02 Feb				Ø	Ø	Ø
10 Feb				Ø	Ø	Ø
17 Feb				Ø	Ø	Ø
23 Feb				Ø	Ø	Ø
02 Mar				Ø	Ø	Ø
09 Mar				Ø	Ø	Ø
16 Mar				Ø	Ø	Ø
22 Mar				3	Ø	Ø
30 Mar				Ø	Ø	Ø
06 Apr				Ø	Ø	Ø
14 Apr				Ø	Ø	Ø
20 Apr				Ø	Ø	Ø
26 Apr				2	Ø	Ø
04 May				Ø	Ø	Ø
11 May				Ø	Ø	Ø
18 May				Ø	Ø	Ø
26 May				Ø	3	Ø
01 June				Ø	Ø	Ø
08 Jun				Ø	Ø	Ø
15 Jun				Ø	1	Ø
22 Jun				Ø	Ø	Ø
29 Jun	Ø	Ø	Ø	Ø	Ø	Ø

THE NATION MUNICIPALITY
ANNUAL MONITORING REPORT
VARS AND LIMOGES COMMUNAL WELLS

APPENDIX 5

RAW WATER MICROBIOLOGICAL
RESULTS FOR THE YEAR 2004
LIMOGES COMMUNAL WELLS

TABLE NO. 11
(cont'd)

	Limoges Well No. 1			Limoges Well No. 2		
Date	Total Coliform Counts/100mL	Background Colonies Counts/100mL	E.Coli Counts/100mL	Total Coliform Counts/100/mL	Background Colonies Counts/100mL	E.Coli Counts/100mL
6 Jul	Ø	Ø	Ø	Ø	Ø	Ø
13 Jul				Ø	Ø	Ø
20 Jul				Ø	Ø	Ø
27 Jul	Ø	Ø	Ø	Ø	Ø	Ø
03 Aug				Ø	Ø	Ø
10 Aug	Ø	Ø	Ø	Ø	Ø	Ø
17 Aug				Ø	5	Ø
23 Aug				Ø	Ø	Ø
30 Aug				Ø	Ø	Ø
08 Sep	Ø	Ø	Ø	Ø	Ø	Ø
13 Sep				Ø	Ø	Ø
21 Sep	Ø	2	Ø	Ø	Ø	Ø
28 Sep				Ø	Ø	Ø
04 Oct				Ø	Ø	Ø
12 Oct	Ø	Ø	Ø	Ø	Ø	Ø
19 Oct				Ø	Ø	Ø
26 Oct				Ø	3	Ø
02 Nov	Ø	Ø	Ø	Ø	Ø	Ø
08 Nov	Ø	Ø	Ø	Ø	Ø	Ø
15 Nov				Ø	Ø	Ø
23 Nov				Ø	Ø	Ø
30 Nov				Ø	Ø	Ø
07 Dec	Ø	Ø	Ø	Ø	Ø	Ø
14 Dec				Ø	Ø	Ø
20 Dec	Ø	Ø	Ø	Ø	Ø	Ø
29 Dec				Ø	Ø	Ø
# Read.	11	11	11	52	52	52
Min.	0	0	0	0	0	0
Max.	0	2	0	3	7	0
Average	0	<1	0	<1	<1	0

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Gaëtan Beauchesne. P.Eng.

April 2005
File No. 52035.23.microres

APPENDIX 6

Limoges and Vars Communal Wells Average Day Flows for the Years 2003 and 2004 Tables 12A and 12B

THE NATION MUNICIPALITY
ANNUAL MONITORING REPORT
LIMOGES AND VARS COMMUNAL WELLS
AVERAGE DAY FLOW FOR THE YEAR 2003

APPENDIX 6
TABLE NO. 12A

MONTH	LIMOGES WELL NO. 1 (m^3/day)	VARS WELL NO. 2 (m^3/day)	COMBINED (m^3/day)
Jan	512	184	696
Feb	534	278	812
Mar	545	236	781
Apr	545	257	802
May	606	236	842
Jun	599	326	925
Jul	579	320	899
Aug	567	256	823
Sep	526	248	774
Oct	506	185	691
Nov	500	208	708
Dec	533	270	803
Minimum	**500**	**184**	**691**
Maximum	**606**	**326**	**925**
Average	**546**	**250**	**796**

Shortforms: N/A = Not Available

Compiled by:
LECOMPTE ENGINEERING LTD.

Gaëtan Beauchesne, P.Eng.
May-05
52035.23.avgdayflow2004

THE NATION MUNICIPALITY
ANNUAL MONITORING REPORT
LIMOGES AND VARS COMMUNAL WELLS
AVERAGE DAY FLOW FOR THE YEAR 2004

APPENDIX 6
TABLE NO. 12B

MONTH	LIMOGES WELL NO. 1 (m^3/day)	VARS WELL NO. 1 (m^3/day)	COMBINED (m^3/day)
Jan	553	227	780
Feb	543	257	800
Mar	513	230	743
Apr	506	237	743
May	608	275	883
Jun	652	308	960
Jul	629	341	970
Aug	557	268	825
Sep	567	339	906
Oct	543	298	841
Nov	516	287	803
Dec	522	N/A	N/A
Minimum	**506**	**227**	**743**
Maximum	**652**	**341**	**970**
Average	**559**	**279**	**841**

Shortforms: N/A = Not Available

Compiled by:
LECOMPTE ENGINEERING LTD.

Gaëtan Beauchesne, P.Eng.
May-05
52035.23.avgdayflow2004

APPENDIX 7

Results of Well Monitoring Program for the On-Site Measurement of Private Wells Water Static Levels from January 2002 to June 2004

APPENDIX 7

The Nation Municipality
Village of Limoges
Well Monitoring Program

Date: Friday April 24, 2004

Water Static Levels as measured on site:

Well location	Description	Top of well casing (steel or pvc) (geodetic)	Static level (top of well to water elevation)	Remarks
1) 150mm Pilot well pressure transducer	Public			Monitored by OCWA 93-6
2) Well behind Peterson property	Public	76.57	N/A	Pvc casing 93-7 - old no. 3 (casing damaged)
3) Leclerc well 2334 Russland	Private		3.75m	Drilled well Not yet geodetic
4) Lortie well 2378 Russland rd	Private	77.17	a) b)	c) Dug well west of house d) Dug well south of house
5) Viau well 2452 Russland rd	Private	77.28	b)3.85m	a) Drilled well west of driveway in front (north) of house (used for heating) b) Drilled well @ n-e corner of house (used for drinking) Previously named Jonah well
6) Lommen well 2551 Russland rd	Private	76.78	a)n/a b)0.9m	a) Dug well b) Pvc sampling well
7) Peterson well 2472 Russland rd	Private		4.98m	New drilled well Not geodetic
8) Lacroix well 2690 Russland rd	Private		3.75m	Not geodetic

Prepared by: Mark Lecompte
May 4, 2004
5341.107\WELL SAMPLING SHEET -14

LECOMPTE ENGINEERING LTD.
CONSULTING ENGINEERS
INGÉNIEURS CONSEILS

The Nation Municipality
Village of Limoges
Well Monitoring Program

Date: Friday April 24, 2004

Water Static Levels as measured on site:

Well location	Description	Top of well casing (steel or pvc) (geodetic)	Static level (top of well to water elevation)	Remarks
1) 150mm Pilot well pressure transducer	Public			Monitored by OCWA 93-6
2) Well behind Peterson property	Public	76.57	N/A	Pvc casing 93-7 - old no. 3 (casing damaged)
3) Leclerc well 2334 Russland	Private		3.75m	Drilled well Not yet geodetic
4) Lortie well 2378 Russland rd	Private	77.17	a) b)	c) Dug well west of house d) Dug well south of house
5) Viau well 2452 Russland rd	Private	77.28	b)3.85m	a) Drilled well west of driveway in front (north) of house (used for heating) b) Drilled well @ n-e corner of house (used for drinking) Previously named Jonah well
6) Lommen well 2551 Russland rd	Private	76.78	a)n/a b)0.9m	a) Dug well b) Pvc sampling well
7) Peterson well 2472 Russland rd	Private		4.98m	New drilled well Not geodetic
8) Lacroix well 2690 Russland rd	Private		3.75m	Not geodetic

Prepared by: Mark Lecomple
May 4, 2004
5341.107\WELL SAMPLING SHEET -14

LECOMPTE ENGINEERING LTD.
CONSULTING ENGINEERS
INGÉNIEURS CONSEILS

The Nation Municipality
Village of Limoges
Well Monitoring Program

Date: August 5, 2003

Water Levels as measured on site:

Well location	Description	Top of well casing (steel or pvc) (geodetic)	Static level (top of well to water elevation)	Remarks
1) 150mm Pilot well pressure transducer	Public			Monitored by OCWA 93-6
2) Well behind Peterson property	Public	76.57	N/A	Pvc casing 93-7 - old no. 3 (casing damaged)
3) Leclerc well 2334 Russland	Private		5.0m	Drilled well Not yet geodetic
4) Lortie well 2378 Russland rd	Private	77.17	a) b)	c) Dug well west of house d) Dug well south of house
5) Viau well 2452 Russland rd	Private	77.28	b)5.52m	a) Drilled well west of driveway in front (north) of house (used for heating) b) Drilled well @ n-e corner of house (used for drinking) Previously named Jonah well
6) Lommen well 2551 Russland rd	Private	76.78	a) b)5.12m	a) Dug well b) Pvc sampling well
7) Peterson well 2472 Russland rd	Private		6.45m	New drilled well Not geodetic
8) Lacroix well 2690 Russland rd	Private		4.55m	Not geodetic

Prepared by: Mark Lecompte
August 6, 2003
5341.107\WELL SAMPLING SHEET -12

LECOMPTE ENGINEERING LTD.
CONSULTING ENGINEERS
INGÉNIEURS CONSEILS

The Nation Municipality
Village of Limoges
Well Monitoring Program

Date: May 22, 2003

Water Levels as measured on site:

Well location	Description	Top of well casing (steel or pvc) (geodetic)	Static level (top of well to water elevation)	Remarks
1) 150mm Pilot well pressure transducer	Public			Monitored by OCWA 93-6
2) Well behind Peterson property	Public	76.57	N/A	Pvc casing 93-7 - old no. 3 (casing damaged)
3) Leclerc well 2334 Russland	Private		4.2m	Drilled well Not yet geodetic
4) Lortie well 2378 Russland rd	Private	77.17	a) b)	c) Dug well west of house d) Dug well south of house
5) Viau well 2452 Russland rd	Private	77.28	b)4.46m	a) Drilled well west of driveway in front (north) of house (used for heating) b) Drilled well @ n-e corner of house (used for drinking) Previously named Jonah well
6) Lommen well 2551 Russland rd	Private	76.78	a) b)4.48m	a) Dug well b) Pvc sampling well
7) Peterson well 2472 Russland rd	Private		5.55m	New drilled well Not geodetic
8) Lacroix well 2690 Russland rd	Private		4.0m	Not geodetic

Prepared by: Mark Lecompte
May 23 , 2003
5341.107\WELL SAMPLING SHEET -11

LECOMPTE ENGINEERING LTD.
CONSULTING ENGINEERS
INGENIEURS CONSEILS

The Nation Municipality
Village of Limoges
Well Monitoring Program

Date: April 14, 2003

Water Levels as measured on site:

Well location	Description	Top of well casing (steel or pvc) (geodetic)	Static level (top of well to water elevation)	Remarks
1) 150mm Pilot well pressure transducer	Public			Monitored by OCWA 93-6
2) Well behind Peterson property	Public	76.57	N/A	Pvc casing 93-7 - old no. 3 (casing damaged)
3) Leclerc well 2334 Russland	Private		5.0m	Drilled well Not yet geodetic
4) Lortie well 2378 Russland rd	Private	77.17	a) b)	c) Dug well west of house d) Dug well south of house
5) Viau well 2452 Russland rd	Private	77.28	b)5.29m	a) Drilled well west of driveway in front (north) of house (used for heating) b) Drilled well @ n-e corner of house (used for drinking) Previously named Jonah well
6) Lommen well 2551 Russland rd	Private	76.78	a) b)5.24m	a) Dug well b) Pvc sampling well 93-9
7) Peterson well 2472 Russland rd	Private		6.41m	New drilled well Not geodetic
8) Lacroix well 2690 Russland rd	Private		4.66m	Not geodetic

Prepared by: Mark Lecompte
April 15, 2003
5341.107\WELL SAMPLING SHEET 10

LECOMPTE ENGINEERING LTD.

The Nation Municipality
Village of Limoges
Well Monitoring Program

Date: January 29, 2003

Water Levels as measured on site:

Well location	Description	Top of well casing (steel or pvc) (geodetic)	Static level (top of well to water elevation)	Remarks
1) 150mm Pilot well pressure transducer	Public			Monitored by OCWA 93-6
2) Well behind Peterson property	Public	76.57	N/A	Pvc casing 93-7 - old no. 3 (casing damaged)
3) Leclerc well 2334 Russland	Private		5.46	Drilled well Not yet geodetic
4) Lortie well 2378 Russland rd	Private	77.17	a) b)	c) Dug well west of house d) Dug well south of house
5) Viau well 2452 Russland rd	Private	77.28	b)5.94	a) Drilled well west of driveway in front (north) of house (used for heating) b) Drilled well @ n-e corner of house (used for drinking) Previously named Jonah well
6) Lommen well 2551 Russland rd	Private	76.78	a) b)6.88	a) Dug well b) Pvc sampling well
7) Peterson well 2472 Russland rd	Private		6.64	New drilled well Not geodetic
8) Lacroix well 2690 Russland rd	Private		5.45	Not geodetic

Prepared by: Mark Lecompte
February 5, 2003
5341.107\WELL SAMPLING SHEET -9

The Nation Municipality
Village of Limoges
Well Monitoring Program

Date: November 26, 2002

Water Levels as measured on site:

Well location	Description	Top of well casing (steel or pvc) (geodetic)	Static level (top of well to water elevation)	Remarks
1) 150mm Pilot well pressure transducer	Public			Monitored by OCWA 93-6
2) Well behind Peterson property	Public	76.57	N/A	Pvc casing 93-7 - old no. 3 (casing damaged)
3) Leclerc well 2334 Russland	Private		5.18	Drilled well Not yet geodetic
4) Lortie well 2378 Russland rd	Private	77.17	a) b)	c) Dug well west of house d) Dug well south of house
5) Viau well 2452 Russland rd	Private	77.28	b)5.49	a) Drilled well west of driveway in front (north) of house (used for heating) b) Drilled well @ n-e corner of house (used for drinking) Previously named Jonah well
6) Lommen well 2551 Russland rd	Private	76.78	a) b)5.26	a) Dug well b) Pvc sampling well
7) Peterson well 2472 Russland rd	Private		6.64	New drilled well Not geodetic
8) Lacroix well 2690 Russland rd	Private		4.7	Not geodetic

Prepared by: Mark Lecompte
November 27, 2002
5341.107\WELL SAMPLING SHEET -8

LECOMPTE ENGINEERING LTD.
CONSULTING ENGINEERS
INGENIEURS CONSEILS

The Nation Municipality
Village of Limoges
Well Monitoring Program

Date: October 21, 2002

Water Levels as measured on site:

Well location	Description	Top of well casing (steel or pvc) (geodetic)	Static level (top of well to water elevation)	Remarks
1) 150mm Pilot well pressure transducer	Public			Monitored by OCWA 93-6
2) Well behind Peterson property	Public	76.57	N/A	Pvc casing 93-7 - old no. 3 (casing damaged)
3) Leclerc well 2334 Russland	Private		5.3	Drilled well Not yet geodetic
4) Lortie well 2378 Russland rd	Private	77.17	a) b)	c) Dug well west of house d) Dug well south of house
5) Viau well 2452 Russland rd	Private	77.28	b)5.6	a) Drilled well west of driveway in front (north) of house (used for heating) b) Drilled well @ n-e corner of house (used for drinking) Previously named Jonah well
6) Loman well 2551 Russland rd	Private	76.78	a) b) 5.5	a) Dug well b) Pvc sampling well
7) Peterson well 2472 Russland rd	Private		6.71	New drilled well Not geodetic
8) Lacroix well 2690 Russland rd	Private		4.49	Not geodetic

Prepared by: Mark Lecompte
October 22, 2002
5341.107\WELL SAMPLING SHEET -7

LECOMPTE ENGINEERING LTD.
CONSULTING ENGINEERS
INGÉNIEURS CONSEILS

The Nation Municipality
Village of Limoges
Well Monitoring Program

Date: September 20, 2002

Water Levels as measured on site:

Well location	Description	Top of well casing (steel or pvc) (geodetic)	Static level (top of well to water elevation)	Remarks
1) 150mm Pilot well pressure transducer	Public			Monitored by OCWA 93-6
2) Well behind Peterson property	Public	76.57	N/A	Pvc casing 93-7 - old no. 3 (casing damaged)
3) Leclerc well 2334 Russland	Private		5.41	Drilled well Not yet geodetic
4) Lortie well 2378 Russland rd	Private	77.17	a) b)	c) Dug well west of house d) Dug well south of house
5) Viau well 2452 Russland rd	Private	77.28	b)5.45	a) Drilled well west of driveway in front (north) of house (used for heating) b) Drilled well @ n-e corner of house (used for drinking) Previously named Jonah well
6) Loman well 2551 Russland rd	Private	76.78	a) b)5.25	a) Dug well b) Pvc sampling well
7) Peterson well 2472 Russland rd	Private		6.43	New drilled well Not geodetic
8) Lacroix well 2690 Russland rd	Private		4.3	Not geodetic

Prepared by: Mark Lecompte
September 26, 2002
5341.107\WELL SAMPLING SHEET -6

LECOMPTE ENGINEERING LTD.
CONSULTING ENGINEERS
INGÉNIEURS CONSEILS

The Nation Municipality
Village of Limoges
Well Monitoring Program

Date: July 17, 2002

Water Levels as measured on site:

Well location	Description	Top of well casing (steel or pvc) (geodetic)	Static level (top of well to water elevation)	Remarks
1) 150mm Pilot well pressure transducer	Public			Monitored by OCWA 93-6
2) Well behind Peterson property	Public	76.57	N/A	Pvc casing 93-7 - old no. 3 (casing damaged)
3) Leclerc well 2334 Russland	Private		3.92	Drilled well Not yet geodetic
4) Lortie well 2378 Russland rd	Private	77.17	a) b)	c) Dug well west of house d) Dug well south of house
5) Viau well 2452 Russland rd	Private	77.28	b)4.3	a) Drilled well west of driveway in front (north) of house (used for heating) b) Drilled well @ n-e corner of house (used for drinking) Previously named Jonah well
6) Loman well 2551 Russland rd	Private	76.78	a)2.71 b)4.05	a) Dug well b) Pvc sampling well
7) Peterson well 2472 Russland rd	Private		5.3	New drilled well Not geodetic
8) Lacroix well 2690 Russland rd	Private		3.29	Not geodetic

Prepared by: Mark Lecompte

5341.107\WELL SAMPLING SHEET -5

LECOMPTE ENGINEERING LTD.
CONSULTING ENGINEERS
INGÉNIEURS CONSEILS

The Nation Municipality
Village of Limoges
Well Monitoring Program

Date: June 19, 2002

Water Levels as measured on site:

Well location	Description	Top of well casing (steel or pvc) (geodetic)	Static level (top of well to water elevation)	Remarks
1) 150mm Pilot well pressure transducer	Public			Monitored by OCWA 93-6
2) Well behind Peterson property	Public	76.57	N/A	Pvc casing 93-7 - old no. 3 (casing damaged)
3) Leclerc well 2334 Russland	Private		2.96	Drilled well Not yet geodetic
4) Lortie well 2378 Russland rd	Private	77.17	a) b)	c) Dug well west of house d) Dug well south of house
5) Viau well 2452 Russland rd	Private	77.28	b) 3.18	a) Drilled well west of driveway in front (north) of house (used for heating) b) Drilled well @ n-e corner of house (used for drinking) Previously named Jonah well
6) Loman well 2551 Russland rd	Private	76.78	a) 1.92 b) 2.9	a) Dug well b) Pvc sampling well
7) Peterson well 2472 Russland rd	Private		4.16	New drilled well Not geodetic
8) Lacroix well 2690 Russland rd	Private		3.09	Not geodetic

Prepared by: Mark Lecompte

LECOMPTE ENGINEERING LTD.
CONSULTING ENGINEERS
INGÉNIEURS CONSEILS

The Nation Municipality
Village of Limoges
Well Monitoring Program

Date: May 8, 2002

Water Levels as measured on site:

Well location	Description	Top of well casing (steel or pvc) (geodetic)	Static level (top of well to water elevation)	Remarks
1) 150mm Pilot well pressure transducer	Public			Monitored by OCWA 93-6
2) Well behind Peterson property	Public	76.57	N/A	Pvc casing 93-7 - old no. 3 (casing damaged)
3) Leclerc well 2334 Russland	Private		3.32	Drilled well Not yet geodetic
4) Lortie well 2378 Russland rd	Private	77.17	a) 0.89 b) 1.54	c) Dug well west of house d) Dug well south of house
5) Viau well 2452 Russland rd	Private	77.28	b) 3.465	a) Drilled well west of driveway in front (north) of house (used for heating) b) Drilled well @ n-e corner of house (used for drinking) Previously named Jonah well
6) Loman well 2551 Russland rd	Private	76.78	3.33	a) Dug well b) Pvc sampling well
7) Peterson well 2472 Russland rd	Private		4.51	New drilled well Not geodetic
8) Lacroix well 2690 Russland rd	Private		3.1	Not geodetic

Prepared by: Mark Lecompte

The Nation Municipality
Village of Limoges
Well Monitoring Program

Date: April 3, 2002

Water Levels as measured on site:

Well location	Description	Top of well casing (steel or pvc) (geodetic)	Static level (top of well to water elevation)	Remarks
1) 150mm Pilot well pressure transducer	Public			Monitored by OCWA 93-6
2) Well behind Peterson property	Public	76.57	N/A	Pvc casing 93-7 - old no. 3 (casing damaged)
3) Leclerc well 2334 Russland	Private		3.74	Drilled well Not yet geodetic
4) Lortie well 2378 Russland rd	Private	77.17		Dug well
5) Viau well 2452 Russland rd	Private	77.28	a) 4.19 b) 3.91	a) Drilled well west of driveway in front (north) of house (used for heating) b) Drilled well @ n-e corner of house (used for drinking) Previously named Jonah well
6) Loman well 2551 Russland rd	Private	76.78	a) 2.0 b) 3.82	a) Dug well b) Pvc sampling well
7) Peterson well 2472 Russland rd	Private			New drilled well Not geodetic
8) Lacroix well 2690 Russland rd	Private		3.93	Not geodetic

LECOMPTE ENGINEERING LTD.
CONSULTING ENGINEERS
INGÉNIEURS CONSEILS

The Nation Municipality
Village of Limoges
Well Monitoring Program

Date: January 24,2002

Water Levels as measured on site:

Well location	Description	Top of well casing (steel or pvc) (geodetic)	Static level (top of well to water elevation)	Remarks
1) 150mm Pilot well pressure transducer	Public			Monitored by OCWA 93-6
2) Well behind Peterson property	Public	76.57	N/A	Pvc casing 93-7 - old no. 3 (casing damaged)
3) Leclerc well 2334 Russland	Private		4.61	Drilled well Not yet geodetic
4) Lortie well 2378 Russland rd	Private	77.17		Dug well
5) Viau well 2452 Russland rd	Private	77.28		a) Drilled well west of driveway in front (north) of house (used for heating) b) Drilled well @ n-e corner of house (used for drinking) Previously named Jonah well
6) Loman well 2551 Russland rd	Private	76.78		a) Dug well b) Pvc sampling well
7) Peterson well 2472 Russland rd	Private		5.97	New drilled well Not geodetic
8) Lacroix well 2690 Russland rd	Private			Not geodetic

LECOMPTE ENGINEERING LTD.
CONSULTING ENGINEERS
INGÉNIEURS CONSEILS

Ministry of the Environment

133 Dalton Avenue
P O Box 820
Kingston ON K7L 4X6

Ministère de l'Environnement

133 avenue Dalton
C P 820
Kingston ON K7L 4X6

Ontario

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

RECEIVED
MAY 16 2003

Municipalité de la Nation
Reçu
MAY 14 2003
Received

5 May 2003

The Nation Municipality
958 Route 500 West
RR 3
Casselman, ON K0A 1M0

Post-it® Fax Note 7671E | Date 5/16/03 | # of pages 13
To Jacques Lecompte | From Mary McCuaig
Co./Dept. | Co.
Phone # | Phone #
Fax # 936-2945 | Fax #

Attention: Mary McCuaig, Clerk

Dear Ms. McCuaig:

Re: Permit to Take Water 03-P-4045

Enclosed please find Permit to Take Water Number 03-P-4045 which authorizes the taking of water from two (2) wells located on Lot 21, Concession VII, Township of The Nation Municipality (formerly Russell Township), County of Prescott & Russell.

The Permit has been issued in accordance with the procedures and amounts stated on the application for the Permit To Take Water. The Permit is subject to the General Conditions and Special Conditions that may be stated on the Permit. The Conditions have been designed to allow for the development of water resources for beneficial purposes, while providing reasonable protection to existing water uses and users.

The Permit is valid until May 2, 2013, or until such time as there are changes in the rate, amount or method of water taking. If changes occur, an application must be submitted to and approved by this Ministry prior to the commencement of the changes. The attached application form must be used to request an amendment to the Permit. Please submit applications for renewal of the Permit at least 60 days prior to the expiry date to allow for processing of the application.

The Permit should be reviewed carefully prior to water taking. Compliance with the Conditions of the Permit is the responsibility of the Permit Holder. Any person taking water under the authority of this Permit must be familiar with the Conditions.

It has been brought to my attention that from time to time your area may experience drought or water shortage conditions and therefore General Condition 11 has been added to the Permit. This General Condition is necessary to ensure equitable access to the water supply and to provide protection for the natural resources. This condition does not affect the right to appeal the Director's Notice to the Environmental Review Tribunal under the *Ontario Water Resources Act*, R.S.O. 1990, Chapter O.40, Subsection 100(3).

If you have any questions regarding your Permit please contact Nicholas Murphy at this office.

Yours truly,

Clyde Hammond, Director
Section 34, R.S.O. 1990
Ontario Water Resources Act, R.S.O. 1990, Chapter O.40
Ministry of the Environment
NM/gl

Enclosure

c: Gaetan Beauchesne, Lecompte Engineering Ltd., 251 Bank Street, Suite 301, Ottawa, ON K2P 1X3

PERMIT TO TAKE WATER
Number 03-P-4045

Notice of Terms and Conditions
Section 100, *Ontario Water Resources Act*, R.S.O. 1990, Chapter O.40

Pursuant to Section 34 of the *Ontario Water Resources Act*, R.S.O. 1990, Chapter O.40 permission is hereby granted

TO: The Nation Municipality
958 Route 500 West
RR 3
Casselman, ON
K0A 1M0

for the taking of water from two (2) wells located on Lot 21, Concession VII, Township of The Nation Municipality (formerly Russell Township), County of Prescott & Russell for municipal water supply for Village of Limoges and the Forest Park communal water system. The rate of taking shall not exceed 1,444 litres per minute, or 2,080,000 litres per day for Well #1, or 1,444 litres per minute, or 2,080,000 litres per day for Well #2. The combined total water taking from both wells shall not exceed 2,080,000 litres per day.

Except where modified by this Permit the water taking shall be in accordance with the application dated December 6, 2002, and signed by Mary McCuaig, Clerk.

You are hereby notified that this Permit is issued to you subject to the following Definitions, General Conditions and Special Conditions.

DEFINITIONS

1. (a) "Director" means a Director, Section 34, *Ontario Water Resources Act*, R.S.O. 1990, Chapter O.40.

(b) "District Office" means Kingston District, Eastern Region, Ontario Ministry of the Environment.

(c) "District Manager" means District Manager, Kingston District, Eastern Region, Ontario Ministry of the Environment.

(d) "Ministry" means Ontario Ministry of the Environment.

(e) "Permit" means this entire Permit to Take Water including its schedules, if any, issued in accordance with Section 34 of the *Ontario Water Resources Act*, R.S.O. 1990, Chapter O.40.

(f) "Permit Holder" means The Nation Municipality.

GENERAL CONDITIONS

2. This Permit shall be kept available at the offices of The Nation Municipality, 958 Route 500 West, RR #3, Casselman, ON, with a copy to be kept on-site at the Village of Limoges water treatment plant for inspection by Ministry staff at all times.

3. The Director may, from time to time, where a situation of interference or anticipated interference with water supplies exists, or in a situation requiring information on water takings for purposes of water resource inventory and planning, give written notice to the Permit Holder to undertake any of the following actions. The Permit Holder shall comply with any such notice:

(a) To establish and maintain a system for the measurement of the quantities of water taken;

(b) To operate such a system and to record measurements of the quantities of water taken on forms provided by the Director, with such frequency or for such time periods as the Director may specify;

(c) To return to the Director records made pursuant to clause 3(b) at such times or with such frequency as the Director may specify; and

(d) To keep records made pursuant to clause 3(b) available for inspection until such time as they are returned to the Director pursuant to clause 3(c).

4. The Permit Holder shall immediately notify the District Manager of any complaint arising from the taking of water authorized under this Permit and shall report any action which has been taken or is proposed with regard to such complaint.

5. For Surface-Water Takings, the taking of water (including the taking of water into storage and the subsequent or simultaneous withdrawal from storage) shall be carried out in such a manner that stream flow is not stopped and is not reduced to a rate that will cause interference with downstream uses of water or with the natural functions of the stream.

6. For Ground-Water Takings, if the taking of water is forecast to cause any negative impact, or is observed to cause any negative impact to other water supplies obtained from any adequate sources that were in use prior to initial issuance of a Permit for this water

taking, the Permit Holder shall take such action necessary to make available to those affected a supply of water equivalent in quantity and quality to their normal takings, or shall compensate such persons for their reasonable costs of so doing, or shall reduce the rate and amount of taking to prevent the forecast negative impact or alleviate the observed negative impact. Pending permanent restoration of the affected supplies, the Permit Holder shall provide, to those affected, temporary water supplies adequate to meet their normal requirements, or shall compensate such persons for their reasonable costs of so doing.

7. The Permit Holder shall report to the Director any changes of address or telephone number, or change of ownership of the property for which this Permit is issued and shall report to the Director any changes in the general conditions of water taking from those described in the Permit application within thirty days of any such change. The Permit Holder shall not assign his rights under this Permit to another person without the written consent of the Director.

8. No water may be taken under authority of this permit after the expiry date of this Permit, unless the Permit is renewed, or after the expiry date shown on any subsequent renewal of this permit, unless it is likewise renewed.

9. This Permit does not release the Permit Holder from any legal liability or obligation and remains in force subject to all limitations, requirements, and liabilities imposed by law. This Permit shall not be construed as precluding or limiting any legal claims or rights of action that any person, including the Crown in right of Ontario or any agency thereof, has or may have against the Permit Holder, its officers, employees, agents, and contractors.

10. The Permit Holder must forthwith, upon presentation of credentials, permit Ministry personnel, or a Ministry authorized representative(s) to carry out any and all inspections authorized by Section 15, 16 or 17 of the *Ontario Water Resources Act*, R.S.O. 1990, Chapter O.40, Section 156, 157 or 158 of the *Environmental Protection Act*, R.S.O. 1990 of Section 19 or 20 of the *Pesticides Act*, R.S.O. 1990.

11. The Director may, at times of drought or water shortage in the locality of the taking, give notice to the Permit Holder to suspend or reduce the taking to an amount or threshold specified by the Director. The suspension or reduction in the taking shall be effective immediately and may be revoked at any time upon notification by the Director. This condition does not affect the right to appeal the notice to the Environmental Review Tribunal under the *Ontario Water Resources Act*, R.S.O. 1990, Chapter O.40, Subsection 100(3).

12. The permit does not abrogate the Permit Holder's responsibility to comply with all applicable legislation, including O. Reg. 285/99, which provides, among other things, that no person shall use water by transferring it out of a water basin (as defined in the Regulation) in a container having a volume greater than 20 litres. The Regulation divides Ontario into three water basins, being the Great Lakes-St. Lawrence, the Nelson and Hudson Bay Basins.

SPECIAL CONDITIONS

13. The Permit Holder shall measure and record separately the daily amount and duration of each water taking event for each water source well and shall ensure copies of these records are kept at the offices of The Nation Municipality, 958 Route 500 West, RR #3, Casselman, ON, with a copy to be kept on-site at the Village of Limoges water treatment plant until this Ministry requests them to be submitted or states otherwise.

14. The Permit Holder shall ensure that a qualified person is retained to develop a groundwater level and water quality monitoring program. The monitoring program shall be set out in a report and shall contain, but to be limited to, an outlining details of activities and timing of activities to be undertaken in order to address ongoing impact(s) of the water taking relative to the Vars Communal Water Supply, other local wells and the local aquifer complex.

15. The Permit Holder shall ensure that the program developed pursuant to Special Condition 14 is developed in consultation with the City of Ottawa.

16. The Permit Holder shall ensure that the monitoring program developed pursuant to Special Conditions 14 and 15 is submitted to the Director on or before August 3, 2003.

17. The Permit Holder shall ensure that the monitoring program developed pursuant to Special Conditions 14 and 15 is implemented on or before August 3, 2003.

18. The Permit Holder shall ensure that the physical and chemical data collected in accordance with the report developed pursuant to Special Conditions 14 and 15 is summarized in an annual report by a qualified person. In addition to the data summary, the annual report shall contain, but not be limited to, an analysis of the long term tend analysis and the ambient groundwater conditions.

19. The Permit Holder shall ensure that the annual report made pursuant to Special Condition 18 includes the data collected during each calender year beginning with the year 2003, is completed on or before January 31st of each year beginning in the year 2004 for the previous calender year beginning with the year 2003.

20. The Permit Holder shall ensure that the report made pursuant to Special Conditions 18 and 19 is kept at the offices of The Nation Municipality, 958 Route 500 West, RR #3, Casselman, ON, with a copy to be kept on-site at the Village of Limoges water treatment plant and made available to Ministry staff and the City of Ottawa upon request.

21. The Permit Holder shall ensure that the District Manager is notified, in writing, of any adverse impact upon the hydrogeological regime, of any forecasted adverse hydrogeological impact(s) related to the water taking and detected by the monitoring program made pursuant to Special Conditions 14 and 15, or by the analysis of the data for the preparation of the annual report made pursuant to Special Condition 18.

22. No water shall be taken under authority of this Permit after May 2, 2013.

The reason for the imposition of Special Condition 13 is to establish a record of water taking.

The reason for the imposition of Special Conditions 14, 15, 16, and 17 is to ensure that the possible impacts of the water taking on the water resources is monitored and that the Ministry has an opportunity to review the proposed monitoring programs.

The reason for the imposition of Special Conditions 18, 19 and 20 is to ensure that the data collected by the monitoring program is evaluated on an annual basis and that the information is available to the Ministry and the City of Ottawa for review.

The reason for the imposition of Special Condition 21 is to ensure that this Ministry is notified of the occurrence or the potential occurrence of impacts on the water resources.

The reason for the imposition of Special Condition 22 is to ensure that this Ministry has an opportunity to review the continued availability of water to be taken under authorization by this Permit as it relates to interference with other established uses.

You may, by written notice served upon me and the Environmental Review Tribunal within 15 days after receipt of this Notice, require a hearing by the Tribunal. Section 101 of the *Ontario Water Resources Act*, R.S.O. 1990, Chapter 0.40, provides that the Notice requiring the hearing shall state:

1. The portions of the Permit or each Term or Condition in the Permit in respect of which the hearing is required, and;
2. The grounds on which you intend to rely at the hearing in relation to each portion appealed.

The Notice should also include:

3. The name of the appellant;
4. The address of the appellant;
5. The Permit number;
6. The date of the Permit;
7. The name of the Director;
8. The municipality within which the taking is located;

And the Notice should be signed and dated by the appellant.

This notice must be served upon:

The Secretary
Environmental Review Tribunal
P.O. Box 2382
2300 Yonge Street, 12th Floor
TORONTO, Ontario
M4P 1E4

AND The Director
Section 34, *Ontario Water Resources Act*
Ministry of the Environment
133 Dalton Avenue, Box 820
KINGSTON, Ontario
K7L 4X6

Dated at Kingston this 8th day of May, 2003.

Director
Section 34, Ontario Water Resources Act
Ministry of the Environment