Canada-U.S. Air Quality Agreement - Ozone Annex (2000)

Amending The "Agreement between the government of Canada and the government of the United Sates of America on Air Quality"

THE GOVERNMENT OF CANADA AND THE GOVERNMENT OF THE UNITED STATES OF AMERICA, hereinafter referred to as "the Parties",

RECALLING the Agreement between the Government of Canada and the Government of the United States of America on Air Quality done at Ottawa March 13, 1991, hereinafter referred to as "the Agreement";

RECOGNIZING that cooperative and coordinated action through the Agreement provides an effective means of addressing transboundary air pollution;

INTENDING to reduce the transboundary flow of tropospheric ozone and precursor emissions (NOx and VOC), thereby helping both countries attain their respective air quality goals;

RECOGNIZING that tropospheric ozone and its precursors (NOx and VOC) originating in Canada and the United States are transported across their international border, thereby affecting the ability of downwind areas in each country to attain their air quality goals;

CONCERNED about the serious adverse effects to human health and the environment from these pollutants;

RECOGNIZING the need to take new scientific evidence into account; and

ACKNOWLEDGING the importance of public awareness, information, education and involvement;

HAVE AGREED as follows:

ARTICLE I

A new Annex 3, titled "Specific Objectives Concerning Ground-Level Ozone Precursors" and attached as an appendix to this Protocol, shall be added to the Agreement.

ARTICLE II

Paragraph 2 of Article IV of the Agreement shall be deleted and replaced with the following:

"2. Each Party's specific objectives for emissions limitations or reductions are set forth in annexes to this Agreement as follows:

1. Specific objectives for sulphur dioxide and nitrogen oxides, which will reduce transboundary flows of these acidic deposition precursors, are set forth in Annex 1.

2. Specific objectives for volatile organic compounds and nitrogen oxides, which will reduce transboundary flows of tropospheric ozone and these precursors, thereby helping both countries attain their respective air quality goals over time, are set forth in Annex 3.

Specific objectives for such other air pollutants as the Parties agree to address should take into account, as appropriate, the activities undertaken pursuant to Article VI."

ARTICLE III

1. Article VII of the Agreement shall be amended by adding a new paragraph 2 as follows: "2. The Parties agree to provide, subject to their respective laws and regulations, public access to the databases containing the emissions and monitoring data reported or shared under this Agreement."
2. Paragraph 2 of Article VII of the Agreement shall be renumbered paragraph 3.

ARTICLE IV

Paragraph 3 of Annex 2 of the Agreement shall be amended as follows:

1. Subparagraph (e) shall be deleted and replaced with the following:

   "(e) their analysis of and experience with market-based mechanisms, including emissions trading. Specifically, through the Air Quality Committee established under Article VII of the Agreement, the Parties shall exchange information, within 12 months of entry into force of the Protocol amending this Agreement and as may be agreed upon thereafter, about the structure, components, public information and disclosure requirements (including verification), environmental impacts, and administration of their respective NOx and SO2 emissions trading programs including emissions monitoring, reporting and tracking of transfers of authority to emit;"
2. Subparagraph (f) shall be amended by deleting the period and replacing it with "; and".
3. A new subparagraph (g) shall be added as follows:

   "(g) public engagement and outreach activities."

ARTICLE V

Annex 2 of the Agreement shall be amended by adding a new paragraph 5 as follows:

"5. The Parties further agree, subject to their respective laws and regulations, to consult and share respective information on data, tools and methodologies and develop joint analyses on ground-level ozone and its precursors, including:

1. research and applications that contribute to tracking of human health and environmental responses to controls;
2. facility-specific emissions data, quantification methods, and related information required for modeling and regulatory policy development, assumptions and models used to estimate emissions from other sources, and air quality data for all relevant monitors;

3. evaluation of transboundary transport, using methods such as, inter alia, monitoring and meteorological data analyses, and modeling;
4. evaluation of adequacy of monitoring networks;
5. review of new technologies; and
6. analysis of options for reductions from significant emitting source categories such as transportation, manufacturing and electricity where there may be opportunities to achieve further cost-effective emission reductions through various means, for example, energy efficiency, renewable energy, cleaner fuels, and alternative technologies and approaches."

ARTICLE VI

Pursuant to Article XVI of the Agreement, this Protocol shall enter into force upon signature by the Parties.

IN WITNESS WHEREOF the undersigned, being duly authorized by their respective Governments, have signed this Protocol.

DONE in duplicate at , this day of 2000, in the English and French languages, each version being equally authentic.

[signature] FOR THE GOVERNMENT OF CANADA
[signature] FOR THE GOVERNMENT OF THE UNITED STATES OF AMERICA

APPENDIX TO THE PROTOCOL

ANNEX 3

SPECIFIC OBJECTIVES CONCERNING GROUND-LEVEL OZONE PRECURSORS

PART I -- PURPOSE

The objective of the annex is to control and reduce, in accordance with the provisions herein, the anthropogenic emissions of nitrogen oxides (NOx) and volatile organic compounds (VOC) that are precursors to the formation of ground-level ozone and that contribute to transboundary air pollution, thereby helping both countries attain their respective air quality goals over time to protect human health and the environment. The Parties' goal is that in the long term and in a stepwise approach, taking into account advances in scientific knowledge, atmospheric concentrations not exceed:

1. For Canada, the Canada Wide Standard (CWS) for Ozone; and
2. For the United States, the National Ambient Air Quality Standards for Ozone.

PART II -- POLLUTANT EMISSION MANAGEMENT AREA

Each Party hereby designates a Pollution Emission Management Area (PEMA), to which obligations in this Annex shall apply in accordance with the provisions herein.

1. For Canada, the area of 301,330km^2 that covers all of the Canadian territory south of about the 48th parallel beginning east of Lake Superior to the Ottawa River, and south of the corridor that extends from the Outaouais Region east to Quebec City, as definitively designated on the map at Appendix 1 to this Annex.
2. For the United States, the area comprising the states of Connecticut, Delaware, Illinois, Indiana, Kentucky, Maine, Maryland, Massachusetts, Michigan, New Hampshire, New York, New Jersey, Ohio, Pennsylvania, Rhode Island, Vermont, West Virginia, and Wisconsin, and the District of Columbia, as indicated on the illustrative map at Appendix 2 to this Annex.

PART III -- SPECIFIC OBLIGATIONS

A. For Canada:

1. With respect to mobile sources of NOx and VOC emissions, Canada shall control and reduce its emissions of NOx and VOC in accordance with the following obligations:
    1. Continue the application of the following emission control measures:
        1. Emission standards for new light-duty vehicles, light-duty trucks, heavyduty vehicles, heavy-duty engines and motorcycles: Motor Vehicle Safety Act (and successor legislation), Schedule V of the Motor Vehicle Safety Regulations: Vehicle Emissions (Standard 1100), SOR/97-376, (28 July, 1997).
        2. The Recreational Marine Engine Memorandum of Understanding between Environment Canada and manufacturers of spark-ignited marine engines to supply the Canadian market with engines designed to comply with U.S. federal spark-ignited marine engine emissions standards starting with the 2001 model year. This is an interim measure that will be overtaken and replaced by the regulation referred to in subparagraph (b)(iv) below.
        3. The Handheld Spark-Ignition Engine Memorandum of Understanding between Environment Canada and manufacturers of handheld sparkignited utility engines to supply engines to the Canadian market that are designed to comply with U.S. federal emissions standards for sparkignited handheld utility engines starting January 1, 2000. This is an interim measure that will be overtaken and replaced by the regulation referred to in subparagraph (b)(iv) below.
        4. The Nonhandheld Nonroad Engine Memorandum of Understanding between Environment Canada and manufacturers of Class I and II nonhandheld spark-ignited utility engines to supply engines to the Canadian market that are designed to comply with U.S. federal emissions standards for new class I and class II nonhandheld nonroad sparkignition engines starting January 1, 2001. This is an interim measure that will be overtaken and replaced by the regulation referred to in subparagraph (b)(iv) below.
        5. The Non-Road Diesel Memorandum of Understanding between Environment Canada and manufacturers of compression ignition (C.I.) non-road engines to supply engines designed to comply with U.S.

federal emissions standards to the Canadian market starting with the 2000 model year. This is an interim measure that will be overtaken and replaced by the regulation referred to in subparagraph (b)(iv) below.

6. Canadian Environmental Protection Act, Diesel Fuel Regulations, SOR/97-110 (4 February, 1997).
7. Canadian Environmental Protection Act, Benzene in Gasoline Regulations, SOR/97-493 (6 November, 1997).
8. Canadian Environmental Protection Act, Sulphur in Gasoline Regulations, SOR/99-236 (4 June, 1999).
9. Canadian Environmental Protection Act, Gasoline and Gasoline Blend Dispensing Flow Rate Regulations, SOR/2000-43 (1 February, 2000).

2. Develop and implement the following new emission control measures:
    1. Proceed with consultations with the objective of developing and implementing a Memorandum of Understanding between Environment Canada and manufacturers and importers of on-road vehicles to ensure that low-emission vehicles will be marketed and sold in Canada in the 2001-2003 model years, in alignment with the voluntary U.S. National Low Emission Vehicle (NLEV) program.
    2. Emission regulations under the Canadian Environmental Protection Act 1999 for new on-road vehicles and engines to align with future U.S. national standards beginning with the 2004 model year, including the U.S. Tier 2 program for new light-duty vehicles, light-duty trucks and medium-duty passenger vehicles and Phase 1 and Phase 2 programs for new heavy-duty vehicles and engines. The final standards and effective dates are subject to the procedures and outcome of the regulatory development process.
    3. A regulation under the Canadian Environmental Protection Act 1999 to reduce the allowable level of sulphur in on-road diesel fuel to align with future U.S. standards. The final standards and effective dates are subject to the procedures and outcome of the regulatory development process.
    4. Emission regulations under the Canadian Environmental Protection Act 1999 for new non-road engines aligned with the U.S. federal emissions program. The final scope of the standards and effective dates are subject to the procedures and outcome of the regulatory development process.

2. With respect to stationary sources of NOx emissions, Canada shall control and reduce its emissions in accordance with the following obligations:
    1. By 2007, cap the annual total emissions of NOx (as NO2) from fossil fuel-fired power plants with a capacity greater than 25 megawatts within the PEMA at 39 kilotonnes for the Ontario portion of the PEMA and 5 kilotonnes for the Quebec portion of the PEMA.
    2. Proposed national Guideline under s.54 of the Canadian Environmental Protection Act, 1999, respecting Renewable Low-Impact Electricity.
3. With respect to sources of emissions of VOC, Canada shall control and reduce its emissions in accordance with the following obligations:
    1.
        1. Canadian Environmental Protection Act 1999, Proposed national Regulation on Tetrachloroethylene and other toxic substances used in dry cleaning.

2. Canadian Environmental Protection Act 1999, Proposed national Regulation on degreasing from commercial and industrial degreasing facilities.

2. Limit values for controlling emissions of VOC from new stationary sources in the following stationary source categories will be determined on the basis of available information on control technology and levels, including limit values applied in other countries, and the following documents:
    1. Canadian Council of Ministers of Environment (CCME). Environmental Guideline for the Control of Volatile Organic Compounds Process Emissions from New Organic Chemical Operations. September 1993. PN1108;
    2. CCME. Environmental Code of Practice for the Measurement and Control of Fugitive VOC Emissions from Equipment Leaks. October 1993. PN1106;
    3. CCME. A Program to Reduce Volatile Organic Compound Emissions by 40 Percent from Adhesives and Sealants. March 1994. PN1116;
    4. CCME. A Plan to Reduce Volatile Organic Compound Emissions by 20 Percent from Consumer Surface Coatings. March 1994. PN1114;
    5. CCME. Environmental Guidelines for Controlling Emissions of Volatile Organic Compounds from Aboveground Storage Tanks. June 1995. PN1180;
    6. CCME. New Source Performance Standards and Guidelines for the Reduction of Volatile Organic Compound Emissions from Canadian Automotive Original Equipment Manufacturer (OEM) Coating Facilities. August 1995. PN1234;
    7. CCME. Environmental Guideline for the Reduction of Volatile Organic Compound Emissions from the Plastics Processing Industry. July 1997. PN1276; and
    8. CCME. National Standards for the Volatile Organic Compound Content of Canadian Commercial/Industrial Surface Coating Products - Automotive Refinishing. August 1997. PN1288.

4. In order to attain the CWS for Ozone in the PEMA by 2010, Canada shall undertake by 2005, and implement between 2005 and 2010, measures based on a comprehensive, national multi-pollutant emission reduction approach as agreed by Canadian Ministers of Environment, consistent with the overall program for achieving the CWS for Ozone, for the following sectors: pulp and paper, lumber and allied wood products, electric power, iron and steel, base metal smelting and concrete batch mix and asphalt mix plants. These measures shall address, inter alia, NOx emissions from new, modified and existing industrial and commercial boilers. In addition, measures shall be developed to reduce VOC emissions from solvents, paints and consumer products using a mix of instruments such as eco-labelling criteria and public education programs pertaining to VOC in consumer products, environmental performance standards for key products (e.g. surface coating of wood products, automotive parts, metal products) and for other significant solvent sources.
5. In addition, in the Quebec portion of the PEMA, the following shall be implemented:
    1. Proposed amendments to Le Réglement sur la qualité de l'atmosphère du Québec ("Québec's Regulation respecting the Quality of the Atmosphere") to reduce NOx emissions from new and modified industrial and commercial boilers.

2. Proposed amendments to Le Réglement sur la qualité de l'atmosphère du Québec ("Québec's Regulation respecting the Quality of the Atmosphere") to reduce VOC emissions from surface coatings, commercial printing, dry cleaning and aboveground storage tanks.
3. Implementation of the Agreement on Environmental Management between the Government of Québec and petroleum refineries and major petrochemical plants to control and reduce VOC emission from their operations.
4. Implementation of the existing Réglement sur les produits pétroliers du Québec ("Québec's Regulation on Petroleum Products") concerning gasoline volatility.
5. Proposed amendments to Le Réglement sur les produits pétroliers du Québec ("Québec's Regulation on Petroleum Products") to reduce VOC emissions from gasoline distribution networks.

6. In addition, in the Ontario portion of the PEMA, the following shall be implemented:
    1. The Ontario Drive Clean program (Ontario Environmental Protection Act Regulation 361/98) as amended by Ontario Regulation 401/98, as amended by Ontario Regulation 86/99 and as amended by Ontario Regulation 438/99.
    2. Regulation (Ontario Environmental Protection Act Regulation 455/94) of Stage I vapour recovery.
    3. Regulation (Ontario Environmental Protection Act Regulation 271/91 as amended by Ontario Environmental Protection Act Regulation 45/97) of volatility of gasoline at 9 psi during the summer months in southern Ontario and 10.5 psi in northern Ontario.
    4. Regulation (Ontario Environmental Protection Act Regulation 323/94) requiring environmental training for dry cleaners.
    5. Implementation of the CCME guideline for new and modified combustion turbines.
    6. Implementation of the CCME guideline for new commercial/industrial boilers and heaters.
    7. Regulation (Ontario Environmental Protection Act Regulation 227/00) to be applied to the electricity sector requiring annual monitoring and reporting of 28 pollutants of concern with a commitment to extend the monitoring and reporting requirement to other industry sectors.

B. For the United States:

1. Specific NOx Reduction Commitments
    1. The United States shall require States that are located in the PEMA and that are subject to EPA's NOx regulation (referred to as the "NOx SIP Call") to implement that regulation in accordance with 40 Code of Federal Regulations (CFR) sections 51.121 and 51.122 including any modifications as a result of any court decision. The NOx SIP Call requires States to ensure that seasonal NOx emissions do not exceed specified levels ("budgets").
    2. The United States shall implement a motor vehicle control program in the PEMA that meets the requirements of 40 CFR Part 80, Subpart D (reformulated gasoline), 40 CFR Part 86 (control of emissions from new and in-use highway vehicles and engines); and 40 CFR Part 80, section 80.29 (controls and prohibitions on diesel fuel quality).
    3. The United States shall implement standards for non-road engines in the PEMA as provided for in 40 CFR Part 87 (aircraft), Part 89 (compression-

ignition engines), Part 90 (spark-ignition engines), Part 92 (locomotives), and Part 94 (marine engines).

2. Specific VOC Reduction Commitments
    1. The United States shall implement controls in the PEMA that reduce VOC emissions as required by 40 CFR Part 59, Subpart B (automobile repair coatings), Subpart C (consumer and commercial products), and Subpart D (architectural coatings).
    2. The United States shall implement controls on hazardous air pollutants in the PEMA that also reduce VOC emissions as required by 40 CFR Part 63. This includes the following Subparts:
    Subpart M (dry cleaning);
    Subparts F, G, H, and I (Hazardous Organic NESHAP);
    Subpart GG (aerospace industry);
    Subpart N (chromium electroplating);
    Subpart L (coke ovens: charging, top side & door leads);
    Subpart O (commercial sterilizers);
    Subpart T (degreasing organic cleaners);
    Subpart R (gasoline distribution (Stage 1));
    Subpart Q (industrial cooling towers);
    Subpart EE (magnetic tape);
    Subpart Y (marine vessel loading operations);
    Subpart DD (off-site waste and recovery operations);
    Subpart CC (petroleum refineries);
    Subpart U (polymers and resins I);
    Subpart W (polymers and resins II);
    Subpart JJJ (polymers and resins III);
    Subpart KK (printing/publishing);
    Subpart X (secondary lead smelters);
    Subpart II (shipbuilding and ship repair);
    Subpart JJ (wood furniture);
    Subpart XXX (ferralloys production);
    Subpart III (flexible polyurethane foam production);
    Subpart YY (generic MACT);
    Subpart DDD (mineral wool production);
    Subpart HH (oil and natural gas transmission and production);
    Subpart MMM (pesticide active ingredient production);
    Subpart GGG (pharmaceuticals production);
    Subpart AA/BB (phosphoric acid/phosphate fertilizers);
    Subpart PPP (polyether polyols productions);
    Subpart OOO (polymers and resins III: amino/phenol resins);
    Subpart LLL (portland cement manufacturing);
    Subpart LL (primary aluminum production);
    Subpart TTT (primary lead smelting);
    Subpart VVV (publicly owned treatment works);
    Subpart S (pulp and paper (Non-combust) MACT I);
    Subpart S (pulp and paper cluster rule MACT III);
    Subpart RRR (secondary aluminum);
    Subpart CCC (steel pickling);
    Subpart F (tetrahydrobenzaldehyde manufacture); and
    Subpart NNN (wool fiberglass manufacturing).

3. The United States shall implement controls in the PEMA on motor vehicles and nonroad engines as described above in Part III.B (1) above.

3. New Source Standards The United States shall require major new VOC and NOx sources in the PEMA to meet New Source Performance Standards as required by 40 CFR Part 60. This includes the following Subparts:
Subpart D (fossil fuel fired steam generators);
Subpart Da (electric utility steam generating units);
Subpart Db (industrial/commercial/institutional steam generating units);
Subpart Dc (small industrial-commercial-institutional steam generating units);
Subpart E (incinerators);
Subpart Ea (municipal waste combustors);
Subpart Eb (large municipal waste combustors);
Subpart Ec (hospital/medical/infectious waste incinerators);
Subpart G (nitric acid);
Subpart K (storage vessels for petroleum liquids);
Subpart Ka (storage vessels for petroleum liquids);
Subpart Kb (volatile organic liquid storage vessels);
Subpart EE (surface coating of metal furniture);
Subpart GG (stationary gas turbines);
Subpart MM (automobile or light-duty truck assembly plants);
Subpart QQ (graphic arts industry: publication rotogravure printing);
Subpart RR (pressure sensitive tape and label surface coating operations);
Subpart SS (industrial surface coating of large appliances);
Subpart TT (metal coil surface coatings);
Subpart VV (synthetic organic chemical manufacturing industry (SOCMI));
Subpart WW (municipal solid waste landfill);
Subpart XX (bulk gasoline terminals);
Subpart BBB (passenger and light duty truck tire manufacturing);
Subpart DDD (polymer manufacturing industry);
Subpart FFF (rotogravure printing of flexible vinyl or urethane products);
Subpart GGG (petroleum refinery leaking equipment);
Subpart HHH (synthetic fiber production facilities);
Subpart JJJ (petroleum dry cleaners);
Subpart KKK (onshore natural gas processing plant leaking equipment);
Subpart NNN (SOCMI distillation operations);
Subpart QQQ (individual drain systems;
Subpart RRR (SOCMI reactor processes);
Subpart SSS (magnetic tape manufacturing);
Subpart TTT (surface coating of plastic parts for business machines);
Subpart VVV (polymeric coating of supporting substrates); and
Subpart WWW (municipal solid waste landfills).

C. For both Parties:

Taking into account the purpose of this Annex, the Parties agree that the regulations, guidelines and caps referenced in all of the commitments in Part III above are subject to modification from time to time as a result of domestic legal processes that may take place.

PART IV -- ANTICIPATED ADDITIONAL CONTROL MEASURES AND INDICATIVE REDUCTIONS

In addition to the obligations set forth in Part III above, each Party currently implements or anticipates implementing additional measures that are expected to contribute to overall reductions of NOx and VOC emissions. For illustrative purposes only, additional control measures currently in place and anticipated additional control measures are set forth below, as are predicted overall emission reduction rates.

A. For Canada:

1. National Reductions
   In order to achieve, by 2010, the CWS for Ozone (65 ppb 8-hour average 4th highest averaged over 3 years), Canada intends to develop and implement further reductions of emissions of NOx and VOC.
2. Area-Specific Reductions
   In Ontario, a 45% reduction of NOx and VOC emissions from 1990 levels is expected to be required to meet the CWS for Ozone, assuming comparable reductions in the U.S. PEMA. In the Ontario portion of the PEMA, measures to reduce VOC emissions from small to medium sized solvent users will be developed. In the Québec portion of the PEMA, measures to reduce NOx and VOC emissions from existing light and heavyduty vehicles will be considered.
3. Quantitative Estimates
   The emission reduction obligations identified in Part III.A above are estimated to reduce annual NOx emissions in the PEMA from 1990 levels by 39% by 2007 and 44% by 2010 and annual VOC emissions in the PEMA from 1990 levels by 18% in 2007 and 20% in 2010. Once all the measures identified in Part III.A are implemented, in conjunction with the anticipated national and area-specific reductions identified above, it is expected that emissions reductions will be greater than currently estimated.

B. For the United States:

1. National Reductions
   The United States has developed or intends to develop and implement standards to further reduce emissions of NOx and VOC, including:
   1. Tier 2 vehicle and fuel sulphur standards
   2. Tier 3 standards for nonroad compression ignition engines
   3. Heavy-duty engine standards
   4. Recreational vehicle standards
2. Area-Specific Reductions
   The United States has implemented and intends to continue to implement NOx and VOC control measures in specific areas as required by applicable provisions of the Clean Air Act. The area specific measures include: NOx and VOC reasonably available control technology, marine vessel loading, treatment storage and disposal facilities, municipal solid waste landfills, onboard refuelling, residential wood combustion, vehicle inspection/maintenance, and reformulated gasoline. In addition to these measures, under Clean Air Act mandates, U.S. states have already adopted or will be required to adopt additional measures for particular areas in the PEMA in order to meet the applicable National Ambient Air Quality Standards for Ozone.
3. Quantitative Estimates
   The emission reduction obligations identified in Part III.B above, in conjunction with the anticipated national and area-specific reductions identified above, are estimated to reduce annual NOx emissions in the PEMA from 1990 levels by 27% by 2007 and

36% by 2010 and annual VOC emissions in the PEMA from 1990 levels by 35% in 2007 and 38% in 2010.[1] Further, the emission reduction obligations identified in Part III.B above in conjunction with the anticipated national and area-specific reductions identified above, are estimated to reduce ozone season NOx emissions in the PEMA from 1990 levels by 35% by 2007 and 43% by 2010 and ozone season VOC emissions in the PEMA from 1990 levels by 39% in 2007 and 36% in 2010.

[1]*The assumptions used in calculating the indicative reductions are detailed in "Procedures for Developing Base Year and Future Year Mass Modeling Inventories for the Tier 2 Final Rulemaking" (EPA420-R-99-034, September 1999).*

C. For Both Parties:

Each Party shall update its quantitative estimates referred to above, by 2004 and from time to time thereafter, and shall make such estimates available to the other Party and to the public.

PART V --REPORTING

A. Beginning in 2004, as part of the biennial progress reports under Article VIII.2 of the Agreement, the Parties agree to provide information on all anthropogenic NOx and all anthropogenic and biogenic VOC emissions within the PEMA specified in Part II above. This information shall be from a year not more than two years prior to the year of the report and shall include:

1. Annual and ozone season (May 1 to September 30) estimates for VOC emissions categorized into the following sectors:
    1. Industrial Sources
    2. Non-Industrial Fuel Combustion
    3. Electric Power Generation
    4. Onroad Transportation
    5. Nonroad Transportation
    6. Solvent Utilization
    7. Other Anthropogenic Sources
    8. Biogenic sources (VOC emissions from vegetation and NOx emissions from soil).
2. Annual and ozone season (May 1 to September 30) estimates for NOx emissions categorized into the following sectors:
    1. Industrial Sources
    2. Non-Industrial Fuel Combustion
    3. Electric Power Generation
    4. Onroad Transportation
    5. Nonroad Transportation
    6. Other Anthropogenic Sources.
3. NOx and VOC 5-year emissions trends for the sectors listed above as well as total emissions.

B. For the purpose of these reports, the Parties shall develop a common definition of what source categories are covered in each sector and a common format and level of aggregation and disaggregation of data for reporting emissions.

C. Beginning in 2002, as part of the biennial progress reports, the Parties agree to provide the following ambient air quality information:

1. Ambient ozone concentrations, reported in the form of the applicable standards
2. 10-year trends in ambient ozone concentrations
3. Ambient VOC concentrations
4. 10-year trends in ambient VOC concentrations
5. Ambient NOx concentrations
6. 10-year trends in ambient NOx.

D. The ambient air quality information listed above shall be reported for all relevant monitors located within 500 km of the border between Canada and the lower 48 states of the United States.

E. For the purpose of these reports, the Parties shall develop common protocols and reporting formats, including identification of relevant monitors, for reporting air quality and trends information.

F. Beginning in 2004, as part of the biennial progress reports, the Parties agree to provide information on implementation of the controls agreed to under this Annex.

PART VI -- REVISITING

A. The Parties agree to assess in 2004 progress in implementing the obligations in the Annex with a view to negotiating further reductions.

B. The Parties agree to discuss, at the request of either Party, the possibility of amending this Annex to designate additional emission management areas and/or to revise the emissions commitments currently specified.

C. As part of the comprehensive review under Article X of the Agreement, the Parties shall also review the adequacy of the obligations in this Annex for achieving the objectives of this Annex.

PART VII -- MORE STRINGENT MEASURES

Either Party may take more stringent measures to control and reduce NOx and VOC emissions than those specified in this Annex.