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**NOTICE OF ARBITRATION**

**Under the UNCITRAL Arbitration Rules  
and  
The North American Free Trade Agreement**

**DOW AGROSCIENCES LLC**

**Claimant/Investor**

**v.**

**GOVERNMENT OF CANADA**

**Respondent/Party**

March 31, 2009

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## **NOTICE OF ARBITRATION**

*Under the UNCITRAL Arbitration Rules  
and  
The North American Free Trade Agreement*

**DOW AGROSCIENCES LLC**

**v.**

**GOVERNMENT OF CANADA**

1. Pursuant to Article 3 of the United Nations Commission on International Trade Law (“**UNCITRAL**”) Arbitration Rules and Articles 1116, 1117, 1120 and Section B of Chapter 11 of the North American Free Trade Agreement (“**NAFTA**”), the Claimant, Dow AgroSciences LLC (“**DAS**”), initiates recourse to arbitration under the UNCITRAL Arbitration Rules, both on its own behalf and on behalf of its Canadian enterprise, Dow AgroSciences Canada Inc. (“**DASCI**”).

### **I. Consent and Waivers**

2. Pursuant to Article 1121 of NAFTA, DAS (the “**Claimant**” or “**Investor**”) on its own behalf and that of DASCI (the “**Investment**” or “**Enterprise**”) consent to arbitration in accordance with the procedures set out in NAFTA.
3. DAS and DASCI waive the right to initiate or continue before any administrative tribunal or court under the laws of any Party, or other dispute settlement procedures, any proceedings with respect to the measures described herein that are alleged to be breaches referred to in Article 1116 and/or 1117, except for proceedings for injunctive, declaratory or other extraordinary relief, not involving the payment of damages, before an administrative tribunal or court under the laws of Canada.
4. Attached hereto as Schedule 1 are the consents and waivers of DAS and DASCI.

**II. Demand that the Dispute be Referred to Arbitration**

5. Pursuant to Article 1120(1)(c) of NAFTA, DAS hereby demands that the dispute between it and the Government of Canada (“Canada”) be referred to arbitration under the UNCITRAL Arbitration Rules.

**III. Names and Address of the Parties**

5. Claimant/Investor: Dow AgroSciences LLC  
9330 Zionsville Road  
Indianapolis, IN 46268  
U.S.A.
6. Respondent/Party: Government of Canada  
Office of the Deputy Attorney General of Canada  
Justice Building  
284 Wellington Street  
Ottawa, ON K1A 0H8
7. Enterprise: Dow AgroSciences Canada Inc.  
2100- 450 1 ST SW  
Calgary, AB T2P 5H1

**IV. Reference to Arbitration Clause that is Invoked**

6. DAS invokes Section B of Chapter 11 of NAFTA, and specifically relies upon Articles 1116, 1117, 1120 and 1122 of NAFTA as authority for the arbitration. Section B of Chapter 11 of NAFTA sets out the provisions agreed upon concerning settlement of disputes between a NAFTA Party and an Investor of another Party.

**V. Reference to Contract out of Which Dispute Arises**

7. The dispute is in relation to the Claimant’s Investment in Canada and the damages that have arisen out of measures undertaken by the Government of the Province of Québec (“Québec” or “Government of Québec”) in breach of the obligations under Chapter 11

of NAFTA. As a Party to NAFTA, Canada is responsible for the NAFTA-inconsistent conduct of Québec.

## **VI. General Nature of the Claim and Indication of the Amount Involved**

### ***A. Summary of Dispute***

8. DAS alleges that Canada has breached and continues to breach its obligations under Chapter 11 of NAFTA, including Articles 1105 and 1110 thereof.
9. Canada, through the measures implemented by Québec, is in breach of international law and its obligations under Article 1105 by failing to provide basic due process, failing to act in a transparent manner, breaching the legitimate expectations of DAS and DASCI and breaching its obligations of good faith and natural justice. The measures at issue are also inconsistent with Article 1110 and constitute an unlawful expropriation of the Claimant's Investment.

### ***B. Procedural History***

10. This Notice of Arbitration follows the Notice of Intent to Submit a Claim to Arbitration filed by DAS on August 25, 2008 in accordance with Article 1119 of NAFTA (the "Notice of Intent"), attached hereto as Schedule 2. The contents of the Notice of Intent are hereby incorporated by reference in this Notice of Arbitration.

### ***C. Background Facts***

11. The Investor, DAS, is a limited liability company organized under the laws of the State of Delaware, U.S.A, with its head office in Indianapolis, Indiana. DAS was organized as a Delaware limited liability company in 1997. Through intermediary companies, DAS is wholly owned by a U.S. publicly-traded corporation incorporated in Delaware. The

Investment, DASI is a Canadian corporation and is an indirect wholly-owned subsidiary of DAS.

12. The Claimant is engaged in the manufacture and sale of specialty chemical products. These products are used in diverse business sectors including agriculture and specialty market segments.
13. Among other products, DAS manufactures the active ingredient 2,4-D in the United States for sale to various companies in numerous countries, including Canada.
14. DASI was incorporated in 1989 under the laws of Canada and has its head office in Calgary, Alberta.
15. DASI has been granted registrations under the Canadian *Pest Control Products Act* (“PCPA”) for 2,4-D technical active ingredient and 2,4-D manufacturing concentrate.
16. DAS and DASI sell PCPA-registered technical active ingredient and manufacturing concentrate to a number of companies that formulate lawn and turf care products for sale and use in Canada. Prior to the implementation of the measures at issue in this arbitration, DAS and DASI had sold 2,4-D that was an ingredient in certain commercial and domestic use lawn and turf products sold in Québec.
17. Effective April 3, 2006, provisions of the Québec *Pesticides Management Code* (the “Code”) came into force which ban the selling or offering for sale of “Class 4” and “Class 5” pesticides containing a prohibited active ingredient, such as 2,4-D, for use on lawns. The ban also prohibits the application of certain pesticides containing 2,4-D on a lawn other than a golf course (collectively the “Ban”).
18. The key provisions of the Code are:

- (a) Section 25: a prohibition on the sale or offering for sale of Class 4 or Class 5 pesticides that contain an active ingredient listed in Schedule (Annex) I and that are intended to be applied on lawns;
  - (b) Section 26: a prohibition on the sale of Class 4 pesticides that have been mixed or impregnated with fertilizer; and
  - (c) Section 68: a prohibition on the application of pesticides containing an active ingredient listed in Schedule (Annex) I on a lawn other than a golf course lawn by a commercial applicator (e.g., lawn care companies, etc.).
19. The Ban was adopted and has been subsequently maintained notwithstanding:
- (a) numerous assessments conducted by national and international agencies prior to the Ban, which have concluded that 2,4-D meets strict health and safety standards;
  - (b) the acknowledgement by Québec that there was no scientific basis to impose the Ban at the time it was adopted;
  - (c) an undertaking by Québec to review the Ban following the completion of re-assessment of 2,4-D by Canada's Pest Management Regulatory Agency ("PMRA") and the United States Environmental Protection Agency ("EPA"); and;
  - (d) the completion of re-assessments of 2,4-D by the PMRA and the EPA subsequent to the Ban, which confirmed that 2,4-D meets modern health and safety standards.
- D. No Scientific Basis to Impose the Ban***
20. At the time the Code was originally adopted in 2003, there was already an extensive body of scientific research on 2,4-D. All of the main expert panels shared the same conclusion – after extensive testing there was no evidence that 2,4-D posed a health or safety risk to

humans when used according to label directions. A summary of these studies is included at paragraph 25 of the Notice of Intent.

***E. Québec Acknowledged there was no Scientific Basis for the Ban***

21. Québec was aware of, and acknowledged, the absence of a valid scientific basis for imposing the Ban prior to the adoption of the Code.
  
22. Documents obtained through access to information make clear that the Government of Québec knew that there was no scientific basis to support the Ban. In a Québec Government document entitled “Fiche pour information – Code de Gestion des Pesticides” dated September 23, 2002, it is stated:

[Translation:]

Prohibition on the use of certain active ingredients  
(Annex 1)

(Prohibition on the lawns of municipal and government lands as of the coming into force and in three years for green spaces by prohibiting their use by ornamental horticulture businesses and by prohibiting the sale of these products for domestic use – s. 23, 29 and 63). This item is the most significant both in terms of objections and support.

Certain herbicides in Annex 1 (2,4-D, MCPA, Mecoprop) cannot be prohibited on a scientific basis (carcinogenic risk and others). Briefs submitted by companies that produce these active ingredients emphasized this. These are active ingredients commonly used on lawns, and their prohibition has raised many objections and congratulations. However, we must rethink our position on this or base our argument on other grounds.

[Original:]

L'Interdiction d'utiliser certains ingrédients actifs  
(Annexe 1)

(Interdiction sur la pelouse des terrains gouvernementaux et municipaux dès l'entrée en vigueur et dans trois ans pour les espaces verts en interdisant leur utilisation par les entreprises d'horticulture ornementale et en interdisant la vente de ces produits au domestique – art. 23, 29 et 63). Cet élément est l'élément majeur autant pour la contestation que l'appui reçu.

Certains herbicides de l'annexe 1 (2,4-D, MCPA, Mécoprop) ne peuvent être interdits sur une base scientifique (risque de cancérogénéicité et autres). Les mémoires des compagnies productrices de ces ingrédients actifs nous l'ont souligné. Ce sont des ingrédients actifs couramment utilisés sur les pelouses et sur lesquels leur interdiction a soulevé beaucoup de contestations ou de félicitations. Il faut cependant revoir notre position à ce sujet ou appuyer notre argumentation sur d'autres éléments.



Several other pesticides could be added to take into account comments from the health sector.

Quelques autres pesticides pourraient être ajoutés pour tenir compte des commentaires du secteur de la santé.

If these products were to be prohibited, it would have to be on other less “firm” grounds such as the precautionary principle or make it a policy decision resulting from the will of the population (like the prohibition of chemical pesticides in the forest imposed by the Forest Protection Strategy).

Si on devait interdire de nouveau ces produits, il faudrait se baser sur d’autres bases moins “solides” comme le principe de précaution ou en faire une décision politique découlant de la volonté de la population (comme l’interdiction des pesticides chimiques en forêt issue de la Stratégie de protection des forêts).

...

...

Possible Scenarios Relating to Annex 1

Scénarios possibles en ce qui a trait à l’annexe 1

Scenario 1. Remove from Annex 1 those products whose prohibition cannot be scientifically upheld based upon chronic toxicity.

Scénario 1. Retirer de l’annexe 1 les produits dont l’interdiction ne peut être soutenue sur le plan scientifique en tenant compte de la toxicité chronique.

Maintain the list of prohibited active ingredients in urban settings, but remove those whose methodology cannot be scientifically defended. This is the case for active ingredients in the chlorophenoxy family of chemicals (2,4-D, Mecoprop and MCPA).

Maintien de la liste des interdictions d’ingrédients actifs en milieu urbain moins ceux dont la méthodologie ne peut être soutenue sur le plan scientifique. C’est le cas des ingrédients actifs de la famille chimique des chlorophénoxy (2,4-D, mécoprop et MCPA).

Advantages:

Avantages

Maintains the approach of prohibiting products ‘in urban settings’ that are the most harmful to human health.

Le maintien de l’approche à l’effet d’interdire les produits les plus nocifs pour la santé humaine en milieu urbain.

Maintains the government’s clear message that pesticides are toxic products that can pose human health risks and ensures that their use in urban settings is reduced.

Le maintien du message clair du gouvernement que les pesticides sont des produits toxiques qui peuvent représenter des risques pour la santé humaine et voir à réduire leur utilisation en milieu urbain.

Disadvantages:

Inconvénients

Removal from the list of products that are commonly used, scientifically studied and subject to controversy regarding their use, herbicides.

Le retrait de la liste des produits les plus couramment utilisés, étudiés scientifiquement et sujet à controverse quant à leur utilisation, les herbicides.

Reducing the use of pesticides for aesthetic purposes will be more difficult

La réduction d’utilisation des pesticides à des fins esthétiques sera plus difficile à

to achieve in the short term.

réaliser à court terme.

Disappointment of environmental groups who will see the removal of these pesticides as a step backwards.

La déception des groupes environnementaux percevant le retrait de ces pesticides comme un recul.

(Emphasis added)

23. In other words, within less than one month after comments were received from industry, Québec had acknowledged that it did not have a scientific basis to support the Ban of 2,4-D. Québec was even considering removing 2,4-D from the list, but was concerned about the reaction of environmental groups.
24. The absence of a scientific basis was well understood not only by the Ministère du développement durable, Environnement et Parcs (“DDEP”), but also by Québec’s Cabinet. In a Memorandum to Cabinet dated February 4, 2003, the Minister of DDEP advised his fellow Cabinet members:

[Translation:]

[Original:]

There have been comments to the effect that the various 2,4-D, MCPA and Mecoprop molecules cannot be retained in Annex 1 because of the reference used, that of the International Agency for Research on Cancer (IARC) assessed the product family (chlorophenoxy) and not the products individually. The prohibition cannot be scientifically defended on the basis of the criteria put forward.

Des commentaires ont indiqué que les différentes molécules de 2,4-D, de MCPA et du Mécoprop ne peuvent être retenus à l’annexe 1 puisque la référence utilisée, soit le Centre International de Recherche sur le Cancer (CIRC) a évalué la famille de ces produits (chlorophénoxy) et non les produits individuellement. Leur interdiction ne peut actuellement être défendue scientifiquement sur la base des critères retenus.

(Emphasis added)

25. All of these documents make clear that Québec recognized the absence of a scientific basis for its Ban of 2,4-D. Moreover, even its stated reliance on an interpretation of the

precautionary approach was motivated by political considerations, rather than any legitimate scientific concerns.

**F. The Commitment to Review the Ban**

26. Given the absence of a scientific basis to impose the Ban, coupled with the political motivation to nonetheless move forward with the Ban, Québec decided to delay the coming into force of the Ban until April 3, 2006, three years after the April 2003 adoption of the Code. Significantly, Québec indicated that the Ban was being imposed for precautionary reasons and would be reconsidered after the conclusion of the on-going re-assessments of 2,4-D. During this period, DAS was confident that the ongoing PMRA and EPA re-assessments would reiterate that 2,4-D continued to meet strict health and safety requirements and accordingly relied on Québec's undertaking to re-evaluate the Ban following the conclusion of the PMRA and EPA re-assessments.
27. On March 5, 2003, Québec announced that it was adopting the Code, and the accompanying Annex I as a regulation (R.Q.C. P-9.3, r.0.01) under the *Pesticides Act*, R.S.Q. c. P-9.3. At that time, a revised "Methodology for Establishing the List of Prohibited Active Ingredients (Annex 1)" was issued dated March 2003 ("**2003 Methodology Report**"). This revised methodology had not been made available for prior comment and no opportunity was given for any further comment.
28. The 2003 Methodology Report itself recognized the absence of a scientific basis for the Ban, yet it was decided that 2,4-D would be pre-emptively prohibited pending the outcome of the re-assessments in progress:

In all, the IARC identified 11 of the active ingredients on our list of 38 active ingredients registered for lawn use as possible carcinogens (Group 2B). These are chlorothalonil and chlorophenoxy herbicides which include the various chemical forms of 2,4-D, Mecoprop and MCPA. However, since the IARC list does not classify each active ingredient individually, but rather the entire chemical family of chlorophenoxy herbicides, and since epidemiological and clinical studies on each active

ingredient taken individually are not sufficient to assess the carcinogenicity potential to man, it is preferable to wait for the re-assessment of these active ingredients in order to classify them individually. In fact, it is currently difficult to justify scientifically the introduction of these active ingredients taken individually, on the basis of this criterion. Given the doubt that persists, they are maintained on the list pending the outcome of the re-assessments in progress.

(Emphasis added)

29. In the March 5, 2003 news release announcing the Code, Québec stated that:

Due to the continuing uncertainty about their harmfulness herbicides made up of active ingredients, 2,4-D, MCPA and Mecoprop will continue to be prohibited for precautionary reasons until the availability of the products' re-evaluation results by recognized organizations.

(Emphasis added)

30. As discussed below, Québec has failed to honour its commitment to re-evaluate the Ban, notwithstanding the completion of re-assessments subsequent to the Ban by both the PMRA and the EPA.

***G. The PMRA and EPA Re-Assessments***

31. As set forth above, the Ban of 2,4-D was imposed pending the re-assessment of the active ingredients by the EPA and the PMRA. As described below, these re-assessments have now been completed. The EPA completed its re-registration of 2,4-D in 2005. After publishing interim re-evaluation decisions in 2005, 2006 and 2007, the PMRA completed its re-evaluation and issued its Re-evaluation Decision in 2008.
32. On February 21, 2005, the PMRA released its Proposed Acceptability for Continuing Registration of lawn and turf uses of 2,4-D. Following its review of 2,4-D's extensive database, the PMRA found that the use of 2,4-D to treat lawns and turf "*does not entail an unacceptable risk of harm to human health or the environment*". Having specific regard to carcinogenicity, the PMRA stated:

Since the release of the USEPA Cancer Peer Review Committee Report in 1997 (USEPA 1997a), other assessments of the epidemiological and animal evidence regarding 2,4-D and cancer risk also indicated that there is inadequate evidence that 2,4-D is a human carcinogen (Gandhi et al. 2000; Garabrant and Philbert 2002). Other regulatory authorities that have finalised their assessments for 2,4-D include the World Health Organization (WHO/FAO 1996), the United States Department of Agriculture (USDA Forest Service 1999), the New Zealand Pesticides Board Expert Panel on 2,4-D (New Zealand, 2000), the European Commission (EC 2001), the Joint WHO/FAO Meeting on Pesticide Residues (WHO 2003) and the USEPA (USEPA 2005). All are in agreement that there is no evidence of carcinogenicity in the animal toxicity studies and that the epidemiology studies show no clear association between exposure to phenoxy herbicides and human cancers. The PMRA is not aware of any new evidence that would challenge these conclusions, and more recent epidemiological analyses lend further support for this classification (De Roos et al, 2003; Alavanja et al 2002, 2004).

33. Further, on August 8, 2005, the EPA issued its Reregistration Eligibility Decision (“**RED**”) of the herbicide 2,4-D. The EPA’s 2,4-D decision concluded that 2,4-D does not present risks of concern to human health when users follow 2,4-D product instructions. The statement by the EPA on human carcinogenicity potential is unequivocal:

The Agency has twice recently reviewed epidemiological studies linking cancer to 2,4-D. In the first review, completed January 14, 2004, EPA concluded there is no additional evidence that would implicate 2,4-D as a cause of cancer (EPA, 2004). The second review of available epidemiological studies occurred in response to comments received during the Phase 3 Public Comment Period for the 2,4-D RED. EPA’s report, dated December 8, 2004 and authored by EPA Scientist Jerry Blondell, Ph. D., found that none of the more recent epidemiological studies definitely linked human cancer cases to 2,4-D.

34. A re-assessment by the New Zealand Environmental Risk Management Authority in 2003 similarly found that 2,4-D does not present a cancer risk to applicators and bystanders.
35. All of these favourable re-assessments were forwarded to the Government of Québec, on several occasions.

36. Notwithstanding all of the foregoing, on July 18, 2005, Québec gave formal notice of the Ban of 2,4-D for lawn use, which was to become effective (and which became effective) on April 3, 2006.
37. In correspondence dated November 21, 2006, the Government of Québec stated that it had not modified its original criteria for determining which active ingredients were to be banned. This correspondence then went on to state:

[Translation:]

Although 2,4-D does not meet these criteria, it was decided to keep it on the list of active ingredients included in Schedule I of the Pesticides Management Code. One reason for this was because the Pest Management Regulatory Agency (PMRA) is re-evaluating this active ingredient. PMRA's re-evaluation has not been completed.

[Original:]

Malgré que le 2,4-D ne répondait à ces critères, il a été décidé de le maintenir sur la liste des ingrédients actifs de l'Annexe I du Code de gestion des pesticides, notamment parce que la réévaluation de cet ingrédient actif par l'Agence de réglementation de la lutte antiparasitaire (ARLA) était en cours. Celle-ci n'est pas encore complétée.

38. On June 19, 2007, the PMRA released the Proposed Acceptability for Continuing Registration for the Agriculture, Forestry, Aquatic and Industrial Site uses of 2,4-D. In doing so, the PMRA indicated that the continued use of 2,4-D for the aforementioned terrestrial sites is acceptable.
39. On August 8, 2007, the EPA published a decision which found that the evidence did not support a conclusion that 2,4-D was a likely human carcinogen.
40. These 2007 PMRA and EPA documents were provided to the Government of Québec. However, Québec refused to alter the Ban, refused to apply a science-based approach, and indeed refused to apply its own criteria for determining whether 2,4-D should be banned. In response to receiving the 2007 EPA decision, the Government of Québec responded that the decision to prohibit 2,4-D (among other ingredients) "is based on the will to limit their use in urban areas. Despite all the awareness efforts made at the

beginning of the 2000s, pesticide sales in urban areas have been steadily increasing” [Translation].

41. Similarly, in an April 28, 2008 letter, Québec stated that “the government’s decision to prohibit use of 2,4-D on lawns is based on the desire to restrict use of this product in urban environments. However, we will be very interested to read the final decision of the Pest Management Regulatory Agency (PMRA) regarding the acceptability of 2,4-D for all types of use, including for agricultural purposes” [Translation, emphasis added].
42. In other words, Québec reaffirmed that it was continuing to apply the Ban based on a political desire to restrict the use of 2,4-D, rather than on the basis of its own previously stated science-based criteria. Yet Québec also reiterated that the final re-evaluation decision by the PMRA on the use of 2,4-D would be an important factor in Québec’s consideration of the appropriateness of the Ban on 2,4-D.
43. On May 16, 2008, the PMRA released its formal Re-evaluation Decision on 2,4-D. This followed an unprecedented public consultation process undertaken in 2005 and again in 2007 with the release of the two Proposed Acceptability for Continuing Registration documents referred to above. The Information Note released with the Re-evaluation Decision states:
- Health Canada also consulted an independent Scientific Advisory Panel comprised of government and university experts/researchers in toxicology, epidemiology and biology. The Panel agreed with Health Canada’s assessment that 2,4-D can be used safely when used according to label directions, with some uses requiring additional protective measures. (Emphasis added)
44. With specific regard to use on lawns, the Re-evaluation Decision further states: “Risks to homeowners and their children from contact with treated lawns and turf are not of concern.”

45. On May 22, 2008, the Industry Task Force II on 2,4-D Research Data forwarded the PMRA's Re-evaluation Decision to Québec, along with a letter summarizing the Decision, and requesting that Québec act in accordance with its stated, science-based criteria set forth in its 2002/2003 Methodology. Québec, on numerous occasions referred to above, relied on the fact that the EPA and the PMRA had not concluded their evaluations of 2,4-D as the basis for the Ban. Those agencies have now concluded their evaluations. In the case of the PMRA decision, Québec had an opportunity to file a notice of objection and seek review of the decision but did not do so.
46. The Ban, in other words, is not based on science, was applied to 2,4-D in a manner inconsistent with the Government of Québec's own criteria, and was applied to 2,4-D without providing any meaningful opportunity for the Investor to be heard. Québec has also failed to act in accordance with its earlier commitments to review the Ban following the re-evaluation of 2,4-D.

## VII. NAFTA Obligations Breaches

### A. *Minimum Standard of Treatment – Article 1105*

47. Canada has failed to accord to the Claimant treatment in accordance with international law, including fair and equitable treatment and full protection and security.
48. The actions of Québec in improperly imposing the Ban, in failing and refusing to review and repeal the Ban, in breaching the Claimant's legitimate expectations, in conducting biased and improper reviews and advancing improper conclusions, and in prohibiting the sale and use of 2,4-D in lawn and turf applications individually and cumulatively constitute breaches of Article 1105.
49. Canada is in breach of international law and its obligations under Article 1105 in respect of basic due process, transparency, good faith and natural justice.



**B. Expropriation – Article 1110**

50. The effect of the series of steps taken by Québec between 2003 to present is, individually and cumulatively, to take a measure or measures tantamount to expropriation of the Claimant's Investment.
51. Any such measures are justified only if they are:
- (a) for a public purpose;
  - (b) on a non-discriminatory basis;
  - (c) in accordance with due process and Article 1105(1); and
  - (d) on payment of compensation on a prescribed basis.
52. None of the measures taken by Québec, individually or collectively, meet any of the above criteria. Most particularly, no compensation has ever been paid or offered.
53. Canada is in breach of its obligations under Article 1110 to not expropriate the Investment of an Investor, either directly or indirectly, except in accordance with the above-noted criteria for a lawful expropriation.

**VIII. Relief Sought and Damages Claimed**

54. The Claimant and its enterprise have incurred damages by reason of and arising out of breaches by Canada of the obligations under Chapter 11 of NAFTA.
55. Pursuant to Article 1135(b), DAS is requesting by way of restitution (a) the repeal of the Ban; and (b) such damages, costs, interest, amounts for tax consequences as described below, both past and future, resulting from Canada's breaches which cannot adequately be compensated by restitution.

56. Alternatively, pursuant to Article 1135(a), DAS claims the following:

- (a) An award in the amount of at least \$2 million for damages caused by Canada's breaches of its obligation under Chapter 11 NAFTA for, but without limitation, loss of sales, profits, goodwill, investment and other costs related to the products. These damages are suffered by the Claimant and its Enterprise.
- (b) Costs associated with these proceedings including counsel, expert and arbitration fees and disbursements.
- (c) Pre and post-judgment interest at a rate to be fixed by the arbitrators.
- (d) Amounts for tax consequences of the award sufficient to maintain the integrity of the award on a net-net basis.
- (e) Such further and other relief as counsel may advise or as may be awarded by the arbitrators.

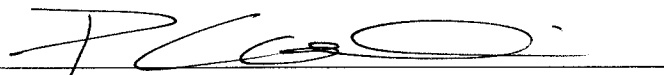
**IX. Appointment of Arbitrators**

57. The Claimant proposes that there be three arbitrators and that the arbitration take place in Ottawa, Ontario.

**X. Statement of Claim**

58. The Statement of Claim shall be filed as directed by the arbitrators in accordance with UNCITRAL Arbitration Rules.

DATED AT OTTAWA, ONTARIO, this 31<sup>st</sup> day of March, 2009



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Counsel to the Claimant/Investor,  
Dow AgroSciences LLC  
and the Enterprise,  
Dow AgroSciences Canada Inc.

**Served to:** Office of the Deputy Attorney General of Canada  
Justice Building  
284 Wellington Street  
Ottawa, ON K1A 0H8

## SCHEDULE 1

The Government of Canada  
Office of the Deputy Attorney General of Canada  
Justice Building  
284 Wellington Street  
Ottawa, ON K1A 0H8

### CONSENT AND WAIVER

Dow AgroSciences LLC (“DAS”), pursuant to Article 1121(1)(c) of the North American Free Trade Agreement (“NAFTA”), hereby demands that the dispute between it and the Governments of Canada and Québec be referred to arbitration under the UNCITRAL Arbitration Rules.

Pursuant to Article 1121(1)(b) of NAFTA, DAS hereby waives its right to initiate or continue before any administrative tribunal or court under the laws of any Party, or other dispute settlement procedures, any proceedings with respect to the measures of the Governments of Canada and Québec which DAS alleges to be breaches of NAFTA obligations referred to in Article 1116 and/or 1117, except for injunctive, declaratory or other extraordinary relief, not involving the payment of damages, before an administrative tribunal or court under the laws of Canada.

Dated this 26<sup>th</sup> day of March, 2009

**Dow AgroSciences LLC**

- by its duly authorized officer -



William W. Wales

Vice President, Secretary and General Counsel



The Government of Canada  
Office of the Deputy Attorney General of Canada  
Justice Building  
284 Wellington Street  
Ottawa, ON K1A 0H8

### CONSENT AND WAIVER

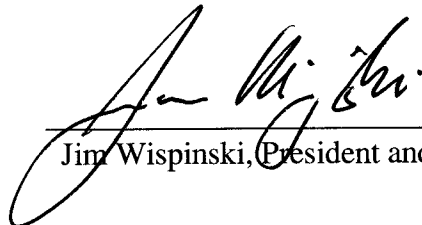
Dow AgroSciences Canada Inc. (“DASCI”), pursuant to Article 1121(1)(c) of the North American Free Trade Agreement (“NAFTA”), hereby demands that the dispute between it and the Governments of Canada and Québec be referred to arbitration under the UNCITRAL Arbitration Rules.

Pursuant to Article 1121(1)(b) of NAFTA, DASCI hereby waives its right to initiate or continue before any administrative tribunal or court under the laws of any Party, or other dispute settlement procedures, any proceedings with respect to the measures of the Governments of Canada and Québec which DASCI alleges to be breaches of NAFTA obligations referred to in Article 1116 and/or 1117, except for injunctive, declaratory or other extraordinary relief, not involving the payment of damages, before an administrative tribunal or court under the laws of Canada.

Dated this 20<sup>th</sup> day of March, 2009

**Dow AgroSciences Canada Inc.**

- by its duly authorized officer -

  
\_\_\_\_\_  
Jim Wispinski, President and CEO

**SCHEDULE 2**

**NOTICE OF INTENT  
TO SUBMIT A CLAIM TO ARBITRATION  
UNDER CHAPTER ELEVEN OF THE  
NORTH AMERICAN FREE TRADE AGREEMENT**

**DOW AGROSCIENCES LLC**

**Investor**

v.

**THE GOVERNMENT OF CANADA**

**Party**

Pursuant to Articles 1116, 1117 and 1119 of the North American Free Trade Agreement (NAFTA), the Investor, Dow AgroSciences LLC (“referred to herein as DAS”) hereby serves this Notice of Intent to Submit a Claim to Arbitration for breach of Canada’s obligations under NAFTA on its own behalf and on behalf of its investment enterprise, Dow AgroSciences Canada Inc. (“DASCI”)

**A. Name and Address of the Investor**

Dow AgroSciences LLC  
9330 Zionsville Road  
Indianapolis, IN 46268  
USA  
Telephone: (317) 337-3000

**B. Name and Address of the Investment/Enterprise**

Dow AgroSciences Canada Inc.  
2100-450 1 Street S.W.  
Calgary, AB T2P 5H1  
Canada  
Telephone: (800) 667-3852

**C. Breach of Obligations**

1. DAS, the Investor, alleges that the Government of Canada has breached its obligations under Section A of Chapter 11 of NAFTA, under the following provisions:

(i) Article 1105 (Fair and Equitable Treatment in Accordance with International Law)

(ii) Article 1110 (Expropriation)

2. The applicable provisions of NAFTA are as follows:

**Article 1105: Minimum Standard of Treatment**

1. Each Party shall accord to investments of investors of another Party treatment in accordance with international law, including fair and equitable treatment and full protection and security.

**Article 1110: Expropriation and Compensation**

1. No party may directly or indirectly nationalize or expropriate an investment of an investor of another Party in its territory or take a measure tantamount to nationalization or expropriation of such an investment ("expropriation"), except:

(a) for a public purpose;

(b) on a non-discriminatory basis;

(c) in accordance with due process of law and Article 1105(1);  
and

(d) on payment of compensation in accordance with paragraphs 2 through 6.



3. The Government of Quebec ("Quebec") started a campaign, beginning in 2002, to terminate the sale of 2,4-D based products in that province, notwithstanding that Quebec has never had a scientific basis for such a ban.
4. The ban on selling or offering for sale Class 4 or Class 5 pesticides containing a prohibited ingredient (such as 2,4-D) for use on lawns and on the application of certain pesticides containing 2,4-D on a lawn other than a golf course lawn came into force on April 3, 2006 (the "Ban").
5. As described further below, there have been numerous assessments conducted by national and international agencies which have found that 2,4-D does not pose an unacceptable health risk. Quebec's own internal documents indicate the absence of a scientific basis for the Ban.
6. Further, Quebec changed its methodology for determining which products would be subject to the Ban from its originally issued methodology in August 2002, to a revised methodology in March 2003, without any consultation, and with no further opportunity to comment, thereby denying stakeholders an opportunity to be heard.
7. At the time the Ban was announced, Quebec stated that 2,4-D would be subject to the Ban not based on scientific criteria, but, in effect, based on the precautionary approach until recognized organizations had concluded their re-assessments of 2,4-D. Industry stakeholders were led to believe that if such re-assessment were favourable to 2,4-D, the Ban would be lifted. Those re-assessments have been completed and were favourable, yet Quebec has refused to lift the Ban. The considerations which form the basis for the Ban, whatever they may be, are not based on science, and are arbitrary, irrelevant and unfair.
8. The above, and related measures, are the subject of this claim. By these measures Quebec has terminated all of DASCi's business of 2,4-D and 2,4-D products for lawn use in Quebec.

**D. Factual Basis for the Claim**

**(i) The Investor and its Investment**

9. The Investor, DAS, is a limited liability company organized under the laws of the state of Delaware, USA, with its head office in Indianapolis, Indiana. DAS was organized as a Delaware limited liability company in 1997. Through intermediary companies, DAS is wholly owned by a U.S. publicly traded corporation incorporated in Delaware. Dow AgroSciences Canada Inc. is a Canadian corporation and is an indirect wholly-owned subsidiary of DAS.
10. Among its other products, DAS manufactures the active ingredient 2,4-D in the United States for sale to various companies in numerous countries, including Canada.
11. DASCi was incorporated in 1989 and has its head office in Calgary, Alberta.
12. DASCi has been granted registrations under the *Pest Control Products Act* (PCPA) for 2,4-D technical active ingredient and 2,4-D manufacturing concentrate.
13. DAS and DASCi sell PCPA-registered technical active ingredient and manufacturing concentrate to a number of companies that formulate lawn and turf care products for sale and use in Canada. Prior to the Ban, DASCi had sold 2,4-D that was formulated into certain commercial and domestic use lawn and turf products in Canada. (A full listing of lawn and turf registrations granted under the provisions of the PCPA may be found at: <http://www.pmr-arla.gc.ca/english/pdf/rev/rev2006-11-e.pdf>)

**(ii) Adoption of the Pesticides Management Code**

14. On July 3, 2002, the Quebec Minister of the Environment released a proposed *Pesticides Management Code* (the "Code") with its accompanying Annex I.

15. The key provisions of the Code were:
  - (a) Section 25: a prohibition on the sale or offering for sale of Class 4 or Class 5 pesticides that contain an active ingredient listed in Schedule (Annex) I and that are intended to be applied on lawns;
  - (b) Section 26: a prohibition on the sale of Class 4 pesticides that have been mixed or impregnated with fertilizer; and
  - (c) Section 68: a prohibition on the application of pesticides containing an active ingredient listed in Schedule (Annex) I on a lawn other than a golf course lawn by a commercial applicator (eg. lawn care companies, etc.).
16. After requests from industry, the Quebec Government released a background report titled "Methodology for Establishing the List of Prohibited Active Ingredients (Annex I)", dated August 2002 ("2002 Methodology Report").
17. In this Report, 2,4-D, among others, was included on a list of the prohibited active ingredients in Annex I.
18. In determining the sources relied upon for inclusion in Annex I, the 2002 Methodology Report states as follows:

The reference sources consulted for the cancer risk assessment are the International Agency for Research on Cancer (IARC), the United States Environment Protection Agency (EPA), the United States National Toxicology Program (NTP) and the California Environmental Protection Agency. Each of these agencies regularly update and publish lists of products considered to be carcinogenic, which are grouped into several categories depending on the degree of carcinogenic certainty. The products are continually re-evaluated and can be transferred from one category to another based on scientific discovery and proof. With respect to endocrine disruption, we reviewed the summary by Lawrence KEITH, a former EPA chemical researcher, published in 1997: Environmental Endocrine Disruptors.

19. The 2002 Methodology Report later went on to state the basis for its reliance on IARC Group 2B (possible carcinogens) and EPA Category C (possible human carcinogen):

Under the precautionary principle, which stipulates that the lack of scientific certainty shall not be used as a reason for postponing the adoption of effective measures to preserve health, some categories expressing degrees of carcinogenic certainty have been cited. Although IARC Group 2B (possible carcinogens) and EPA Category C (possible human carcinogens) do not prove a carcinogenic risk beyond a doubt, they represent a fairly worrisome risk to be maintained in order to establish an adequate safety factor for applying the precautionary factor.

20. With respect to the IARC classification, the Report stated:

The IARC identified 15 of the active ingredients on our list of active ingredients registered for lawn use as carcinogens (Group 1) or possible carcinogens (Group 2B). According to the IARC, chlorophenoxy herbicides are sited in Group 2B and include the various chemical forms of 2,4-D, Mecoprop and MCPA, as cited in the IARC monograph in 1986. The active ingredients are listed in the table for reasons of comprehension. However, the IARC list does not classify each active ingredient individually, but rather the entire chemical family of chlorophenoxy herbicides. Epidemiological and clinical studies on each herbicide in this chemical family were taken into consideration in order to determine the overall risk of chlorophenoxy herbicides.

21. The 2002 Methodology Report's conclusions drawn from the IARC review in 1986 are both unfounded and, indeed, wrong. The IARC 1986 review classified chlorophenoxy herbicides as Group 2B. Chlorophenoxy herbicides are a family of ingredients which includes 2,4,5-T. The registration of 2,4,5-T was withdrawn in the early 1980s, due to possible contamination with polychlorinated dioxins.
22. The 1987 IARC monograph states that its "evaluation applies to the group of chemicals as a whole and not necessarily to all individual chemicals within the group".

23. With respect of 2,4-D, the 1986 IARC monograph found that there was “inadequate” data to classify for carcinogenicity in animals or genetic activity in short-term tests. In the 1987 monograph, 2,4-D was classified separately with no classification for human carcinogenicity and “I” (inadequate evidence) for animal carcinogenicity.
24. Contrary to the implication from Quebec’s 2002 Methodology Report, 2,4-D has never been found by IARC to be a “possible” carcinogen.
25. With respect to other sources referenced in the 2002 Methodology Report, no NAFTA or OECD pesticide regulatory agency has classified 2,4-D as a “known”, “probable” or “possible” human carcinogen. In particular, all of the following studies and information were available to Quebec when it issued its 2002 Methodology Report.
  - (a) The then current United States Environmental Protection Agency (U.S. EPA) toxicology profile (1996) stated that 2,4-D is “non carcinogenic” (i.e. does not cause cancer), “non teratogenic” (i.e. does not cause birth defects, also referred to as developmental effects) and “non mutagenic” (i.e., does not cause genetic damage). The U.S. EPA classified 2,4-D as a Group D compound – it is not a “known”, “probable” or “possible” carcinogen. This was re-confirmed on May 8, 2002.
  - (b) Regulatory agencies around the world – including the World Health Organization in 1996 - had determined that there is “no evidence of carcinogenicity” associated with 2,4-D.
  - (c) On October 1, 2001, the European Commission Health and Consumer Protection Directorate-General completed its re-evaluation of 2,4-D. It determined that there is “**no evidence of carcinogenicity associated with 2,4-D**”.

- (d) The Pest Management Regulatory Agency (“PMRA”) concurred with the U.S. EPA determination that 2,4-D is a “Group D” carcinogen, **“The conclusion was that 2,4-D should remain as a Group D carcinogen: not classifiable as to human carcinogenicity. Currently, the PMRA concurs with this position.”** In conducting the toxicology re-evaluation of 2,4-D, the PMRA determined that the molecule displayed **“No evidence of oncogenicity”**. (2001).
- (e) Workers directly involved in the production of 2,4-D do not have an elevated cancer risk. A published paper (*Burns et al*, 2001) reviewed nearly 50 years history of workers in the Chemical manufacturing plants of DAS and related companies – men and women who would have the highest possibility of exposure – and concluded: - **“There was no evidence of a causal association between exposure to 2,4-D and mortality due to all causes and malignant neoplasms. No significant risk due to NHL (non-Hodgkin’s lymphoma) was found”**. An ongoing study sponsored by IARC (*Kogevinas*, 1997) found that workers exposed to chlorophenoxy herbicides, with minimal or no contamination by TCDD (a type of dioxin) and higher chlorinated dioxins had similar conclusions. This type of occupational exposure is several orders of magnitude greater than that experienced by farmers and professional lawn care applicators, population groups that also do not have an elevated risk (*Fleming et al*, 1999; Garabrant, Philbert, 2002).
- (f) Drs. David H. Garabrant and Martin A. Philbert of the University of Michigan School of Public Health (2002) concluded after reviewing more than 160 toxicologic and epidemiologic studies:

Despite several thorough *in vitro* and *in vivo* animal studies, no experimental evidence exists supporting the theory that 2,4-D or any of its salts or esters, damages DNA under physiologic conditions. Studies in rodents demonstrate a lack of oncogenic or carcinogenic effects following lifetime dietary administration

of 2,4-D. Epidemiologic studies provide scant evidence that exposure to 2,4-D is associated with soft tissue sarcoma, non-Hodgkin's lymphoma, Hodgkin's disease, or any other cancer. There is no human evidence of adverse reproductive outcomes to 2,4-D. The available data from animal studies of acute, sub chronic and chronic exposure to 2,4-D, its salts and esters show unequivocal lack of systemic toxicity at doses that do not exceed renal clearance mechanisms. There is no evidence that 2,4-D in any of its forms activates or transforms the immune system in animals at any does...

- (g) The authors of Chapter 72, "Phenoxy Herbicides (2,4-D)" of the 2001 edition of the Handbook of Pesticide Toxicology (i.e. the most recent edition when the 2002 Methodology Report was prepared) concluded: **"The extensive database of metabolic, toxicological, and epidemiological studies on 2,4-D has provided no evidence that 2,4-D poses any health risk to humans when used according to label directions"**. The Handbook is one of the leading reference books on the toxicology of various chemicals, including pesticides. This authoritative reference can be found in libraries and is regularly consulted by toxicologists, pharmacists, emergency response personnel, medical doctors, and poison control centres.
26. These were the main scientific studies and information available to Quebec when it prepared its 2002 Methodology Report, and all of the above were provided to Quebec by the Industry Task Force II on 2,4-D Research Data on August 30, 2002.
27. In November 2002, Quebec published a "Public Consultation Report" which summarized the comments that had been made in response to the Code, the Annex and the 2002 Methodology Report.
28. On March 5, 2003, Quebec announced that it was adopting the Code, and the accompanying Annex I as a regulation (R.Q.C. P-9.3, r.0.01) under the *Pesticides Act*, R.S.Q. c. P-9.3. At that time, a revised "Methodology for Establishing the

List of Prohibited Active Ingredients (Annex 1)” was issued dated March 2003 (“2003 Methodology Report”). This revised methodology had not been made available for prior comment and no opportunity was given for any further comment.

29. The new March 2003 Methodology Report continued to recognize IARC as its basis for inclusion of the 2,4-D in the Prohibited List. However, based on Quebec’s apparent recognition of the weakness of this position, the description of its reliance on the IARC reviews was re-stated as follows:

*In all, the IARC identified 11 of the active ingredients on our list of 38 active ingredients registered for lawn use as possible carcinogens (Group 2B). These are chlorothalonil and chlorophenoxy herbicides which include the various chemical forms of 2,4-D, Mecoprop and MCPA. However, since the IARC list does not classify each active ingredient individually, but rather the entire chemical family of chlorophenoxy herbicides, and since epidemiological and clinical studies on each active ingredient taken individually are not sufficient to assess the carcinogenicity potential to man, it is preferable to wait for the reassessment of these active ingredients in order to classify them individually. In fact, it is currently difficult to justify scientifically the introduction of these active ingredients taken individually, on the basis of this criterion. Given the doubt that persists, they are maintained on the list pending the outcome of the reassessments in progress.* (Emphasis added)

30. In other words, the 2003 Methodology Report itself recognizes the absence of a scientific basis for the Ban. Instead, Quebec states that because of the “doubt that persists”, 2,4-D will be prohibited pending the outcome of the reassessments in progress. In the March 5, 2003 news release announcing the Code, Quebec states that:

Due to the continuing uncertainty about their harmfulness herbicides made up of active ingredients, 2,4-D, MCPA and Mecoprop will continue to be prohibited for precautionary reasons until the availability of the products’ re-evaluation results by recognized organizations. (Emphasis added).



(iii) The Internal Deliberations by the Quebec Government leading to the adoption of the Code

31. Documents obtained through access to information make clear that the Government of Quebec knew that there was no scientific basis to support the ban.
32. In a Quebec Government document entitled "Fiche pour information – Code de Gestion des Pesticides" dated September 23, 2002, it is stated:

[Translation:]

Prohibition on the use of certain active ingredients  
(Annex 1)

(Prohibition on the lawns of municipal and government lands as of the coming into force and in three years for green spaces by prohibiting their use by ornamental horticulture businesses and by prohibiting the sale of these products for domestic use – s. 23, 29 and 63). This item is the most significant both in terms of objections and support.

*Certain herbicides in Annex 1 (2,4-D, MCPA, Mecoprop) cannot be prohibited on a scientific basis (carcinogenic risk and others). Briefs submitted by companies that produce these active ingredients emphasized this. These are active ingredients commonly used on lawns, and their prohibition has raised many objections and congratulations. However, we must rethink our position on this or base our argument on other grounds.*

Several other pesticides could be added to take into account comments from the health sector.

If these products were to be prohibited again, it would have to be on other less "firm" grounds such as the precautionary principle or make it a policy decision resulting from the will of the population (like the prohibition of chemical pesticides in the forest imposed by the Forest Protection Strategy).

....

Possible Scenarios Relating to Annex 1

Scenario 1. Remove from Annex 1 those products whose prohibition cannot be scientifically upheld based upon chronic toxicity.

*Maintain the list of prohibited active ingredients in urban settings, but remove those whose methodology cannot be*

*scientifically defended. This is the case for active ingredients in the chlorophenoxy family of chemicals (2,4-D, Mecoprop and MCPA).*

Advantages:

Maintains the approach of prohibiting products 'in urban settings' that are the most harmful to human health.

Maintains the government's clear message that pesticides are toxic products that can pose human health risks and ensures that their use in urban settings is reduced.

Disadvantages:

Removal from the list of products that are commonly used, scientifically studied and subject to controversy regarding their use, herbicides.

Reducing the use of pesticides for aesthetic purposes will be more difficult to achieve in the short term.

Disappointment of environmental groups who will see the removal of these pesticides as a step backwards.

(Emphasis added)

[Original:]

*L'Interdiction d'utiliser certains ingrédients actifs (Annexe 1)*

*(Interdiction sur la pelouse des terrains gouvernementaux et municipaux dès l'entrée en vigueur et dans trois ans pour les espaces verts en interdisant leur utilisation par les entreprises d'horticulture ornementale et en interdisant la vente de ces produits au domestique – art. 23, 29 et 63). Cet élément est l'élément majeur autant pour la contestation que l'appui reçu.*

*Certains herbicides de l'annexe 1 (2,4-D, MCPA, Mecoprop) ne peuvent être interdits sur une base scientifique (risque de cancérogénécité et autres). Les mémoires des compagnies productrices de ces ingrédients actifs nous l'ont souligné. Ce sont des ingrédients actifs couramment utilisés sur les pelouses et sur lesquels leur interdiction a soulevé beaucoup de contestations ou de félicitations. Il faut cependant revoir notre position à ce sujet ou appuyer notre argumentation sur d'autres éléments.*

*Quelques autres pesticides pourraient être ajoutés pour tenir compte des commentaires du secteur de la santé.*

*Si on devait interdire de nouveau ces produits, il faudrait se baser sur d'autres bases moins "solides" comme le principe de précaution ou en faire une décision politique découlant de la volonté de la population (comme l'interdiction des pesticides chimiques en forêt issue de la Stratégie de protection des forêts).*

...

#### *Scénarios possibles en ce qui a trait à l'annexe 1*

*Scénario 1. Retirer de l'annexe 1 les produits dont l'interdiction ne peut être soutenue sur le plan scientifique en tenant compte de la toxicité chronique.*

*Maintien de la liste des interdictions d'ingrédients actifs en milieu urbain moins ceux dont la méthodologie ne peut être soutenue sur le plan scientifique. C'est le cas des ingrédients actifs de la famille chimique des chlorophénoxy (2,4-D, mécoprop et MCPA).*

#### *Avantages*

*Le maintien de l'approche à l'effet d'interdire les produits les plus nocifs pour la santé humaine en milieu urbain.*

*Le maintien du message clair du gouvernement que les pesticides sont des produits toxiques qui peuvent représenter des risques pour la santé humaine et voir à réduire leur utilisation en milieu urbain.*

#### *Inconvénients*

*Le retrait de la liste des produits les plus couramment utilisés, étudiés scientifiquement et sujet à controverse quant à leur utilisation, les herbicides.*

*La réduction d'utilisation des pesticides à des fins esthétiques sera plus difficile à réaliser à court terme.*

*La déception des groupes environnementaux percevant le retrait de ces pesticides comme un recul.*

33. In other words, within less than one month after comments were received from industry, Quebec had acknowledged that it did not have a scientific basis to support the Ban of 2,4-D. Quebec was even considering removing 2,4-D from the list, but was concerned about the reaction of environmental groups.

34. Another Quebec Government document, "Fiche Synthèse pour information", dated October 30, 2002, confirms the absence of a scientific basis for the ban of 2,4-D.

[Translation:]

Prohibition on the use and sale of certain active ingredients  
(Annex 1)

(Prohibition on the lawns of municipal and government lands as of the coming into force and in three years for green spaces by prohibiting their use by ornamental horticulture businesses and by prohibiting the sale of these products for domestic use – s. 23, 29 and 63). This item is the most significant both in terms of objections and support.

*Certain herbicides in Annex 1 (2,4-D, MCPA, Mecoprop) cannot currently be prohibited on the scientific basis of their carcinogenic risk. Briefs submitted by companies that produce these active ingredients emphasized this. This is also the opinion of the INSPQ.*

The emerging position is as follows:

- the endocrine disruption criterion would be reviewed while waiting for and in anticipation of the results from studies conducted by scientifically recognized organizations. No active ingredients would be prohibited on the basis of this criterion when the Code comes into effect;
- active ingredients could be added to take into account products used on trees and shrubs (the initial list was prepared with reference to active ingredients for lawns) and based on the criterion already reviewed (carcinogenicity).
- The herbicides 2,4-D, MCPA and Mecoprop, although they cannot currently be prohibited based on the carcinogenicity criterion, would stay on the list of prohibited active ingredients for the following reasons:
  - in the case of public and semipublic lands, for exemplary reasons, by referring to the precautionary principle and so that these areas are kept free of pesticides as much as possible;
  - in the case of private and residential green spaces, the prohibition on selling and using these products will be re-evaluated within three years because the provisions are only applicable in three years. The decision to maintain or

lift the prohibition will be made in due course in the light of scientific data that will become available in the meantime.

As to the prohibition on selling domestic products containing the same active ingredients, the position is maintained at this time.

(Emphasis added)

[Original:]

*L'interdiction d'utiliser et de vendre certains ingrédients actifs  
(Annexe 1)*

*(Interdiction sur la pelouse des terrains gouvernementaux et municipaux dès l'entrée en vigueur et dans trois ans pour les espaces verts en interdisant leur utilisation par les entreprises d'horticulture ornementale et en interdisant la vente de ces produits au domestique – art. 23, 29 et 63). Cet élément est l'élément majeur autant pour la contestation que l'appui reçu.*

*Certain herbicides de l'annexe 1 (2,4-D, MCPA, Mécoprop) ne peuvent présentement être interdits sur la base scientifique du risque de cancérogénéité. Les mémoires des compagnies productrices de ces ingrédients actifs nous l'ont souligné. C'est également l'avis de l'INSPQ.*

*La position qui se dégage actuellement est la suivante:*

- *le critère de perturbation du système endocrinien serait retenu en attente et en prévision des résultants des études d'organismes scientifiquement reconnus. Aucun ingrédient actif ne serait interdit sur la base de ce critère lors de l'entrée en vigueur du code;*
- *des ingrédients actifs pourraient être ajoutés pour tenir compte des produits utilisés sur les arbres et arbustes (la liste initiale a été établie par rapport aux ingrédients actifs des pelouses) et ce en fonction du critère déjà retenu (cancérogénéité).*
- *Les herbicides 2,4-D, MCPA et Mécoprop, bien qu'ils ne puissent actuellement être interdits sur la base du critère de cancérogénéité seraient maintenus dans la liste des ingrédients actifs interdits pour les raisons suivantes :*
  - *dans le cas des terrains publics et parapublics, pour des raisons d'exemplarité, en invoquant le principe de précaution et pour que ces lieux soient le plus possible exempts de pesticides;*

- *dans le cas des espaces verts privés et résidentiels, l'interdiction de vendre et d'utiliser ces produits sera réévaluer d'ici trois ans, les dispositions ne s'appliquant que dans trois ans. Le décision de maintenir ou de suspendre l'interdiction sera prise au moment opportun à la lumière des données scientifiques qui seront rendus disponibles entre temps.*

*Quant à l'interdiction de vendre les produits domestiques contenant ces mêmes ingrédients actifs, la position est maintenue, à ce moment-ci.*

35. As can be seen, the absence of a scientific basis for the Ban was confirmed by the INSPQ, the National Public Health Institute of Quebec.
36. Similarly, an October 31, 2002 Quebec Government document states:

[Translation:]

For the herbicides 2,4-D, Mecoprop and MCPA: the weight of scientific evidence is not great but there is doubt; *the INRS could not defend the prohibition of chlorophenoxy.*

Proposed approach of not prohibiting 2,4-D, Mecoprop and MCPA and of adding measures to the code for limiting their use is agreed; this would be a good compromise that would still be beneficial.

(Emphasis added)

[Original:]

*Pour les herbicides 2,4-D, Mécoprop, MCPA: le poids de la preuve scientifique n'est pas lourd mais il y a un doute; l'INRS ne pourrait pas défendre l'interdiction des chlorophénoxy.*

*D'accord avec l'approche proposée soit de ne pas interdire les 2,4-D, Mécoprop et MCPA et d'ajouter des mesures au code pour en limiter l'usage; ce serait un bon compromis qui permettrait néanmoins de faire des gains.*

37. This document states that the INRS, the National Scientific Research Institute at the University of Quebec, could also not defend the prohibition of chlorophenoxy.

38. Another Quebec Government document titled “Code de Gestion des Pesticides – Etat de situation à la consultation de l’été” dated January 2003 recognizes that the Active Ingredients are on the banned list due to “lingering doubt” and in light of the “re-evaluation process under way at registration organizations (EPA, PMRA)”:

[Translation:]

The prohibition on selling or using the active ingredients specified in Annex 1 will apply only to lawn surfaces except those in nurseries, seed orchards, and certain sports fields.

Amendments have been made to the list of active ingredients in Annex 1 on the basis of the use of pesticides on lawns, that no active ingredients are currently prohibited based on the endocrine disruption criterion and of certain products whose registration has been withdrawn. However, the herbicides 2,4-D, MCPA and Mecoprop remain on the list due to lingering doubt and in the light of the re-evaluation process under way at registration organizations (EPA, PMRA). They are prohibited on public lands and are under review until this prohibition is extended to private lands in three years.

[Original:]

*L'interdiction de vendre ou d'utiliser un des ingrédients actifs mentionnés à l'annexe 1 ne s'appliquera qu'aux surfaces gazonnées sauf celles des pépinières, des vergers à graines et certains terrains à vocation sportive.*

*Des modifications ont été apportées à la liste des ingrédients actifs de l'annexe 1 en tenant compte d'une utilisation de pesticides sur le gazon, qu'aucun ingrédient actif n'est interdit actuellement sur la base du critère de perturbation du système endocrinien et de certains produits dont l'homologation a été retirée. Par contre, les herbicides 2,4-D, MCPA et Mécoprop sont maintenus en raison du doute qui subsiste et compte tenu du processus de réévaluation en cours auprès des organismes d'homologation (EPA, ARLA). Ils seront interdits dans les terrains publics et en révision d'ici à l'élargissement de cette interdiction aux terrains privés dans 3 ans.*

39. Finally, in a Memorandum to Cabinet dated February 4, 2003, from Environment Minister André Boisclair, the statement is made:

[Translation:]

There have been comments to the effect that the various 2,4-D, MCPA and Mecoprop molecules cannot be retained in Annex 1 because of the reference used, that of the International Agency for Research on Cancer (IARC) assessed the product family (chlorophenoxy) and not the products individually. The prohibition cannot be scientifically defended on the basis of the criteria put forward. (Emphasis added).

[Original:]

*Des commentaires ont indiqué que les différentes molécules de 2,4-D, de MCPA et du Mécoprop ne peuvent être retenus à l'annexe 1 puisque la référence utilisée, soit le Centre International de Recherche sur le Cancer (CIRC) a évalué la famille de ces produits (chlorophénoxy) et non les produits individuellement. Leur interdiction ne peut actuellement être défendue scientifiquement sur la base des critères retenus.*

40. All of these documents make clear that the Quebec Government recognized the absence of a scientific basis for its Ban of 2,4-D. Moreover, even its apparent reliance on an interpretation of the precautionary approach was motivated by political, rather than any legitimate scientific concerns.

(iv) Subsequent Scientific Re-Assessments of 2,4-D

41. As noted above, the Ban of 2,4-D was made pending the re-assessment of the Active Ingredients by the EPA and PMRA. The EPA completed its re-registration of 2,4-D in 2005. After publishing interim re-evaluation decisions in 2005, 2006 and 2007, the PMRA completed its re-evaluation and issued its Re-evaluation Decision in 2008.
42. On February 21, 2005, Health Canada's Pest Management Regulatory Agency released its Proposed Acceptability for Continuing Registration of lawn and turf uses of 2,4-D. Following its review of 2,4-D's extensive database, including 2,4-D Task Force studies generated in response to EPA and PMRA requirements, the



PMRA found that the use of 2,4-D to treat lawns and turf “*does not entail an unacceptable risk of harm to human health or the environment*”. Having specific regard to carcinogenicity, the PMRA stated:

Since the release of the USEPA Cancer Peer Review Committee Report in 1997 (USEPA 1997a), other assessments of the epidemiological and animal evidence regarding 2,4-D and cancer risk also indicated that there is inadequate evidence that 2,4-D is a human carcinogen (Gandhi et al. 2000; Garabrant and Philbert 2002). Other regulatory authorities that have finalised their assessments for 2,4-D include the World Health Organization (WHO/FAO 1996), the United States Department of Agriculture (USDA Forest Service 1999), the New Zealand Pesticides Board Expert Panel on 2,4-D (New Zealand, 2000), the European Commission (EC 2001), the Joint WHO/FAO Meeting on Pesticide Residues (WHO 2003) and the USEPA (USEPA 2005). All are in agreement that there is no evidence of carcinogenicity in the animal toxicity studies and that the epidemiology studies show no clear association between exposure to phenoxy herbicides and human cancers. The PMRA is not aware of any new evidence that would challenge these conclusions, and more recent epidemiological analyses lend further support for this classification (De Roos et al, 2003; Alavanja et al 2002, 2004).

43. Further, on August 8, 2005, the United States Environmental Protection Agency issued its Reregistration Eligibility Decision (RED) of the herbicide 2,4-D. EPA's 2,4-D decision concluded that 2,4-D does not present risks of concern to human health when users follow 2,4-D product instruction. The statement by the EPA on human carcinogenicity potential is unequivocal:

The Agency has twice recently reviewed epidemiological studies linking cancer to 2,4-D. In the first review, completed January 14, 2004, EPA concluded there is no additional evidence that would implicate 2,4-D as a cause of cancer (EPA, 2004). The second review of available epidemiological studies occurred in response to comments received during the Phase 3 Public Comment Period for the 2,4-D RED. EPA's report, dated December 8, 2004 and authored by EPA Scientist Jerry Blondell, Ph. D., found that none of the more recent epidemiological studies definitely linked human cancer cases to 2,4-D.

44. On August 16, 2006, Health Canada's Pest Management Regulatory Agency released Re-evaluation Note 2006-11 outlining interim measures for lawn and turf

uses of 2,4-D. Following its review of public comments generated in response to PACR 2005-01, the PMRA determined that the use of 2,4-D to treat lawns and turf was acceptable. Having specific regard to the IARC classification, the PMRA stated:

In 1987, the International Agency for Research on Cancer classified the chlorophenoxy class (2,4-D, MCPA and 2,4,5-T) as a class 2B carcinogen—possibly carcinogenic to humans—concluding that there was limited evidence in humans and inadequate evidence in animals. This was updated in 1998, specifically in relation to occupational exposure, stating there was limited evidence that occupational exposure to chlorophenoxy herbicides are carcinogenic to humans. This classification and 1998 occupational exposure update does not consider the Scientific Advisory Panel discussions held in 1996 that revisited the 2,4-D epidemiology and animal toxicity data.

The International Agency for Research on Cancer is the only international regulatory organization that has not revisited the issue of 2,4-D in its entirety. More recent re-evaluations by the European Union, the United States Environmental Protection Agency, New Zealand and the World Health Organization do not classify 2,4-D as human carcinogen.

45. A re-assessment by the New Zealand Environmental Risk Management Authority in 2003 similarly found that 2,4-D does not present a cancer risk to applicators and by-standers.
46. All of these favourable re-assessments were forwarded to the Quebec Government, on several occasions.
47. Notwithstanding all of the foregoing, on July 18, 2005, Quebec gave formal notice of the Ban of 2,4-D for lawn use, which was to become effective (and which became effective) on April 3, 2006.
48. In correspondence dated November 21, 2006, the Government of Quebec stated that it had not modified its criteria in the 2002 Methodology for determining which active ingredients were to be banned. This correspondence then went on to state:

Although 2,4-D does not meet these criteria, it was decided to keep it on the list of active ingredients included in Schedule I of the Pesticides Management Code. One reason for this was because the Pest Management Regulatory Agency (PMRA) is re-evaluating this active ingredient. PMRA's re-evaluation has not been completed.

[Translation]

[Original:]

*Malgré que le 2,4-D ne répondait à ces critères, il a été décidé de le maintenir sur la liste des ingrédients actifs de l'Annexe I du Code de gestion des pesticides, notamment parce que la réévaluation de cet ingrédient actif par l'Agence de réglementation de la lutte antiparasitaire (ARLA) était en cours. Celle-ci n'est pas encore complétée.*

49. On June 19, 2007, the PMRA released the Proposed Acceptability for Continuing Registration for the Agriculture, Forestry, Aquatic and Industrial Site uses of 2,4-D. In doing so, the PMRA proposed that the continued use of 2,4-D for the aforementioned terrestrial sites is acceptable.
50. On August 8, 2007, the EPA published a decision which found that the evidence did not support a conclusion that 2,4-D was a likely human carcinogen.
51. These 2007 PMRA and EPA documents were provided to the Government of Quebec. However, Quebec refused to alter the Ban, refused to apply a science-based approach, and indeed refused to apply its own criteria. In response to receiving the 2007 EPA decision, the Government of Quebec responded that the Government's decision to prohibit 2,4-D (among other ingredients) "is based on the will to limit their use in urban areas. Despite all the awareness efforts made at the beginning of the 2000s, pesticide sales in urban areas have been steadily increasing."

[Translation]
52. Similarly, in an April 28, 2008 letter, Quebec stated that "the government's decision to prohibit use of 2,4-D on lawns is based on the desire to restrict use of this product in urban environments. **However, we will be very interested to read**

**the final decision of the Pest Management Regulatory Agency (PMRA) regarding the acceptability of 2,4-D for all types of use, including for agricultural purposes.”** [Translation, emphasis added]

53. In other words, Quebec reaffirmed that it was continuing to apply the ban based on a desire to restrict the use of 2,4-D, rather than on the basis of its own previously stated science-based criteria. Further, and notwithstanding this first statement, Quebec reiterated that the final re-evaluation decision by PMRA on the use of 2,4-D would be an important factor in Quebec’s consideration of the appropriateness of the Ban on 2,4-D.
54. On May 16, 2008, the PMRA released its formal Re-evaluation Decision on 2,4-D. This followed an unprecedented public consultation process undertaken in 2005 and again in 2007 with the release of the two Proposed Acceptability for Continuing Registration documents referred to above. The Information Note released with the Re-evaluation Decision states:
- Health Canada also consulted an independent Scientific Advisory Panel comprised of government and university experts/researchers in toxicology, epidemiology and biology. The Panel agreed with Health Canada’s assessment that 2,4-D can be used safely when used according to label directions, with some uses requiring additional protective measures.
55. With specific regard to use on lawns, the Re-evaluation Decision states, “Risks to homeowners and their children from contact with treated lawns and turf are not of concern.”
56. On May 22, 2008, the Industry Task Force II on 2,4-D Research Data forwarded PMRA’s Re-evaluation Decision to Quebec, along with a letter summarizing the Decision, and requesting that Quebec act in accordance with its stated, science-based criteria. Quebec, on numerous occasions referred to above, relied on the fact that the EPA and the PMRA had not concluded their evaluations of 2,4-D as

the basis for Quebec's Ban. Those agencies have now concluded their evaluations and yet Quebec has failed to act in accordance with its earlier commitments.

57. The Ban, in other words, is not based on science, was applied to 2,4-D in a manner inconsistent with the Government's own criteria, and was applied to 2,4-D without providing any meaningful opportunity for the Investor to be heard.

**E. Issues**

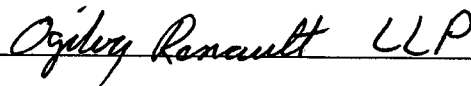
58. Has the Government of Canada taken measures inconsistent with its obligations under NAFTA Articles 1105 or 1110?
59. If the answer to this question is yes, what is the quantum of compensation to be paid to the Investor as a result of the failure of the Government of Canada to comply with its obligations arising under Chapter 11 of NAFTA?

**F. Relief Sought and Damages Claimed**

60. The Investor claims damages for the following:
- (a) Damages of not less than \$2,000,000 as compensation for the losses caused by, or arising out of, Canada's measures which are inconsistent with its obligations contained within Part A of NAFTA Chapter 11;
  - (b) Costs associated with these proceedings, including all professional fees and disbursements;
  - (c) Fees and expenses incurred to oppose the promulgation of the infringing measures;
  - (d) Pre-award and post-award interest at a rate to be fixed by the Tribunal;

- (e) Payment of a sum of compensation equal to any tax consequences of the award, in order to maintain the award's integrity; and
- (f) Such further relief including additional damages as counsel may advise and that this Tribunal may deem appropriate.

DATED AT OTTAWA, this 25<sup>th</sup> day of August, 2008.



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