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MAY - 7 1998

Ms. Janine Ferretti
Interim Executive Director
Secretariat
Commission for Environmental Cooperation
393 St. Jacques Street West, Suite 200
Montreal, Quebec
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Dear Ms. Ferretti:

I am writing in response to your letter dated February 19. In it, the Secretariat is requesting information under Article 21(1)(b) of the North American Agreement on Environmental Cooperation, relating to the submission by the *Centre québécois du droit de l'environnement*.

I have enclosed our response to this request.

Yours sincerely,

For Avrim Lazar
Assistant Deputy Minister
Policy and Communications



Enclosure

Canada



**Canada's Response to the
Request for Information Under
Paragraph 21 (1) (b) of the
North American Agreement on
Environmental Cooperation**

8 April 1998

The purpose of this document is to respond to the request for information by the Secretariat of the Commission for Environmental Cooperation under paragraph 21 (1) (b) of the North American Agreement on Environmental Cooperation concerning certain monitoring methods used by Quebec in the application of its own legislation.

1.0 The 1988 Policy on Compliance with Environmental Standards and Monitoring Plans

As requested, attached is a copy of the Policy on Compliance with Environmental Standards (*Politique de conformité aux normes environnementales*), adopted in 1988, (**Appendix 1**) in addition to several monitoring plans typical of those in various regional departments (**Appendix 2**)

Because the importance of agriculture varies from region to region, care has been taken to include plans from highly agricultural regions (Lanaudière and Estrie) as well from regions where agriculture is less important than other activities (Bas-Saint-Laurent and Mauricie).

2.0 Are all the listed documents currently in effect, have they been replaced or modified, what order of precedence do they have and how are they applied in the agricultural sector by Quebec's Ministry of the Environment and Wildlife?

The 1988 Policy on Compliance with Environmental Standards came about as a result of the desire within the Quebec ministry of the environment and wildlife (MEF—*ministère de l'Environnement et de la Faune*) to determine the ministerial objectives and fully assume its responsibilities. It was an innovative policy that based the implementation of laws and regulations on the management by results concept. The results obtained were compiled from administrative and environmental performance indicators.

This Policy formed the framework for and dictated a good number of the methods that were developed and put in place to apply environmental regulations more rigorously: guides to regulatory application, inspection programs, training programs, computer systems, etc.

The Policy continued to be in effect until 1992. In January 1994, two ministries—the ministry of the environment (*ministère de l'Environnement*) and the ministry of recreation, hunting and fishing (*ministère du Loisir, de la Chasse de la Pêche*)—were combined to form the MEF, which undertook a restructuring of services and departments at both central and regional levels.

With the creation of the MEF, new strategic orientations were adopted; the 1988 Policy was not updated and thus no longer took the new reality into account. The monitoring and implementation components of the Policy took other forms. In fact, with respect to methods of

monitoring and implementing the laws and regulations, the Policy was replaced by a Guide to Inspection Procedures (*Guide sur le processus d'inspection*) which was adopted in 1992.

The Guide and the inspection procedure it describes can, however, be thought of as being products of the overall objectives stated in the 1988 Policy. This procedure was actually developed during 1989 and 1990 and was introduced gradually in 1991. It officially came into effect in 1992 and is still in effect today. The procedure is clearly outlined in the Guide and constitutes a significant portion of the MEF's power of intervention.

The monitoring plans adopted by the regional departments are complementary to the Guide to Inspection Procedures, particularly with respect to the type and frequency of inspections—both planned and projected—used to verify agricultural-sector compliance with environmental standards.

It should be noted that the 1988 Policy, while a public document, was above all administrative in nature. It was aimed at clarifying the actions and activities that the Ministry carried out in order to ensure the application of laws and regulations, and was addressed only indirectly to businesses or clients. This was unlike many other policies that state actions or measures that the businesses or clients must carry out themselves such as the Policy on Riverbank and Coastline Protection (*Politique sur la protection des rives de du littoral*), the Policy on Integrated Waste Management (*Politique sur la gestion intégrée des déchets*), or policies on waste snow or contaminated soils.

3.0 If these documents are in effect or if they have been replaced or modified, how can the apparent differences in monitoring methods between the Policy, the Analytical Framework, the Proposal and possibly those in various plans be explained?

As has been underlined above, from 1992 to 1997 the Guide to Inspection Procedures was applied by the regional departments, to which was added the Analytical Framework for Livestock Operations (*Cadre d'examen des projets de production animale*). A proposal called the General Monitoring Procedure (*Procédure générale de contrôle*) was a working document that the regional departments used for reference but which was never officially ratified.

In general, the 1988 Policy was the inspiration for a transparent and structured inspection process that gradually evolved into other tools such as the Inspection Guide, the Analytical Framework and the General Inspection Procedure. These tools have, over the years, formed the foundation of regional plans that have been gradually updated as experience has been gained, both on farms and before the courts.

In order to understand the roles played by the Analytical Framework and the General Inspection Procedure in the application of regulatory measures, it is important to consider the following points.¹

3.1 The 1996 Analytical Framework

The Analytical Framework on Livestock Operations, adopted in September 1996, stipulates on one hand, standards that are more restrictive than the minimum regulatory requirements, and on the other hand, proposes an additional impact assessment process. Complementary to this framework is a document entitled Additional Information Concerning Livestock Operations (*Informations supplémentaires concernant les projets d'établissement de production animale*).²

The Analytical Framework's primary purpose is to specify to applicants for authorization certificates, what to include when the MEF requests additional information. It also offers applicants methods by which they can minimize the impacts of their projects on the environment.

As a result, projects subject to the Analytical Framework are assessed more rigorously and, if further examination shows it to be necessary, can be given greater attention during MEF inspections.

3.2 The 1995 General Monitoring Procedure

The 1995 General Monitoring Procedure consolidates the experience acquired by the regional departments over the years; in this sense, it is a continuation of the Policy. While this document was only a proposal, it was widely disseminated within the MEF and several regional departments used it as a guide to applying their own inspection plans.

The Procedure never got past the proposal stage because at the same time, discussions were underway to change the Regulation Respecting the Prevention of Water Pollution by Livestock Operations (*Règlement sur la prévention de la pollution des eaux par les établissements de production animale*). On 4 June 1997, a new set of regulations was adopted: the Regulation on the Reduction of Agricultural Pollution (*Règlement sur la réduction de la pollution d'origine agricole*).

¹ See the Analytical Framework in Appendix 19 of the 9 September 1997 *Canadian Response* and the General Monitoring Procedure in Appendix 22 of the same document.

² See Appendix 20 of the 9 September 1997 *Canadian Response*.

4.0 How is the Analytical Framework applied? Does data exist concerning the analyses carried out under this Framework? Has the MEF produced other supplementary documents or guides concerning specific problems in the agricultural sector and if yes, how have they been applied?

The 1996 Analytical Framework is not by itself an inspection procedure for the application of regulatory measures. It is an analytical tool used for projects that, from an environmental standpoint, are generally more complex, and whose size, location or general nature make them more likely to affect the environment. This Analytical Framework was distributed and implemented in all regional departments and is still in effect.

Between 1994 and 1997, there were 516 projects that were subject to the Analytical Framework. These projects were authorized only after having complied with both environmental standards and any other additional conditions imposed.

No other supplementary documents or guides exist concerning specific agricultural-sector problems. It should be noted however, that in May 1997, a pork-producing project was the subject of a special directive (see **Appendix 3**). The proposed site of this project was a peat bog, but after analyzing the problems associated with establishing it on the proposed site, it was decided to authorize it in a different location.

5.0 With respect to the MEF's monitoring methods, the Policy stipulates the publication of an annual report on businesses' environmental performance within the framework of a Results Management Report. What have the agricultural sector results been since the Policy has come into effect?

The 1988 Policy did stipulate that businesses publish annual reports within the framework of a Results Management Report (*Rapport sur la gestion des résultats*). The results were grouped by range of activity, and environmental performance was evaluated within each of these "ranges" using administrative and performance indicators. Four reports were published—in 1987–88, 1988–89, 1989–90 and the last one in 1990–91. These four reports all used the same term of reference and the agricultural sector was included in the section called "Incentives for the Sustainable Use of Resources" (*Incitation à l'exploitation durable des ressources*). An example can be found in **Appendix 4**, an excerpt from the 1990–91 report, published in 1992, that covers the period from 1988–91.

During this period, 2743 certificates of authorization were issued and 243 applications were denied. The MEF also dealt with 949 complaints concerning water pollution, while 994

establishments received notices (notices of warning, infraction, enforcement and legal proceedings). 1949 storage systems were constructed representing a total investment of C \$34, 918,632. A total of 1521 storage systems were modified to comply with regulations.

Publishing annual reports on result management proved to be a difficult process because of, among other things, changes in the MEF's structure and the complexity of gathering data for certain environmental indicators. Also, in 1992, efforts were concentrated primarily on producing an overview of the state of the environment in Quebec. This overview was published in 1993. In 1994, the MEF chose to present these data by including a table on Regulatory Application Statistics (*Statistiques d'application réglementaire*) in its annual report. This practice was continued in subsequent annual reports.

6.0 The Policy stipulates that a Prioritizing Committee determine which sectors are subject to the inspections provided for in the annual report. How are these priorities established? Has the agricultural sector been a priority since the Policy has come into effect? If yes, which of the various and diverse agricultural activities have been recognized as priorities? When the Communication was filed, were agricultural activities among the Committee's priorities? If so, what was the nature of the inspection program?

The efforts of the MEF during the years that the Policy was in effect, and in subsequent years, demonstrate that pollution control in the agricultural sector has always been a priority. This is still true today; the control of agricultural pollution is one of the MEF's strategic objectives and makes up one of six areas of priority. In April 1997, a team dedicated to this "area" was formed. Its goals are to examine the problems faced by the agricultural community and the best means to solve their very real difficulties, not only with regard to the application of regulations but also concerning sustainable and environmentally-friendly agricultural development. This team, headed by the agricultural and environmental sector policy director, is supported by a technical advisory committee that helps to direct the work and provide added stimulus. As a reference, **Appendix 5** includes the document entitled MEF Directions for 1997-98 (*Les orientations du ministère de l'Environnement et de la Faune pour 1997-98*).

Thus, from 1994 until the present, inspecting and verifying projects on farms with regard to compliance with environmental standards has been a priority. Moreover, the MEF has actively participated on interdepartmental committees exploring better technologies to reduce agricultural pollution. On 22 February 1993 it signed a Canada-Quebec agreement on sustainable agricultural development. A total of C \$40 million was set aside to finance new programs aimed at supporting the Quebec agricultural sector in its effort to become more environmentally

friendly and helping agricultural operations better manage and conserve their resources.³ For the next two years, the MEF will also allocate C \$500,000 to the Agro-environmental Research and Development Institute (*Institut de recherche et de développement en agroenvironnement*) to finance research, development and pilot projects. This contribution comes from the environment portion of the Governmental Priority Fund in Science and Technology (*Fonds des priorités gouvernementales en sciences et en technologie*).

As has been mentioned, the 1988 Policy stipulated that a committee be established within the Inspections and Inquires Branch (*Direction générale des inspections et des enquêtes*) to determine which sectors should be prioritized under the inspection program. In fact, the committee was never formed and the regional departments were allowed to set their own priorities with regard to inspection programs. On 28 April 1994, inspection duties were officially handed over to the regional departments, confirming the fundamental role played by these departments in carrying out inspections. At the same time, an Investigations Directorate (*Direction des enquêtes*), a central division reporting directly to the Deputy Minister, was established.

Today, the Investigations Directorate reports to the Assistant Deputy Minister of Operations (*sous-ministre adjoint aux opérations*). Investigative responsibilities are assumed by regional departments, thus inspection priorities are still made at this level. Priorities are first of all determined along ministerial lines but must also take into account local issues and the human and budgetary resources available to each regional department.

Responses to previous questions will help to set the context in which regional departments have been operating and the monitoring methods employed. In heavily agricultural regions, local departments have clearly prioritized activities related to this sector. In regions where urbanization and industrialization are more important, activities related to these sectors have been targeted. Overall, regional departments have assumed the following duties:

- to establish agricultural pollution monitoring plans;
- to closely examine all submitted files and if necessary, order modifications so that buildings or equipment comply with environmental standards;
- to be more stringent with respect to certain projects examined under the Analytical Framework;
- to monitor most projects by verifying their compliance to standards once they have been completed; and
- to follow up on all admissible written complaints;

³ See Appendix 16 of the 9 September 1997 *Canadian Response*. This document summarizes the research and development projects, many of which concern farm effluent management, to which the MEF and Government of Canada have contributed.

7.0 A number of these documents, including the regulations, refer to the principle of “animal units.” This term is important to both the process of determining compliance prior to granting permits to livestock operations and to verifying whether regulations and permits are being respected. How is this term interpreted and applied by the MEF? How are animal units calculated? What types of monitoring methods does the MEF use in order to ensure that regional interpretations and applications of this term are consistent?

In this area, it is preferable to use the term “concept” rather than “principle” because a principle is associated with something that is unchanging. The “animal unit” concept was introduced when the Regulation Respecting the Prevention of Water Pollution in Livestock Operations came into effect on 10 June 1981.

7.1 *How are animal units calculated?*

Article 1 of the Regulation defines an “animal unit” as follows:

“the reference unit established according to the animal species in a livestock production operation as defined in Appendix B.”

Appendix B establishes an equivalent “animal unit” for most farm animals in Quebec according to their quantity. For certain classes of animals such as bovines, porcines and galliformes it even goes so far as to create sub-classes according to weight at the end of the breeding period.

Appendix B	
<p>For the purpose of applying this regulation, the following animal types and quantities are equivalent to one animal unit.</p> <p>1 cow 1 bull 2 calves weighing between 225 and 500 kilograms each 5 calves weighing less than 225 kilograms each 1 horse 5 breeding pigs weighing between 20 and 100 kilograms each 25 piglets weighing less than 20 kilograms each 4 sows and their unweaned yearling piglets 125 hens or roosters 250 broiler hens 250 growing pullets 1 500 quails 300 pheasants</p>	<p>.50 broiler turkeys weighing 13 kilograms each .100 broiler turkeys weighing between 5 and 5.5 kilograms .75 broiler turkeys weighing between 8.5 and 10 kilograms 100 female minks (males and young are not counted) 40 female foxes (males and young are not counted) 4 sheep and their yearling lambs 6 goats and their yearling kids 40 female rabbits (males and young are not counted)</p> <p>Weights in this appendix are those of animals at the end of the breeding period.</p> <p>For all other animal species, 500 kilograms is equivalent to one animal unit.</p>

Thus, if the pig is used as an example, Appendix B differentiates breeding pigs (weighing from 20 to 100 kg) from piglets (weighing less than 20 kg) and sows (including their unweaned piglets). The weight limit for piglet is thus 20 kg; over this weight the animal is considered to be a breeding pig.

Appendix B also gives a general rule for animals not specifically identified:

“For all other animal species, 500 kilograms is equivalent to one animal unit.”

The animal unit concept is used so that various farm animals can be compared in terms of the amount of nitrogen contained in their excrement. For example, in the early 1980s, it was scientifically established that a cow—the farm animal used as a reference for the animal unit concept—produced 80 kg of nitrogen in the form of organic fertilizer. The annual amount of nitrogen produced by other animals was thus compared to this unit of reference. It was then possible to determine the number of animals required to equal the annual nitrogen discharge of this “animal unit.”

This concept became the cornerstone of the 1981 Regulation because it establishes the amount of organic nitrogen to apply in terms of both cultivated land and the animals of the livestock operation. Moreover, Appendix F of this regulation sets the ratio of “animal units per hectare,” which is the maximum number of animal units allowed for each type of cultivation. Relating “animal units” to an applied nitrogen limit for cultivation was a legislative response to a need for standardizing and simplifying the analysis of a considerable number of authorization requests every year. Thus, Appendix F lays out soil *support capacity* for animal manure based on a crop’s nitrogen requirements.

7.2 *How is the “animal unit” concept interpreted by the MEF?*

Genetic changes in farm animals, changes in animal production techniques and market forces have led to modifications in the weight limits for various breeding categories. These modifications have been felt most strongly in pork production. For example, today the limit for a breeding pig is set at 108 kg, rather than 100 kg; piglets are often sent to feeding houses at 30 kg, rather than 20 kg.

These production changes have had an effect on the way the Regulation is interpreted when applications for certificates of authorization are analyzed. For instance, how many animal units are there in an operation with 1000 piglets with live weights of up to 30 kg? There are at least three legitimate interpretations:

1. The animals that fall in the 20–30 kg bracket are counted as breeding pigs (i.e., 5 head per animal unit); the rest of the animals are counted as piglets (i.e., 25 head per animal unit). Thus, in a rotating breeding system where 25 percent of the herd is in the 20–30 kg bracket, 1000 head would be counted as **80 animal units**.
2. Given that the weight at the end of the breeding period falls within the category corresponding to a breeding pig under Appendix B of the Regulation, all the animals are counted as breeding pigs. The same number of animals would then be **200 animal units**.
3. As this breeding category is not explicitly stated in the Regulation, the general rule of 500 kg per animal unit is used. The same 1000 head would then be counted as **60 animal units**.

The above example demonstrates the extent to which Appendix B of the Regulation is open to interpretation. In fact, this very situation arose on several occasions during the period covered by the Communication (i.e., October 1995 to 24 May 1996). On the latter date, the central authority of the MEF issued an inter-office memorandum clarifying all interpretations. This memorandum can be found in **Appendix 6**.

7.3 *What types of monitoring methods are used by the MEF in order to ensure that regional interpretations and applications of this term are consistent?*

The ministry uses three administrative procedures to formalize attitudes, set out codes of conduct or interpret regulations, policies or technical briefings.

The first and most recent is the publication of an **interpretive guide**, and in fact, no such guide has been written for the Regulation Respecting the Prevention of Water Pollution in Livestock Operations. A digest on the application of the Assistance Program for the Improvement of Manure Management (PAAFG—*Programme d'aide à l'amélioration de la gestion des fumiers*) served as a management guide, however in 1993 the guide ceased to be used when this program was transferred to the Quebec ministry of agriculture, fisheries and nutrition (*ministère de l'Agriculture, des Pêcheries et de l'Alimentation du Québec*).

The second procedure is the **memorandum of instruction**. This is a standardized note which states the problem and gives instructions on what actions should be taken. This very precise procedure was instituted in 1995. An example of a memorandum of instruction is given in **Appendix 7**.

Finally, there is the **inter-office memorandum**. This is less standardized, but more rapidly drawn up than the memorandum of instruction. It is used to deal with urgent situations.

In the case with which the present document concerns itself, an inter-office memo was used to define the context of the MEF's actions concerning the calculation of animal units. Appendix 6, cited above, contains the inter-office memo from the Deputy Minister and the one which followed from the Assistant Deputy Minister of Operations. Given the important consequences of this memorandum, frequent discussions were held in order to ensure that it was understood correctly.

Also, in order to ensure that analysts correctly apply the interpretations issued by MEF authorities when processing applications for certificates of authorization, the department head verifies the contents of applications and projects. This is done before applications are approved by the regional director, the person authorized to act for the Minister. The analyst also makes certain that the holder of a newly-granted certificate is registered in the inspection program so that the livestock operation can be monitored.