Guide: Distribution of imported bottled water in Quebec Project assessment

Centre québécois d'inspection des aliments et de santé animale

To the applicant,

The information requested in this guide and the forms accompanying it are required by section 22 of the Regulation respecting bottled water (c.P-29, r.1.1) and also by law under section 32.1 of the Food products Act (R.S.Q., c. P-29).

GENERAL INSTRUCTIONS

- 1. The importer must ensure that the following forms and documents are completed and signed by the duly authorized individuals:
 - (a) for spring water and mineral water, the importer's and bottler's declaration, complete with a hydrogeological study;
 - (b) for spring water and mineral water, the declaration of the physicochemical analysis laboratory regarding water taken directly from catchment sources;
 - (c) for spring water and mineral water, the declaration of the microbiological analysis laboratory regarding water taken directly from catchment sources;
 - (d) for spring water and mineral water, the declaration of the radiochemical analysis laboratory regarding water taken directly from catchment sources;

THE PRECEDING LABORATORY ANALYSES (B, C AND D) MUST HAVE BEEN PERFORMED WITHIN THE LAST YEAR

- (e) the attestation of the government authorities of the country of origin to the effect that the water quality, the source, the catchment facilities and the bottling plant conform to the legal requirements of that country of origin;
- (f) a dummy of the label for each bottle size contemplated in this application;
- (g) five decoders for determining the bottling date on each bottle size.
- 2. The importer must have documents and forms in a language other than French or English translated. These translations must be sealed by a certified translator in Canada.

- 3. The importer must submit official samples of each type and size of finished product contemplated in this application. The products must have been manufactured less than three months prior to the date of this application. Samples must be accompanied by a certificate, signed by the bottler, indicating the date they were bottled, AS WELL AS ANALYSES PERFORMED LESS THAN ONE YEAR PRIOR TO THE DATE OF THIS APPLICATION. The minimum number of samples are as follows:
 - at least 20 bottles if the net volume of each bottle is 500 ml or more; and
 - at least 60 bottles if their net volume is less than 500 ml.
- 4. The analyses of the finished product contemplated in the enclosed guidelines on rates¹ must be performed by an approved laboratory operating in the Province of Québec on the official samples submitted to the ministère de l'Agriculture, des Pêcheries et de l'Alimentation.
- 5. If, based on the information provided, the vulnerability index calculated according to the DRASTIC system is between 36% and 74%, the importer or distributor of the water in Québec shall submit the results of analytical monitoring as described in the section "Additional Information".
- 6. The importer must send all forms, documents and product samples specified in the attached document to:

Gestion des permis
Direction des services à la clientèle
Direction générale de l'alimentation
Ministère de l'Agriculture, des Pêcheries et de l'Alimentation
200, chemin Sainte-Foy, 11^e étage
Québec (Québec) G1R 4X6

Tel. 1 800 463-6210 1-418-380-2130

NOTE

- This application cannot be studied until all of the required forms, certified translations, documents and samples have been received by the above organization.
- . All documents must be <u>originals</u>.

Guidelines on rates - Commercial water and ice - revised on 10-12-93.

ADDITIONAL INFORMATION (SPRING WATER AND MINERAL WATER)

In March 1995, the ministère de l'Agriculture, des Pêcheries et de l'Alimentation du Québec (MAPAQ) adopted a new approach for determining whether an underground catchment is sufficiently protected, either naturally or geologically, as defined in Québec's Regulation respecting bottled water (R.R.Q., c. Q-2, r. 5). A protected aquifer is one of the conditions for being allowed to distribute bottled water as "spring water" or "mineral water" in Québec.

Under the new approach, the hydrogeologic vulnerability scale (0 - 100%) is divided into three categories:

| | Vulnerability Index | Conclusion |
|------------|---------------------|------------------------------------|
| Category 1 | 0-35% | Well protected |
| Category 2 | 36%-74% | Hydrogeologic protection uncertain |
| Category 3 | 75-100% | Vulnerable |

Water taken from a catchment which falls into Category 3 may not be labelled spring water or mineral water under the requirements of the Québec Regulation respecting bottled water.

For Category 2 water, the importer or distributor in Québec shall submit the results of water quality monitoring analyses. If the quality is consistently in keeping with the quality standards stipulated in the Regulation, the water can be sold as spring water or mineral water.

For Category 1 spring water, the importer will not be required to submit the results of water quality monitoring analyses before marketing the water in Québec.

The vulnerability index shall be calculated using the DRASTIC system explained on the importer's and bottler's declaration. Monitoring analyses, where required, must meet the conditions indicated below.

MONITORING ANALYSIS GUIDELINES

Where the hydrogeologic setting is deemed moderately vulnerable to contamination (DRASTIC Index of 36-80%), water quality will have to be monitored to determine whether it remains consistently in keeping with set standards and, consequently, whether the aquifer is geologically well protected.

(a) Duration

2 consecutive years

(b) Period

Analytical monitoring shall be performed in the 3 years preceding the application to distribute imported spring water or mineral water in Québec.

(c) Pumping rate or volume of water collected

Throughout the analytical monitoring, the well or catchment shall operate at its normal production rate or volume around the clock.

(d) Parameters and frequency of analyses

Microbiological

- 25 analyses at 1-month intervals of the following parameters:
 - total coliforms in 100 ml
 - Escherichia coli in 100 ml
 - optional aerobic and anaerobic heterotrophic bacteria in 1 ml at 35-37°C.
- 5 analyses at 6-month intervals to determine:
 - basic aerobic and anaerobic heterotrophic bacteria in 4 L or, if this methodology is not available in the country or province of origin, pathogens in 4 L. In the latter case, the analysis procedure shall be described and the list of pathogenic microorganisms targeted by the analysis submitted to MAPAQ.

Physicochemical

- 25 analyses at 1-month intervals of the following parameters:
 - dissolved solids at 180°C
 - conductivity at 25°C
 - water temperature at source
 - where applicable, natural spring flow rate
- 9 analyses at 3-month intervals of the following parameters:
 - calcium, magnesium, sodium and potassium
 - chlorides, sulfates, bicarbonates and carbonates
 - total silica
 - nitrates, fluorides, ammonia nitrogen, nitrites and total phosphates
 - pH
 - dissolved CO₂ for naturally carboeffervescent water

(e) Criteria for evaluating analysis results

| Parameter | Maximum allowable concentration | Maximum allowable variation |
|---|---|-----------------------------|
| Total coliforms | Zero (0) in 100 ml in 95% of samples | - |
| Escherichia coli | Zero (0) in 100 ml in 100% of samples | - |
| Identification of SPC in 4 L | Maximum 2 samples with presence of a micro-organism belonging to the coliform group, excluding <i>E. coli</i> and <i>Streptococci, Enterococci,</i> or <i>Staphylococci,</i> or with presence of <i>Pseudomonas aeruginosa</i> and no pathogen in 100% of samples | - |
| Identification of pathogens | No pathogen in 100% of samples | - |
| Bacteria (SPC at 35-37°C) | < 20 cfu/ml in 70% of samples | - |
| Nitrates (in N) | < 10 mg/L in 100% of samples | ± 20% |
| Fluorides | < 6 mg/L in 100% of samples | ± 20% |
| Magnesium sulfate | < 400 mg/L in 100% of samples | ± 20% |
| Total sulfates | < 1500 mg/L in 100% of samples | ± 20% |
| All other physicochemical parameters required for analytical monitoring | - | ± 20% |

f) Laboratory analysis of monitoring results

The laboratory performing the analysis must have no connection to the project operator or promoter.

For imported water, this laboratory must be certified by the government authority having jurisdiction in the country of origin. If no such certification exists in that country, monitoring results must be analyzed by a laboratory approved by the Québec Minister of the Environment and Wildlife.

g) Analysis methods

Imported water must be analyzed using methods certified by the government authority having jurisdiction in the country of origin. Analysis reports must mention the methods used.

Project to distribute imported water in Québec

| 1 | - | Trade name of water |
|---|---|--|
| | | (a) The product to be distributed in Québec will be sold under the following trade name: |
| | | (b) The product is currently distributed in (country of origin) |
| | | under the trade name: |
| | | |
| 2 | - | Bottle type and size |
| | | The product will be distributed in Québec in the following sizes: |

| Size | Volume indicated on each label (in metric units) | Exact nature ¹ of material used to make bottles | Is water carbonated? (Yes or No) |
|-------|--|--|-------------------------------------|
| No. 1 | | | |
| No. 2 | | | |
| No. 3 | | | |
| No. 4 | | | |
| No. 5 | | | |
| No. 6 | | | |

¹ If plastic, specify what type.

| 3 | Importer | | |
|-----|-------------------------------|--------------|--|
| | Name of business firm: | | |
| | Address: | | |
| | | | |
| | City or town: | Postal code: | |
| | Telephone: () | | |
| | | | |
| 4 - | Bottler and place of bottling | | |
| | (a) Bottler: | | |
| | Name of business firm: | | |
| | Address: | | |
| | | | |
| | City or town: | Postal code: | |
| | Telephone: () | | |
| | (b) Place of bottling | | |
| | Name of business firm: | | |
| | Address: | | |
| | | | |
| | City or town: | Postal code: | |
| | Telephone: () | | |

Origin of water (check one)

5

| | | The water in the | e product is wholly of underg | round origin |
|-----|------|--------------------|---------------------------------|---------------------|
| | | or | | |
| | | The water in the | e product is partially of under | ground origin |
| | | or | | |
| | | The water is no | t of underground origin | |
| | | | | |
| (b) | | The water come | es from a single catchment or | well |
| | | or | | |
| | | The water commany? | es from more than one catch | ment or well. If so |
| | | | | |
| (c) | Give | the longitude and | latitude of each catchment to | the nearest second |
| (c) | | | | Г |
| (c) | | CATCHMENT | latitude of each catchment to | the nearest second |
| (c) | | CATCHMENT No. 1 | | ſ |
| (c) | | No. 1 No. 3 | | ſ |
| (c) | | CATCHMENT No. 1 | | ſ |

| 6 - <u>Transport of w</u> | ater |
|---------------------------|------|
|---------------------------|------|

7

(a) Give the rectilinear distance, in metres, between the bottling plant and each catchment, indicating the method of transport used for each:

| CATCHMENT IN WELL | DISTANCE FROM PLANT (IN METRES) | TRANSPORT METHOD (TANK TRUCK OR PIPES) |
|----------------------|---------------------------------------|---|
| No. 1 | | |
| No. 2 | | |
| No. 3 | | |
| No. 4 | | |
| No. 5 | | |

| (b) | Indicate the number of the catchments, if any, which supply a municipal waterworks or one or more buildings in addition to the bottling plant: |
|-------|---|
| | |
| (c) | If the water is transported by tank truck from the source to the bottling plant, indicate (yes or no) whether the tank truck(s) ever carry(ies) other product(s): |
| | If so, what? |
| Origi | n of carbon dioxide |
| (a) | Do you intend to indicate on the label or in your advertising that the product is "naturally carbonated", "reinforced with carbon dioxide from the source" or "partially decarbonated"? |
| | (If so, answer questions 7 (b), (c) and (d). |
| (b) | Indicate which catchments (numbers) are used as the source of carbon dioxide: |
| (c) | If all or part of the carbon dioxide comes from a different catchment(s) than the water, give the catchment(s) longitude and latitude to the nearest second: |

(d) Indicate the rectilinear distance, in metres, between the bottling plant and each carbon dioxide catchment:

| CATCHMENT | RECTILINEAR DISTANCE BETWEEN PLANT AND CATCHMENT (IN METRES) |
|-----------|---|
| No. 1 | |
| No. 2 | |
| No. 3 | |
| No. 4 | |
| No. 5 | |

| 0 | | - | |
|---|---|-------|--------|
| 8 | _ | Proce | essing |
| O | | 1100 | عسدد |

| | (a) | Othe wate | | carbon d | lioxide, | what | substa | nces | are r | removed | from | the | raw |
|--------------|-----|--------------|-----------|------------|----------|----------|-----------|--------|-------|------------|-------|-------|-----|
| | | Othe | er than c | earbon dic | oxide, w | hat su | bstance | s are | addeo | d to the r | aw wa | ıter? | |
| | (b) | Doe | s the wa | iter under | go proc | essing | to kill l | bacter | ria? | | | | |
| process(es): | | If | so, | specify | the |) | | | | | | | |
| 1 () | | | | | | | | | | | | | |

- 9 <u>Description of each catchment or well</u> (for spring and mineral water only)
 - (a) Catchment site and area and protection area;
 - i Lot and cadastre numbers, municipality and county;
 - ii Proof of ownership of operator or operator's representative (name, address, telephone number of owner if different from that of operator);
 - iii UTM (Universal Transverse Mercator) coordinates, including 1927 or 1983 NAD (North American Datum), or longitude and latitude of source, wells and piezometers;
 - (b) Hydrogeological study

The hydrogeological study must be performed by a hydrogeologist and include the following:

Ministère de l'Agriculture, des Pêcheries et de l'Alimentation

i Description of the natural features of the land

Using a 1:5000 scale topographical map, describe the natural features of the land within a 1-km radius of the well or catchment. The description must include, at the minimum, the following information:

- Description of surface drainage; location of marshy areas, streams, rivers and lakes;
- Description of topography (flat, undulating, steep);
- Location and description of rocky outcrops (geology, structure, degree of fracturing, etc.);
- Location and description of unconsolidated deposits.

ii Inventory of human activities

All human activities carried on within a minimum 1-km radius of the well or catchment must be listed, including previous, current and future uses of the site and adjacent land. A 1:5000 map showing the site of likely sources of contamination (roads, houses, buildings, septic tanks, tanks containing hydrocarbons and other chemicals, plants, waste disposal sites, quarries, sand pits, agricultural operations, aerial pesticide spraying, etc.) must also be submitted.

All pesticides used in the wellhead area must be listed.

iii Description of stratigraphic units

On the basis of existing information (geological maps and reports, aerial photographs, drilling reports, hydrogeological studies, etc.) and project-related data (pumping tests, drilling, etc.), describe and identify all stratigraphic and hydrogeologic units in the study area (within a 1-km radius of the well or catchment). The description must include a 1:5000 map and two stratigraphic sections (parallel and perpendicular to groundwater flow). It must include, at the minimum, the following information:

- Soil depth and thickness (2 metres or less);
- Thickness and type of unconsolidated deposits;
- Type and depth of bedrock from surface;
- Piezometry for each hydrostratigraphic unit;
- Location and depth of observation and pumped wells;
- Topographical profile.

iv Water level maps of the aquifer

Two water level maps (scale of 1:5000) of the aquifer from which the water is collected must be drawn: one based on static water levels before pumping and the other based on steady pumping levels. The first map will be used to determine the velocity and direction of the natural groundwater flow. The second will be used to define conditions induced by water collection. The wellhead area and zone of influence must be indicated on the second map. Guidelines^{2,3,4,5} exist for the delineation of wellhead protection areas.

v Assessment of hydraulic characteristics

Pumping test

A properly conducted pumping test^{6,7,8} is required for all new wells proposed for bottled water projects. This test must provide the following information:

- operating flow;
- service life of catchment;
- interference with other catchments and possibilities of conflicting use;
- wellhead area;
- zone of influence;
- recharge or confining limits.

vi Discussion of the degree of aquifer protection

Vulnerability must be evaluated using the DRASTIC system. After gathering the required data, the consultant must provide a detailed description of the relative vulnerability of the aquifer to contamination. If insufficient data has been collected to determine the vulnerability index, additional information must be obtained, such as geophysical surveys and groundwater dating techniques.

² Bradbury, K.-R. et al., 1991. Delineation of Wellhead Protection Areas in Fractured Rocks, EPA-570/9-91-009. United States.

Lallemand-Barrès, A., Roux, J.-C., 1989. Guide méthodologique d'établissement de périmètres de protection des captages d'eau souterraine destinée à la consommation humaine. Manuels et méthodes, No. 19. BRGM. France.

⁴ USEPA, 1987. Guidelines for Delineation of Wellhead Protection Areas EPA/6-87-010. United States.

MEF, 1995. Guide pour la détermination des périmètres de protection autour de captage d'eau souterraine (preliminary document), Québec.

⁶ ASTM, 1994. Ground Water and Vadose Zone Investigations, 2nd edition, United States.

Chapuis, R.P., 1995. Guide d'interprétation sur les essais de pompage (in progress), MEF, Québec.

⁸ Kruseman, G.P., de Ridder N.A., 1991. Analysis and Evaluation of Pumping Test Data, 2nd edition, International Institute for Land Reclamation and Improvement, Publication 47, The Netherlands.

Aller, L. et al., 1987. Drastic: A Standardized System for evaluating Ground Water Pollution Potential Using Hydrogeologic Settings. EPA-600/2-87-035.

The first step in the DRASTIC system consists in identifying the different hydrogeologic settings comprising the study area. A hydrogeologic setting incorporates the major geological and hydrogeologic factors which determine its vulnerability to groundwater contamination. For example, the existence or absence of a confining layer overtop an aquifer can mean the difference between a high and low risk of contamination. On vulnerability maps, a hydrogeologic setting corresponds to a well-defined geographical area.

The DRASTIC numerical ranking system is based on seven measurable physical parameters (factors) which affect contaminant transport and attenuation: depth to water, net recharge, aquifer media, soil media, topography, impact of the vadose zone media, and hydraulic conductivity of the aquifer. Each of these parameters has an assigned weight (predetermined value) of between 1 and 5, indicating the relative importance of the parameter for contaminant transport and attenuation. The most significant factors have weights of 5; the least significant, a weight of 1. Each weight was assigned using a Delphi (consensus) approach. All seven parameters are evaluated for each hydrogeologic setting and assigned a rating which varies between 1 and 10. A rating of 1 corresponds to conditions representing the least vulnerability; a rating of 10 indicates an area most vulnerable to contamination.

The last step in the process involves calculating the DRASTIC Index for each hydrogeologic setting by multiplying the weight x rating for each parameter and then adding the results. The index thus obtained indicates the pollution potential of the hydrogeologic setting under study. The higher the DRASTIC index, the greater the groundwater pollution potential (maximum 226, or 100%; minimum 23, or 0%).

vii Evaluation of the stability of the water source

Using geological, physicochemical and bacteriological data, identify the probable causes of any substantial variations in the quality of the water collected.

viii Protection area

On the basis of the geological and environmental data gathered for the catchment site, delineate wellhead protection areas (immediate, near, far)^{2,3,4,5}.

ix Well construction plan (underground portion)

A detailed, hydrogeologist-approved plan of the catchment or well must be provided.

x Plans and specifications

Specifications (and plans) must cover the following aspects:

- catchment or well system (above ground)
- storage at source (if any)
- protection of structures on site

You must submit three(3) copies of the hydrogeological study containing the above information

CALCULATION OF THE DRASTIC INDEX

The geological features of the water table ensure the quality of water in the aquifer is not affected by natural or anthropic contaminants which leach through the soil. To determine the degree of protection against contamination, groundwater vulnerability to pollution is evaluated using the DRASTIC system recommended by the USEPA (17). Vulnerability is measured using a numerical ranking system (index calculation) applied to each hydrogeologic setting.

The first step in the DRASTIC system consists in identifying the different hydrogeologic settings comprising the study area. A hydrogeologic setting incorporates the major geological and hydrogeologic factors which determine its vulnerability to groundwater contamination. For example, the existence or absence of a confining layer overtop an aquifer can mean the difference between a high and low risk of contamination. On vulnerability maps, a hydrogeologic setting corresponds to a well-defined geographical area.

The DRASTIC numerical ranking system is based on seven measurable physical parameters (factors) which affect contaminant transport and attenuation: depth to water, net recharge, aquifer media, soil media, topography, impact of the vadose zone media, and hydraulic conductivity of the aquifer. Each of these parameters has an assigned weight (predetermined value) of between 1 and 5, indicating the relative importance of the parameter in relation to contaminant transport and attenuation. The most significant factors have weights of 5; the least significant, a weight of 1 (Table 1). Each weight was assigned using a Delphi (consensus) approach. All seven parameters are evaluated for each hydrogeologic setting and assigned a rating which varies between 1 and 10. A rating of 1 corresponds to conditions representing the least vulnerability; a rating of 10 indicates an area most vulnerable to contamination (Table 2).

The last step in the process involves calculating the DRASTIC Index for each hydrogeologic setting by multiplying the weight x rating for each parameter and then adding the results (Table 3). The index thus obtained indicates the pollution potential of the hydrogeologic setting under study. The higher the DRASTIC Index, the greater the groundwater pollution potential (maximum 226, minimum 23). Table 4 qualifies the Index in terms of vulnerability.

Agriculture, Pêcheries et Alimentation Québec Importer's and bottler's declaration

The following page provides an example of the DRASTIC system applied to the RMC of Montcalm, followed by a brief explanation of the use and evaluation of the DRASTIC system.

Table 1. DRASTIC features and assigned weights

| Symbol | Feature | Weight |
|--------|-----------------------------------|--------|
| (D) | Depth | 5 |
| (R) | Net Recharge | 4 |
| (A) | Aquifer Media | 3 |
| (S) | Soil Media | 2 |
| (T) | Topography | 1 |
| (I) | Impact of Vadose Zone Media | 5 |
| (C) | Hydraulic Conductivity of Aquifer | 3 |

Table 2. Example ranges and ratings for depth to water

| Range (m) | Rating |
|-----------|--------|
| 0 - 1.5 | 10 |
| 1.5 - 4.5 | 9 |
| 4.5 - 9.0 | 7 |
| 9 - 15 | 5 |
| 15 - 23 | 3 |
| 23 - 31 | 2 |
| > 31 | 1 |

Table 3. Example calculation of DRASTIC index. Hydrogeologic setting: glacial till over bedded sedimentary rock

| Feature | Range | Weight | Rating | Index |
|--------------------------------|--------------------------------|--------|--------|-------|
| Depth to water | 1.5 - 4.5 m | 5 | 9 | 45 |
| Net recharge | 5 - 10 cm | 4 | 3 | 12 |
| Aquifer Media | Dolomite | 3 | 7 | 21 |
| Soil Media | Sandy loam | 2 | 6 | 12 |
| Topography (Slope) | 0 - 2% | 1 | 10 | 10 |
| Impact of Vadose Zone Media | Sand + Gravel + Silt + Clay | 5 | 6 | 30 |
| Hydraulic Conductivity | 12 - 29 m/d | 3 | 4 | 12 |
| | Drastic Index (= Total) | | | 142 |



Table 4. DRASTIC Index and relative vulnerability (based on Fréchette 1987)

| DRASTIC Index (I) | Relative Vulnerability |
|----------------------|------------------------|
| 23 to 84 (0-30%) | Very low |
| 85 to 114 (31-45%) | Low |
| 115 to 145 (46-60%) | Moderate |
| 146 to 175 (60-75%) | High |
| 176 to 226 (76-100%) | Very high |

COMPUTATION OF DRASTIC INDEX (%):

Index in
$$\% = \frac{I - 23}{203} \times 100$$

- 10 <u>Description of water transport</u> (for spring and mineral water only)
 - (a) Plan and physical description

First scenario: Transport by pipes

- aerial and underground
- distance between catchment and plant
- depth;

Second scenario: Transport by tank truck

- diagram (tank, plumbing, valves, manhole, etc.),
- materials (tank, pipes, facilities, etc.),
- insulation: description and heat resistance (R value)
- pipe, dust control,
- tank capacity,
- length of road in miles or kilometres;
- (b) Operating procedure and maintenance schedule First scenario: Transport by pipes
 - description of disinfection method used
 - frequency, etc.

Second scenario: Transport by tank truck

- detailed description of maintenance and disinfection methods and schedule
- detailed description of loading and unloading (hitching) methods

11 - Description of plant

- (a) Diagram and general description of plant (location and description):
 - bottling and washing sections (walls, floors, drains, ceilings, doors, windows, ventilation, conveyors, equipment, etc.)
 - storage sections (taps, unwashed containers, finished product, etc.)
 - mixing section
 - bathrooms (sinks, hot water, cold water)
 - laboratory
 - employee lounge
 - truck loading dock.
- (b) Plans and <u>very detailed</u> description of plumbing system, tanks, processing apparatus, etc.

12 - Quality control and public health/sanitation program

- (a) Description of methods used to disinfect containers and caps.
- (b) Frequency of quality control of container and cap disinfection.
- (c) Description and frequency of sanitary maintenance of piping and lines, tanks, filters, counterpressure racker, bottling room and washing section.
- (d) Description and frequency of quality control of finished product.

- Submission of official samples

The importer or bottler must send the ministère de l'Agriculture, des Pêcheries et de l'Alimentation du Québec herewith:

- at least 20 units of finished product if each unit contains 500 ml or more of water; or
- at least 60 units of finished product if each unit contains less than 500 ml of water.

Volume

Date

The bottler must provide a written, signed and dated statement certifying that all samples in each size were produced at the same time and within the last three months.

| | | For size For size For size For size For size |
|----|---|--|
| 14 | - | Raw-water analyses |
| | | The importer or bottler must enclose the declarations of the physicochemical, microbiological and actinological analysis laboratories regarding water taken at each catchment contemplated herein. ANALYSES MUST HAVE BEEN PERFORMED LESS THAN A YEAR PRIOR TO THE DATE OF THIS APPLICATION. The analyses must have been performed by a laboratory with no connection to the importer or manufacturer and approved under the legal provisions of the country, state or province of origin. |
| 15 | - | Labelling |
| | | For water distributed in Québec, the importer or bottler must enclose a dummy of the labels for each bottle size contemplated in this application. |
| 16 | - | Bottling date |
| | | The bottle or label for each size to be distributed in Québec will indicate the bottling date as follows: |
| | | Size No. 1: |
| | | Size No. 2: |
| | | |
| | | Size No. 3: |
| | | Size No. 4: |
| | | Size No. 5: |

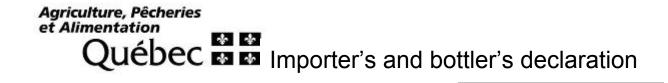
| | If a decoder is required to read the bottling date, the importer or bottler must enclose five copies herewith: |
|------|---|
| | □ Yes □ No |
| 17 - | Attestation of government authorities of the country of origin |
| | The importer or bottler must enclose a government attestation certifying that the bottled water production facilities and operations contemplated in this application comply with the legal provisions in force in the country of origin. |
| | We, the undersigned, declare the above information (pages 1 to 6) to be true and accurate. |
| | Signature and title of importer's representative |
| | |
| | Place and date of signature |
| | Importer's seal |
| | Signature and title of bottler's representative |
| | |
| | Place and date of signature |
| | |
| | Bottler's seal |

Agriculture, Pêcheries et Alimentation Québec Main Importer's and bottler's declaration

Enclosed: 1. Transport of water (item 6)

- 2. Origin of carbon dioxide (item 7)
- 3. Processing (item 8)
- 4. Description of catchments or wells (item 9)
- 5. Description of water transport (item 10)
- 6. Description of plant (item 11)
- 7. Quality control and public health/sanitation program (item 12)
- 8. Official samples (item 13)
- 9. Declarations of analysis laboratories for:
 - (a) physicochemical
 - (b) microbiological, and
 - (c) actinological analyses

 performed on raw water taken directly from catchment sources (item 14)
- 10. Dummies of labels for each bottle size and type of water contemplated (item 15)
- 11. Five copies of each decoder used (item 16)
- 12. Government attestation (item 17)
- 13. Originals and certified translations of the above documents
- 14. Where applicable, the results of water quality monitoring analyses for each catchment.



Project to distribute imported water in Québec

DECLARATION OF PHYSICOCHEMICAL ANALYSIS LABORATORY REGARDING WATER TAKEN DIRECTLY FROM CATCHMENT SOURCES

| Name of labo | poratory: | |
|---------------|---|---------------------------------------|
| Address: | | |
| | | |
| City or town: | 1: | Postal code: |
| Telephone: (| () | |
| We hereby co | certify that the following information is true and ac | curate. |
| - Our la | laboratory is approved under the legal provisions i | n force at the above address. |
| - We co | collected and analyzed the samples contemplated in | n this application at the request of: |
| Name | ne of applicant: | |
| Addr | ress: | |
| | | |
| City | or town: | Postal code: |
| Telep | phone: () | |
| - All sa | samples were taken directly from the source comm | ercially known as: |
| Trade | le name of water: | |

- We analyzed the samples according to the methods described below and obtained the following results:

Québec Importer's and bottler's declaration

| PARAMETER | ANALYSIS METHOD | UNIT OF MEASUREMENT | CATCHMENT NO. 1 | CATCHMENT NO. 2 | CATCHMENT NO. 3 | CATCHMENT NO. 4 | CATCHMENT NO. 5 |
|--|-----------------|------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| INORGANIC SUBSTANCES | I | | | | | | |
| Total alkalinity | | | | | | | |
| Bicarbonates | | | | | | | |
| Calcium | | | | | | | |
| Chlorides | | | | | | | |
| Conductivity at 25°C | | | | | | | |
| Colour | | | | | | | |
| Fluorides | | | | | | | |
| Magnesium | | | | | | | |
| Nitrates + Nitrites | | | | | | | |
| pH (in lab) | | | | | | | |
| Potassium | | | | | | | |
| Total silica | | | | | | | |
| Sodium | | | | | | | |
| Dissolved solids at 180°C after filtration at 0.45 microns | | | | | | | |
| Water temperature at source | | | | | | | |
| Turbidity | | | | | | | |
| Sulphates | | | | | | | |

| Laboratory seal | Performed at, | | - , | , on, | ,, 19, | |
|-----------------------------|------------------------|----------------|-----------|-------|--------|--|
| | | (municipality) | (country) | | (date) | |
| | of laboratory director | | | | | |
| Ministère de l'Agriculture, | • | • | | | | |

Agriculture, Pêcheries et Alimentation

Québec Importer's and bottler's declaration

| PARAMETER | ANALYSIS METHOD | UNIT OF MEASUREMENT | CATCHMENT NO. 1 | CATCHMENT NO. 2 | CATCHMENT NO. 3 | CATCHMENT NO. 4 | CATCHMENT NO. 5 |
|----------------------|-----------------|------------------------|--------------------|--------------------|--------------------|--------------------|-----------------|
| INORGANIC SUBSTANCES | 11 | | | | | | |
| Total iron | | | | | | | |
| Aluminum | | | | | | | |
| Silver | | | | | | | |
| Copper | | | | | | | |
| Lead | | | | | | | |
| Zinc | | | | | | | |
| | <u> </u> | <u> </u> | 1 | 1 | <u> </u> | <u> </u> | |

| PARAMETER | ANALYSIS METHOD | UNIT OF MEASUREMENT | CATCHMENT NO. 1 | CATCHMENT NO. 2 | CATCHMENT NO. 3 | CATCHMENT NO. 4 | CATCHMENT NO. 5 | | | |
|----------------------|--------------------------|------------------------|--------------------|--------------------|--------------------|--------------------|-----------------|--|--|--|
| INORGANIC SUBSTANCES | INORGANIC SUBSTANCES III | | | | | | | | | |
| Total manganese | | | | | | | | | | |
| Nitrites | | | | | | | | | | |
| Ammonia nitrogen | | | | | | | | | | |
| Cyanides | | | | | | | | | | |
| Sulphides | | | | | | | | | | |
| Antimony | | | | | | | | | | |
| Arsenic | | | | | | | | | | |
| Barium | | | | | | | | | | |

| Laboratory seal | Performed at, | (municipality) | (country) | , | on, | , , , , | 19, |
|--------------------------|-------------------------|------------------------|-----------|---|-----|---------|-----|
| | Signature of | of laboratory director | | | | | |
| Ministère de l'Agricultu | ire des Pêcheries et de | l'Alimentation | | | | | |

Agriculture, Pêcheries et Alimentation

Québec Importer's and bottler's declaration

| PARAMETER | ANALYSIS METHOD | UNIT OF MEASUREMENT | CATCHMENT NO. 1 | CATCHMENT NO. 2 | CATCHMENT NO. 3 | CATCHMENT NO. 4 | CATCHMENT NO. 5 |
|------------------|-----------------|------------------------|--------------------|--------------------|--------------------|--------------------|-----------------|
| Boron | | | | | | | |
| Total phosphorus | | | | | | | |
| Cadmium | | | | | | | |
| Chromium | | | | | | | |
| Mercury | | | | | | | |
| Selenium | | | | | | | |
| Uranium | | | | | | | |
| Bromides | | | | | | | |

| Laboratory seal | Performed at, | , | | , on, | ,, 19, | |
|-----------------|---------------|------------------------|-----------|-------|--------|--|
| • | | (municipality) | (country) | | (date) | |
| | Signature o | of laboratory director | | | | |

Agriculture, Pêcheries et Alimentation Québec Importer's and bottler's declaration

| PARAMETER | ANALYSIS METHOD | UNIT OF MEASUREMENT | CATCHMENT NO. 1 | CATCHMENT NO. 2 | CATCHMENT NO. 3 | CATCHMENT NO. 4 | CATCHMENT NO. 5 | | |
|---|-----------------|------------------------|--------------------|--------------------|--------------------|--------------------|-----------------|--|--|
| ORGANIC SUBSTANCES I | | | | | | | | | |
| Dissolved organic carbon | | | | | | | | | |
| Oxygen chemical requirement | | | | | | | | | |
| Volatile organic compounds | | | | | | | | | |
| ORGANIC SUBSTANCES II | | | - | | | | | | |
| Semi-volatile organic compounds (EPA 525) | | | | | | | | | |
| ORGANIC SUBSTANCES III | | | | | | | | | |
| Anionic surfactants | | | | | | | | | |
| Each pesticide used in wellhead area | | | | | | | | | |

| Laboratory seal | Performed at, _ | (municipality) | (country) | , on, | ,, 19, | |
|-----------------|-----------------|------------------------|-----------|-------|--------|--|
| | Signature | of laboratory director | | | | |

declaration of actinological analysis laboratory regarding water taken directly from catchment sources

Project to distribute imported water in Québec

| Name of laborat | ory: |
|-----------------|---|
| Address: | |
| | |
| City or town: | Postal code: |
| Telephone: () | |
| - We hereby | certify that the following information is true and accurate |
| - Our labora | tory is approved under the legal provisions in force at the above address. |
| - We collect | ed and analyzed the samples contemplated in this application at the request of: |
| Name of | applicant: |
| Address: | |
| | |
| City or to | own: Postal code |
| Telephor | ne: () |
| - All samp | oles were taken directly from the source commercially known as: |
| Trade na | me of water: |

We analyzed the samples according to the methods identified below and obtained the following results:

Agriculture, Pêcheries et Alimentation

declaration of actinological analysis laboratory regarding water taken directly from catchment sources

| PARAMETER | ANALYSIS METHOD | UNIT OF MEASUREMENT | CATCHMENT NO. 1 | CATCHMENT NO. 2 | CATCHMENT NO. 3 | CATCHMENT NO. 4 | CATCHMENT NO. 5 |
|--|--------------------|------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| ACTINOLOGY I | | | | | | | |
| Combined radium 226- 228 count | | | | | | | |
| Global alpha activity count (including radium 226 but excluding radon and uranium) | | | | | | | |
| Total beta activity count | | | | | | | |

| Laboratory seal | Performed at, | (municipality) | (country) | on, | ,, 19, |
|-----------------|---------------|----------------------------|-----------|-----|--------|
| | Signature | e of laboratory director _ | | | |



Declaration of microbiological analysis aboratory regarding water taken directly from catchment sources

Project to distribute imported water in Québec

| Nam | ne of laboratory: | |
|------|--|---|
| Add | ress: | |
| | | |
| City | or town: | Postal code: |
| Tele | phone: () | |
| We l | hereby certify that the following information is | strue and accurate. |
| - | Our laboratory is approved under the legal [| provisions in force at the above address. |
| - | We collected and analyzed the samples con | ntemplated in this application at the request of: |
| | Name of applicant: | |
| | Address : | |
| | | |
| | City or town: | Postal code: |
| | Telephone: () | |
| - | All samples were taken directly from the so | ource commercially known as: |
| | Trade name of water: | - |
| _ | We analyzed the samples according to the r | methods identified below and obtained the following i |

Agriculture, Pêcheries et Alimentation

Declaration of microbiological analysis Québec laboratory regarding water taken directly from catchment sources

| | - Catchinicht Sources | | | | | | | | |
|---|--|------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|--|--|
| PARAMETER | ANALYSIS METHOD | UNIT OF MEASUREMENT | CATCHMENT NO. 1 | CATCHMENT NO. 2 | CATCHMENT NO. 3 | CATCHMENT NO. 4 | CATCHMENT NO. 5 | | |
| Total bacteria count per 1 ml incubated on plain agar at 35-37°C for 48 hours | | | | | | | | | |
| Identification of bacteria present in 4 L of filtered water or Identification of pathogens (note) | | | | | | | | | |
| Parasites in 380 litres | ASTM Vol. 11.02, Water Vol. 2, PCN 01- 110292-16 | | | | | | | | |
| Total coliform count per 100 ml | | | | | | | | | |
| Pseudomonas Aeruginosa per 100 ml | | | | | | | | | |
| Fecal streptococci per 100 ml | | | | | | | | | |
| Algae | | | | | | | | | |
| Yeast | | | | | | | | | |
| Mould | | | | | | | | | |

Note: The laboratory must specify the pathogens looked for and describe in detail the analysis method used in each case, including the volume sampled.

| Laboratory seal | Performed at, | (municipality) | ,, (country) | on, | ,, 19 | , |
|-----------------|---------------|--------------------------|--------------|-----|-------|---|
| | Signature o | of laboratory director _ | | | | |

Agriculture, Pêcheries et Alimentation

Declaration of microbiological analysis

and the contraction laboratory regarding water taken directly from catchment sources