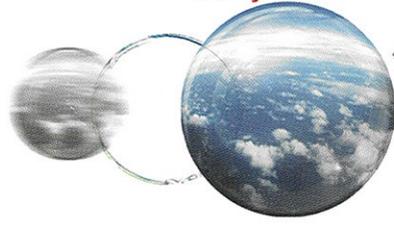




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NEWS RELEASE

GOVERNMENT OF CANADA UNVEILS \$120 MILLION CLEAN AIR ACTION PLAN TO PROTECT THE HEALTH OF CANADIANS

Ottawa, February 19, 2001 -- The Government of Canada will invest \$120.2 million in new measures to accelerate action on clean air, Environment Minister David Anderson announced today.

The action plan focuses on a 10 year regulatory road map for cleaner vehicles and fuels, initial measures to reduce smog causing emissions from industrial sectors, improvements to the cross country network of pollutant monitoring stations and expansion of the public reporting by industry on pollutant releases. The plan will deliver cleaner air to 30 million Canadians and ensure Canada meets its commitments to implement the Canada-U.S. Ozone Annex signed in December 2000.

"Last spring I launched the Clean Air strategy and today I'm delivering on our promises," said Minister Anderson. "That strategy included steps to reduce transboundary pollution, to ensure cleaner transportation, to reduce the emission of smog pollutants from industrial sectors, to initiate more clean air science and to help Canadians and communities who want to take their own clean air actions. We've signed the Ozone Annex with the U.S, we're delivering a regulatory plan for cleaner vehicles and fuels, we're strengthening our monitoring and public reporting of contaminants and we've started the work to reduce emissions from the industrial sector."

The Ozone Annex, negotiated last year under the Canada-U.S. Air Quality Agreement, includes commitments by both countries to dramatically reduce the smog-causing pollutants nitrogen oxides and volatile organic compounds that cause ground-level ozone to form and which create health and environmental problems on both sides of the border. The Annex also contains commitments on monitoring and reporting measures.

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"We know that air pollution affects our health, and that children, senior citizens and those with respiratory and cardiac illness are particularly vulnerable to the health effects of dirty air", said Minister Anderson. "Therefore, our job is not finished. We will continue to work on reducing emissions from industrial sectors, on engaging more and more Canadians and on strengthening the foundation of clean air science."

The \$120.2 million investment in cleaner air builds on earlier initiatives including regulations to reduce sulphur levels in gasoline, measures to enhance science and monitoring programs on acid rain and leading in the development of a United Nations treaty to reduce Persistent Organic Pollutants (POPs) such as PCBs and dioxins and furans.

Government measures directed at reducing air pollutants complement initiatives to combat climate change. Bringing cleaner fuels, alternative energy sources and greener transportation to Canadians also reduce greenhouse gases emissions, and will help Canada reach its international commitments on climate change.

Further information on the Government of Canada's Clean Air Agenda and new Fact sheets: New Measures on Clean Air total \$120.2 million; Taking Action on Vehicles, Engines and Fuels to Clean the Air and Protect Human Health; The National Air Pollution Surveillance (NAPS) Network and the Canadian Air and Precipitation Monitoring Network (CAPMoN); and the Canada-U.S. Ozone Annex are available on Environment Canada's Green Lane at: http://www.ec.gc.ca/air/menu_e.shtml.

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(  galement disponible en fran  ais)



New Measures on Clean Air Total \$120.2 Million

Funding for measures included in the Government of Canada's Plan of Action on Clean Air announced by Environment Minister David Anderson totals \$120.2 million. They focus on four major areas: transportation, industrial sector, monitoring and reporting.

Transportation

Initiatives on vehicles, engines and fuels total \$48.4 million. They include the development and implementation of regulations for vehicles, off-road equipment and fuels, laboratory testing of vehicles, the expansion of voluntary inspection and maintenance programs and support for high emitting vehicle scrappage programs.

The regulatory plan will align Canadian vehicle emission standards with those in the United States by the 2004 model year, and introduce new standards for diesel fuel used in trucks, buses and construction and agricultural equipment.

Industrial Sector

Other investments totaling \$19.8 million will be allocated over five years toward a number of initial actions for reducing NO_x and VOC emissions from industrial sectors. These include:

- \$2.7 million to implement, in cooperation with Ontario and Quebec, a NO_x emission cap on the fossil fuelled electricity sector in the regions of those provinces that are included in the Ozone Annex;
- \$4.9 million for measures to reduce other emissions of VOC and NO_x from a range of products including paints and paint coatings, degreasing agents and solvents;
- \$5.2 million on modeling applications of transboundary flows and regional smog formation and transport. These measures will serve to assess progress in meeting the goals of the Ozone Annex and support design of smog implementation plans;
- \$3.0 million for conducting regional risk analysis to characterize major sources of smog in selected regions of Canada; and

- \$4.0 million on joint analyses based on the component monitoring and reporting systems so that governments in Canada and the United States can prepare for and undertake the next round of Ozone Annex negotiations in 2004.

Monitoring

To track progress under the Ozone Annex, both countries will improve monitoring and reporting on air quality within 500 kilometres of the Canada-U.S. border. Canada will invest \$29.1 million over five years and add up to 10 new monitoring stations to the 262 stations in 131 municipalities and rural sites across the country, refurbish about 50 monitoring stations across Canada and upgrade equipment in others.

Reporting

The third major component of the funding to implement the Ozone Annex is a \$22.9 million expansion of the National Pollutant Release Inventory (NPRI), Canada's only legislated, nation-wide publicly accessible inventory of pollutants released to the environment. The NPRI list of substances will be expanded in 2002 to include precursors of ground-level ozone and components of smog such as Nitrogen Oxides (NO_x), Volatile Organic Compounds (VOC), Sulphur Oxides (SO_x), Particulate Matter (PM) and Carbon Monoxide (CO).

Further details on all these initiatives are available in *Securing Clean Air for Canada* which can be found on Environment Canada's Green Lane at: www.ec.gc.ca/air/menu_e.shtml.



Taking Action on Vehicles, Engines and Fuels to Clean the Air and Protect Human Health

On February 19, 2001, Environment Minister David Anderson made public the details of a 10 year Plan of Action for cleaner vehicles, engines and fuels, an integral part of the Government of Canada's Clean Air Strategy. The Plan of Action includes measures and actions on clean air that will produce health and environmental benefits for Canadians from coast to coast. The measures, which will be supported by regulations, guidelines and studies over the coming years, were developed through extensive consultations that began last spring with provincial and territorial governments, environmental and health organizations and automobile and fuel sector representatives.

Transportation is the largest source of air pollution in Canada. The use of engines to power vehicles and equipment and the combustion of transportation fuels have major impacts on the environment and health of Canadians. Air pollution is a serious health problem. Studies show that more than 5,000 premature deaths a year across Canada can be attributed to air pollution.

Emissions Initiatives

Cars, Trucks, Off-Road Vehicles and Engines

Emissions from vehicles and engines depend upon vehicle/engine technology and the properties of the fuels. In some cases, vehicle emission control systems cannot operate properly without the right fuels. Therefore, fuel standards and vehicle/engine emission standards must be considered as an integrated system.

The Plan of Action sets out a plan to develop new Canadian emission standards for vehicles and engines, aligned with those of the United States Environmental Protection Agency. Regulations under the *Canadian Environmental Protection Act* and emissions control programs will be developed to reduce emissions from:

- cars, vans, pick-up trucks and sports utility vehicles to be phased-in beginning with the 2004 model year;
- large trucks and buses to be phased-in beginning with the 2004 model year;
- off-road diesel vehicles and engines such as those used in the agricultural sector and by the construction industry;
- gasoline utility engines such as those used in snowblowers, lawn mowers, chain saws, and

- outboard marine engines and personal watercraft.

The Plan of Action also provides details on the following measures:

- the development of a Memorandum of Understanding with automobile manufacturers to introduce low-emission vehicles in Canada for model years 2001-2003, similar to the Voluntary National Low-Emission Vehicle (NLEV) Program in the U.S. This will ensure that Canadians benefit from the latest vehicle emission control technologies; and
- the development of a Code of Practice for Heavy Duty Vehicle Inspection and Maintenance programs for use by provinces in monitoring emissions from large trucks and buses.

Clean Fuel Initiatives

Diesel, Gasoline and Fuel Oils

Cleaner fuels reduce pollution. The Plan of Action contains several measures aimed at protecting the health and environment of Canadians by improving the quality of diesel fuel by:

- reducing the level of sulphur by 2006 in on-road diesel fuel used by trucks and buses, by aligning Canadian requirements with those in the United States;
- establishing a new limit for sulphur in off-road diesel fuel used in construction and agricultural equipment; and
- establishing a comprehensive database on diesel fuel quality in order to monitor fuel quality

The Plan also details several measures for cleaner gasoline:

- Environment Canada will conduct further analysis on the composition of gasoline to determine if additional controls on gasoline quality have the potential to reduce emissions of toxic substances from vehicles; and
- a *Canada Gazette* notice will be published requesting information on the use and release into the environment of the gasoline additive MTBE.

Environment Canada also proposes to develop measures to reduce the level of sulphur in light fuel oils used for heating homes and for heavy fuel oils used by industrial facilities.

Environment Canada will investigate complementary measures to regulations, such as economic instruments, to promote the early introduction of cleaner fuels into Canada.

Further information on the Government of Canada's Clean Air Strategy can be found on Environment Canada's Green Lane at: www.ec.gc.ca/air/menu_e.shtml

Clean Air: What the Government of Canada is Doing

The Government of Canada is taking action on clean air that will bring benefits in the short-term, and implementing a long-term agenda that will help ensure clean air for future generations.

Clean air is being addressed by actions on transportation emissions, transboundary pollution, industrial emissions, science, and by encouraging the many different actions that can be taken at the corporate level and by individuals.

The Government of Canada has taken a number of actions in recent months that address the clean air priority. For instance:

Science, Reporting and Monitoring

- Additional resources of \$22.9 million were announced on February 19th to allow for the expansion in 2002 of reporting by industry to the National Pollutant Release Inventory (NPRI) on the pollutant releases that contribute to smog. New pollutants to be covered in annual reporting include Nitrogen Oxides (NO_x), Volatile Organic Compounds (VOC), Sulphur Oxides (SO_x), Particulate Matter (PM) and Carbon Monoxide (CO). The NPRI is a publicly accessible inventory of information on substances of concern released to air, water and land. Each year, NPRI provides Canadians with more details on pollutants released in their communities.
- Additional resources of \$29.1 million have been added to Canada's air pollutant monitoring networks: the National Air Pollution Surveillance (NAPS) Network and the Canadian Air and Precipitation Monitoring Network (CAPMoN). These federal-provincial-territorial networks run 262 monitoring stations at urban and rural sites across Canada. This new funding is in addition to \$1.2 million provided in 2000, and will add new monitoring stations, refurbish others and upgrade equipment.
- In 1997, Canada initiated the first program on smog forecasting in New Brunswick. This program was expanded to Nova Scotia and Prince Edward Island in 2000.

- A smog forecasting pilot project has been conducted with provincial and municipal governments in the Vancouver area. The partners are currently discussing next steps and implementation.
- Canada is strengthening the science of clean air through the provision of \$60 million to the Canadian Foundation for Climate and Atmospheric Sciences (CFCAS) to strengthen science capacity in air quality, climate change and extreme weather issues. The Foundation announced its first round of research projects on February 15, 2001.

Vehicles and Fuels

- A major investment of \$48.4 million dollars is being made to bring cleaner engines and cleaner fuels to Canadian cars, light duty trucks, Sport Utility Vehicles (SUVs), tractors, heavy duty diesel equipment and small engines such as snowblowers, lawnmowers and leaf blowers. The 10 year regulatory and scientific plan of action will ensure that Canadian vehicle and fuel standards are in line with the stringent requirements in the United States starting in the 2004 model year.
- For the immediate period, while new vehicle and engine regulations are being developed, a comprehensive set of voluntary agreements have been put into place that require manufacturers and importers to provide equipment offerings in Canada equivalent to new U.S. standards.
- Canada is reducing sulphur in gasoline through regulations that require reductions across Canada to 150 parts per million (ppm) by 2002 and 30 ppm starting in 2005. The reductions are especially important in Ontario, which has the highest sulphur levels in gasoline in Canada. These regulations will avoid, over the next 20 years, more than 2,000 premature deaths, 93,000 cases of bronchitis in children and 11 million incidents of respiratory problems such as asthma attacks.
- Sulphur in Diesel Regulations, effective since January 1, 1998, limit the sulphur content of diesel fuel used in on road vehicles to a maximum of 500 ppm.
- The Government has also announced its intention to further reduce sulphur in diesel to 15 ppm by 2006 in line with similar requirements for diesel sold in the United States.

Canada-Wide Standards

- In June 2000, the Government of Canada, the provinces and the territories, except Quebec, adopted new Canada-Wide Standards for PM and Ozone. These Standards set the agenda for managing air quality in Canada for the next decade. They set ambient air quality concentration targets for ground-level ozone and fine particulate matter for the year 2010.
- Environment Canada is working with provinces and territories to develop comprehensive emission reduction strategies for a number of major industrial sectors in Canada. Other measures focusing largely on existing commercial and industrial sources are being undertaken by provinces and territories to ensure that the new PM and ozone standards will be met by 2010.
- To meet its commitments under the Canada-Wide Standards, the government has allocated:
 - \$2.7 million to implement a NO_x emission cap on the fossil fuelled electricity sector in regions in Ontario and Quebec included in the Ozone Annex; and
 - \$4.9 million for measures to reduce other emissions of VOC and NO_x from a range of products including paints and paint coatings, degreasing agents, solvents, printing chemicals and cleaners.
- Other important air quality-related Canada-Wide Standards either adopted or accepted in principle by federal, provincial and territorial Ministers in June 2000 include mercury, benzene, dioxins and furans.

International

- On December 7, 2000, Canada signed an agreement to reduce transboundary smog with the United States through an Ozone Annex under the *1991 Canada-U.S. Air Quality Agreement*. Actions under the Annex will reduce air pollution flows from the United States to improve air quality and the health of Canadians living in downwind areas in eastern Canada. It also commits to reducing flows of pollution from areas in Ontario and Quebec into the United States. Measures to improve air pollution monitoring, air pollution reporting and to ensure cleaner vehicles and cleaner fuels have been announced as part of a \$120 million investment to enable Canada to meet its commitments under the Annex.

- The Government is also preparing for a review of Ozone Annex implementation in 2004 through studies that will pave the way for the new round of negotiations including:
 - \$5.2 million on modeling applications of transboundary flows and regional smog formation and transport. These measures will serve to assess progress in meeting the goals of the Ozone Annex and support design of smog implementation plans;
 - \$3 million for conducting regional risk analyses to characterize major sources of smog in selected regions of Canada; and
 - \$4 million on joint analyses based on the component monitoring and reporting systems so that governments in Canada and the United States can prepare for and undertake the next round of Ozone Annex negotiations in 2004.
- Action on the world's most toxic persistent organic pollutants such as DDT and PCBs has been committed under a United Nations Convention. The final draft text was signed on December 10, 2000 by Canada and 122 other countries. Canada is affected through the global transport of these and other pollutants in the atmosphere. In its Budget 2000, Canada committed \$20 million over the next five years to projects that will help developing countries and countries with economies in transition to reduce or eliminate the release of Persistent Organic Pollutants (POPs) into the environment. The final text of the POPs Convention will go forward for formal approval, signature and ratification in Stockholm, Sweden, in May 2001. Canada is looking forward to adopting the agreement.
- Canada was the first country to ratify the United Nations Economic Commission for Europe (UNECE) Protocols on POPs and Heavy Metals.

The *Canadian Environmental Protection Act (CEPA) 1999*

- CEPA 1999 provides the Government of Canada with new enforcement tools and powers to reduce pollution and to eliminate and regulate emissions of toxic substances.
- The Government has proposed that particulate matter less than or equal to 10 microns (PM₁₀) be declared toxic under CEPA. Emission reduction strategies with timetables will be developed for major emission sources.

Infrastructure

- Canada is working in partnership with provinces, territories and municipalities to improve local access to clean air, clean water and to reduce the threat of climate change in urban and rural centres by:
 - providing \$25 million to create the Green Municipal Enabling Fund and \$100 million to create the Green Municipal Investment Fund. Both these funds will provide grants, loans and loan guarantees for projects that increase the environmental efficiency and cost-effectiveness of existing municipal water, wastewater, waste, energy and public transportation facilities.
- The Government of Canada will invest \$2.65 billion over six years in a new infrastructure program. Investment in Green Infrastructure projects focusing on clean air, clean water and waste water will be the first priority in the new program.

Acid Rain

- Canada has signed the Canada-Wide Acid Rain Strategy for Post-2000, and is currently working in collaboration with the provinces and territories on its implementation. The Strategy calls for new emission reduction targets in eastern Canada, pursuing emission reduction commitments from the United States, ensuring the adequacy of acid rain science and monitoring, and minimizing growth in emissions in areas where deposition is still below levels that cause harm.
- Additional resources of \$8.7 million over five years (\$2.1 million in 2000) have been allocated for enhancing the science and monitoring programs on Acid Rain.



Canada-United States Ozone Annex

The Ozone Annex to the *1991 Canada-United States Air Quality Agreement* was negotiated to reduce the transboundary movement of smog-causing pollutants to better protect human health and the environment. The Ozone Annex commits both Canada and the United States to control and reduce emissions of Nitrogen Oxides (NO_x) and Volatile Organic Compounds (VOC) which are precursors of ground-level ozone, a major component of smog over major regions in Eastern North America.

The Ozone Annex defines a region in each country that is the source of transboundary flows of ozone pollution and its precursors where the commitments in the Annex will apply. In Canada, the defined area includes central and southern Ontario and southern Quebec. In the United States, this includes 18 states and the District of Columbia. These regions represent about 40 percent of the population of the United States and over 50 percent of the population of Canada.

The emission control measures for NO_x and VOC emissions specific to each country include the following:

For the United States:

- The aggressive NO_x emission reduction program - known as the NO_x SIP call (State Implementation Plans) - which will reduce summertime NO_x emissions in the U.S. transboundary region by about 35 percent in 2007. The U.S. Environmental Protection Agency expects that this will be achieved by a more than 70 percent reduction in summertime emissions from fossil fuel power plants and major industrial sources.
- Reductions of NO_x and VOC from existing U.S. vehicles and fuel quality rules, standards for new and modified stationary sources as well as VOC reductions associated with standards for stationary sources of hazardous air pollutants, consumer and commercial products, architectural coatings and automobile repair coatings.
- The United States estimates that the total NO_x reductions in the U.S. transboundary region will be 36 percent year-round by 2010 and 43 percent during the summertime ozone season.

For Canada:

- Aggressive annual caps by 2007 of 39 kilotons of NO_x (as NO₂) emissions from fossil fuel power plants in central and southern Ontario and five kilotons of NO_x in southern Quebec.
- Implementing stringent emission reduction regulations, aligned with those in the United States for:
 - cars, vans, SUVs and light duty trucks;
 - cleaner small engines for off-road equipment and outboard motors;
 - future diesel engines; and
 - fuel standards.
- Canada estimates that the total NO_x reductions in the Canadian transboundary region will be 44 percent year-round by 2010.

The Ozone Annex also provides for:

- annual reporting by both Parties of emissions from major sources categories and tracking of air quality within 500 km of the border between Canada and the lower 48 U.S. states;
- joint analysis of ground-level ozone including transboundary transport, the adequacy of monitoring networks and analysis of options for further cost-effective emission reductions;
- greater public access to information on emissions and air quality;
- assessment of progress and the need for further reductions in 2004 with a view to negotiating further reductions. As part of the review, the countries will look at adding a western component that would address southern British Columbia and U.S. Pacific Northwest transboundary air issues; and
- analyze further options to reduce emissions from significant sources such as transportation, manufacturing and electricity. The goal is to implement cost effective reductions through energy efficiency, renewable energy, cleaner fuel and alternative technology and approaches.

The final draft was crafted through four negotiating sessions and extensive informal consultations beginning in Ottawa, in February 2000, and ending in Washington, on October 12, 2000. The Canadian and American negotiating teams were enhanced on both sides by the participation of health, environmental, industry and labour representatives. As well, representatives of the Ontario and Quebec governments joined the Canadian delegation and U.S. state representatives and Congressional staff were part of the U.S. delegation.



The National Air Pollution Surveillance Network and the Canadian Air and Precipitation Monitoring Network

Canada maintains two air-monitoring networks. The National Air Pollution Network (NAPS) Network is a joint federal, provincial, territorial and municipal network established in 1969. It is primarily an urban network, with 239 air monitoring stations in 136 municipalities. The augmented Canadian Air and Precipitation Monitoring Network (CAPMoN) is a rural network with 23 air monitoring stations in Canada and one in the United States.

In order to track progress on commitments made under the Ozone Annex to the *1991 Canada-U.S. Air Quality Agreement*, both Canada and the United States will improve monitoring and reporting on air quality within 500 kilometres of the Canada-U.S. border. The more we know, the faster we will be able to identify problem areas and take action to prevent pollution and promote better health for Canadians and Americans in border areas.

Environment Canada will invest more than \$29 million over five years to expand and refurbish federal and provincial networks of monitoring stations across Canada. The new funding, in addition to the \$1.2 million allocated for monitoring in 2000, will ensure these networks meet the monitoring and measurement requirements of the Ozone Annex and the Canada-Wide Standards for Particulate Matter (PM) and Ozone, and provide Canadians with the information on air quality they need.

The NAPS Network gathers measurements on the components of smog. These are Ozone, PM, sulphur dioxide (SO₂), carbon monoxide (CO), oxides of nitrogen (NO_x) and volatile organic compounds (VOC). Air quality data collected by the NAPS has been used to demonstrate the links between air pollution and human health and also to evaluate air pollution control strategies, identify urban air quality trends and forewarn of emerging air pollution issues. Information from the NAPS Network is used by land-use planners, public transportation and urban planners, and many others who must take air quality into account in their decisions.

The new funding will be used to establish up to ten new monitoring stations, refurbish approximately 50 critical monitoring stations as well as to replace aging instrumentation throughout the network. This will include replacing outdated monitors as well as upgrading or replacing the equipment used to calibrate monitoring instruments. In some cases, new samplers will also be added to existing sites to provide more detailed data on levels and components of PM.

The CAPMoN has been in operation for over 20 years. Its initial focus was on acid rain, but now smog pollutants (NO_x, PM and Ozone) are also measured at some sites. Locations are chosen to ensure measurements are regionally representative and are not affected by local sources of air pollution. Data from CAPMoN are used to assess transboundary transport of pollutants. The new funding will add measurements of Ozone and PM at several stations of the augmented CAPMoN.

The investment to improve monitoring complements existing work under way by the New England Governors and Eastern Canadian Premiers, who initiated a joint Eastern Canada-U.S. mapping-without-borders project in the summer of 2000. The project provides seamless, animated, near real-time Canadian and U.S. ground-level ozone maps for, on the Canadian side, New Brunswick, Nova Scotia, Prince Edward Island, Ontario and Quebec. The maps are available during the smog season - May through September - to the public on Environment Canada's Green Lane at: www.ec.gc.ca/air/ozone-maps_e.shtml.

PROTOCOL
BETWEEN
THE GOVERNMENT OF CANADA
AND
THE GOVERNMENT OF THE UNITED STATES OF AMERICA
AMENDING THE "AGREEMENT BETWEEN THE GOVERNMENT OF
CANADA AND THE GOVERNMENT OF THE UNITED STATES 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 (NO_x and VOC), thereby helping both countries attain their respective air quality goals;

RECOGNIZING that tropospheric ozone and its precursors (NO_x 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:

- (a) Specific objectives for sulphur dioxide and nitrogen oxides, which will reduce transboundary flows of these acidic deposition precursors, are set forth in Annex 1.
- (b) 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 NO_x 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:

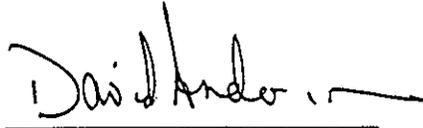
- (a) research and applications that contribute to tracking of human health and environmental responses to controls;
- (b) facility-specific emissions data, quantification methods, and related information required for modeling and regulatory policy development, assumptions and models used to estimate emissions from other sources, and air quality data for all relevant monitors;
- (c) evaluation of transboundary transport, using methods such as, *inter alia*, monitoring and meteorological data analyses, and modeling;
- (d) evaluation of adequacy of monitoring networks;
- (e) review of new technologies; and
- (f) 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

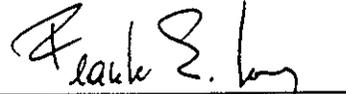
Pursuant to Article XVI of the Agreement, this Protocol shall enter into force upon signature by the Parties.

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

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



**FOR THE GOVERNMENT
OF CANADA**



**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 (NO_x) 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:

- A. For Canada, the Canada Wide Standard (CWS) for Ozone; and
- B. 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.

A. For Canada, the area of 301,330km² 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.

B. 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 NO_x and VOC emissions, Canada shall control and reduce its emissions of NO_x and VOC in accordance with the following obligations:

- (a) Continue the application of the following emission control measures:

- (i) Emission standards for new light-duty vehicles, light-duty trucks, heavy-duty 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).
- (ii) 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.
- (iii) The Handheld Spark-Ignition Engine Memorandum of Understanding between Environment Canada and manufacturers of handheld spark-ignited utility engines to supply engines to the Canadian market that are designed to comply with U.S. federal emissions standards for spark-ignited 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.
- (iv) The Nonhandheld Nonroad Engine Memorandum of Understanding between Environment Canada and manufacturers of Class I and II non-handheld 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 spark-ignition 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.
- (v) 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.
- (vi) *Canadian Environmental Protection Act*, Diesel Fuel Regulations, SOR/97-110 (4 February, 1997).
- (vii) *Canadian Environmental Protection Act*, Benzene in Gasoline Regulations, SOR/97-493 (6 November, 1997).
- (viii) *Canadian Environmental Protection Act*, Sulphur in Gasoline Regulations, SOR/99-236 (4 June, 1999).
- (ix) *Canadian Environmental Protection Act*, Gasoline and Gasoline Blend Dispensing Flow Rate Regulations, SOR/2000-43 (1 February, 2000).

- (b) Develop and implement the following new emission control measures:
- (i) 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.
 - (ii) 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.
 - (iii) 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.
 - (iv) 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 NO_x emissions, Canada shall control and reduce its emissions in accordance with the following obligations:

- (a) By 2007, cap the annual total emissions of NO_x (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.
- (b) 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:

- (a) Canadian Environmental Protection Act 1999, Proposed national Regulation on Tetrachloroethylene and other toxic substances used in dry cleaning.

- (b) Canadian Environmental Protection Act 1999, Proposed national Regulation on degreasing from commercial and industrial degreasing facilities.
- (c) 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:
- (i) 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;
 - (ii) CCME. Environmental Code of Practice for the Measurement and Control of Fugitive VOC Emissions from Equipment Leaks. October 1993. PN1106;
 - (iii) CCME. A Program to Reduce Volatile Organic Compound Emissions by 40 Percent from Adhesives and Sealants. March 1994. PN1116;
 - (iv) CCME. A Plan to Reduce Volatile Organic Compound Emissions by 20 Percent from Consumer Surface Coatings. March 1994. PN1114;
 - (v) CCME. Environmental Guidelines for Controlling Emissions of Volatile Organic Compounds from Aboveground Storage Tanks. June 1995. PN1180;
 - (vi) 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;
 - (vii) CCME. Environmental Guideline for the Reduction of Volatile Organic Compound Emissions from the Plastics Processing Industry. July 1997. PN1276; and
 - (viii) 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, NO_x 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:

- (a) Proposed amendments to *Le Règlement sur la qualité de l'atmosphère du Québec* ("Québec's Regulation respecting the Quality of the Atmosphere") to reduce NO_x emissions from new and modified industrial and commercial boilers.
- (b) Proposed amendments to *Le Règlement 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.
- (c) 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.
- (d) Implementation of the existing *Règlement sur les produits pétroliers du Québec* ("Québec's Regulation on Petroleum Products") concerning gasoline volatility.
- (e) Proposed amendments to *Le Règlement 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:

- (a) 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.
- (b) Regulation (*Ontario Environmental Protection Act* Regulation 455/94) of Stage I vapour recovery.
- (c) 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.

- (d) Regulation (*Ontario Environmental Protection Act* Regulation 323/94) requiring environmental training for dry cleaners.
- (e) Implementation of the CCME guideline for new and modified combustion turbines.
- (f) Implementation of the CCME guideline for new commercial/industrial boilers and heaters.
- (g) 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 NO_x Reduction Commitments

- (a) The United States shall require States that are located in the PEMA and that are subject to EPA's NO_x regulation (referred to as the "NO_x 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 NO_x SIP Call requires States to ensure that seasonal NO_x emissions do not exceed specified levels ("budgets").
- (b) 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).
- (c) 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

(a) 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).

(b) 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 (ferroalloys 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).

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

3. New Source Standards

The United States shall require major new VOC and NO_x 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 NO_x 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 NO_x and VOC.

2. Area-Specific Reductions

In Ontario, a 45% reduction of NO_x 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 NO_x and VOC emissions from existing light and heavy-duty vehicles will be considered.

3. Quantitative Estimates

The emission reduction obligations identified in Part III.A above are estimated to reduce annual NO_x 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 NO_x and VOC, including:

- (a) Tier 2 vehicle and fuel sulphur standards
- (b) Tier 3 standards for nonroad compression ignition engines
- (c) Heavy-duty engine standards
- (d) Recreational vehicle standards

2. Area-Specific Reductions

The United States has implemented and intends to continue to implement NO_x and VOC control measures in specific areas as required by applicable provisions of the Clean Air Act. The area specific measures include: NO_x 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 NO_x 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 NO_x 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.

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.

¹The 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).

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 NO_x 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:
 - (a) Industrial Sources
 - (b) Non-Industrial Fuel Combustion
 - (c) Electric Power Generation
 - (d) Onroad Transportation
 - (e) Nonroad Transportation
 - (f) Solvent Utilization
 - (g) Other Anthropogenic Sources
 - (h) Biogenic sources (VOC emissions from vegetation and NO_x emissions from soil).
2. Annual and ozone season (May 1 to September 30) estimates for NO_x emissions categorized into the following sectors:
 - (a) Industrial Sources
 - (b) Non-Industrial Fuel Combustion
 - (c) Electric Power Generation
 - (d) Onroad Transportation
 - (e) Nonroad Transportation
 - (f) Other Anthropogenic Sources.
3. NO_x 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 NO_x concentrations
6. 10-year trends in ambient NO_x.

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.

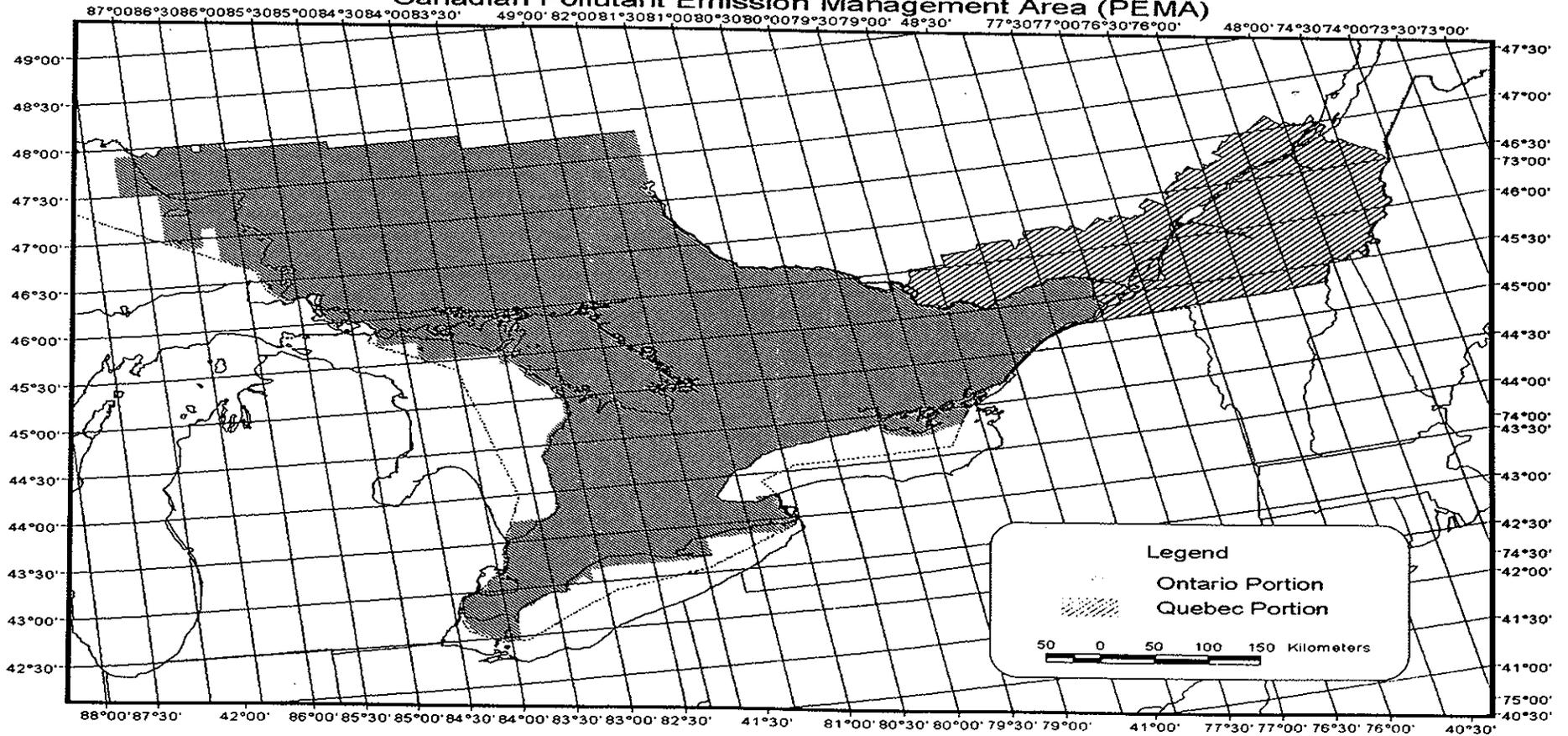
C. As part of the comprehensive review under Article X of the Agreement, the Parties shall also review the adequacy of the obligations in this Annex for achieving the objectives of this Annex.

PART VII -- MORE STRINGENT MEASURES

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

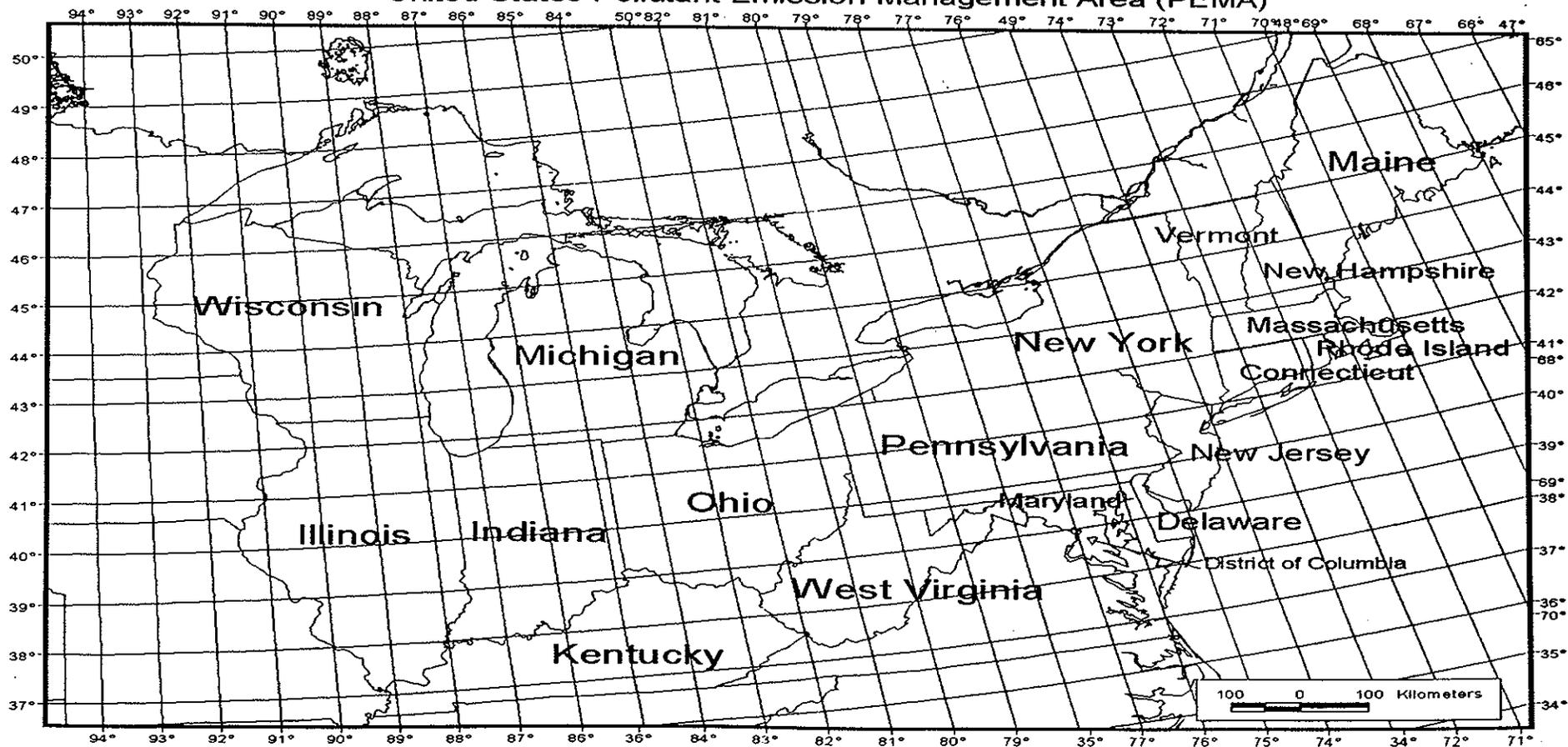
Appendix 1

Appendix 1 Canadian Pollutant Emission Management Area (PEMA)



Appendix 2

Appendix 2
United States Pollutant Emission Management Area (PEMA)



DEPARTMENT OF THE ENVIRONMENT

A Federal Agenda for Cleaner Vehicles, Engines and Fuels

Notice is hereby given that the Minister of the Environment has developed a federal agenda on cleaner vehicles, engines and fuels, as annexed.



Minister of the Environment

ANNEX

Federal Agenda on Cleaner Vehicles, Engines and Fuels

Environment Canada intends to develop and implement a series of measures over the next decade to further protect the health of Canadians and the environment by reducing emissions from vehicles, engines and fuels.

Background

Air pollution is a serious health problem. Across Canada, studies show that there are more than 5,000 premature deaths a year that can be attributed to air pollution. Air pollution is also associated with other health impacts including cardio-vascular ailments and respiratory distress and results in increased emergency hospital visits and hospital admissions for Canadians. Clearly, there is a need to continue taking strong actions to provide a healthier environment for Canadians.

The use of internal combustion engines to power vehicles and equipment and the combustion of fuel oils contribute significantly to air pollution in Canada, particularly in urban areas. Emissions of concern include nitrogen oxides (NOx), volatile organic compounds (VOCs), sulphur oxides (SOx), carbon monoxide (CO), greenhouse gases, fine particulate matter, benzene, 1,3-butadiene, formaldehyde, acetaldehyde and other toxic or potentially toxic substances. These emissions are primarily a function of vehicle/engine technology and the properties of the fuels. Since the performance of vehicle/engine emission control systems can be impaired without the right fuels, the development of effective

policies and programs to reduce emissions must consider fuel standards and vehicle/engine emission standards as an integrated system.

In the spring of 2000, the federal Minister of the Environment announced the federal government's integrated clean air strategy. In recognition of the above, a key component of the clean air strategy is the development and subsequent implementation of a federal agenda on cleaner vehicles, engines and fuels for the next decade. As an initial step, on April 4th, 2000 the Deputy Minister of the Environment wrote to a wide range of stakeholders, inviting them to participate in development of the agenda on cleaner vehicles, engines and fuels. Environment Canada also prepared a discussion paper entitled "*Future Canadian Emission Standards for Vehicles and Engines and Standards for Reformulation of Petroleum-based Fuels*" and distributed this document to all parties who expressed an interest in participating in the process of developing the federal agenda, in response to the Deputy Minister's invitation. The purpose of the discussion paper was to set out the background on various issues and initiate dialogue on what the next decade might hold in regards to new standards in these areas.

On May 25th and 26th, Environment Canada convened a multi-stakeholder workshop in Toronto to bring together leading experts on matters dealing with emissions from vehicles, engines and fuels to discuss future measures to reduce air pollution from these sources. The Vehicle and Fuels Workshop was attended by more than 125 representatives from federal departments, provincial and municipal governments, health and environmental groups, the petroleum refining industry, automotive and engine manufacturers and the alternative fuels sector. All parties were invited to either make presentations at the workshop and/or to provide written submissions which detailed their views on the measures that should be included in the cleaner vehicles, engines and fuels agenda. All workshop presentations and submissions were subsequently distributed in July to stakeholders.

Following a thorough review and full consideration of stakeholder comments, the Minister of the Environment has developed a federal agenda of planned measures and future initiatives to reduce pollution from vehicles, engines and fuels. The following is a summary of the main action items respecting that agenda.

Summary of Planned Actions on Cleaner Vehicles, Engines and Fuels

1) Action on On-Road Vehicles and Engines

Environment Canada intends to proceed with the development of regulations under Division 5 of the Canadian Environmental Protection Act (CEPA)1999, to

align Canadian emission standards for on-road vehicles and engines with those of the U.S. EPA. Specifically, the following items will be included:

Light -duty vehicles and light-duty trucks (cars, pickups, SUVs, etc.):

- Proposed regulations will be developed to align with U.S. Tier 2 standards to be phased-in starting in the 2004 model year;
- For model years 2001-2003, an interim Memorandum of Understanding with vehicle manufacturers will be developed to provide for introduction of vehicles meeting LEV (low emission vehicle) standards; and

Heavy-duty vehicles and engines:

- Proposed regulations will be developed to bring Phase 1 standards into effect for model year 2004 and Phase 2 standards into effect consistent with U.S. timing.

In developing future emission regulations for on-road vehicles and engines under CEPA 1999, Environment Canada plans to ensure that the environmental performance of new vehicle fleets in Canada will be comparable to applicable U.S. program objectives. The details of future regulations, including possible corporate fleet-averaging standards or alternate mechanisms that achieve comparable results, will be developed in consultation with stakeholders during the regulatory development process.

2) Action on In-Use Vehicles and Engines

The Department intends to develop a Code of Practice for Heavy Duty Vehicle Inspection and Maintenance Programs in consultation with interested stakeholders.

3) Action on Off-Road Vehicles and Engines

The Department intends to proceed with the development of emissions control programs for off-road engines, under Division 5 of CEPA 1999, aligned with the corresponding U.S. federal emissions control programs. These include:

- Development of proposed regulations corresponding to the U.S. EPA Phase 2 program for spark-ignition gasoline utility engines;

- Development of proposed regulations corresponding to the U.S. EPA Tier 2 program for compression-ignition off-road engines; and
- Development of proposed regulations corresponding to the U.S. EPA program for spark-ignition marine engines;

The Department will consider the development of:

- Tier 3 program for compression-ignition off-road engines when the full scope of the U.S. EPA program is available; and
- Emissions control programs for large spark-ignition engines, recreational vehicles using gasoline engines, and stern drive and inboard gasoline-powered marine engines aligned with the U.S. EPA programs once these programs are finalized in the U.S.

The details of future proposed regulations, including self-certification, emissions credit systems and fleet averaging provisions, where effective and practical, will be developed through the regulatory process.

4) Action - Policy on International Alignment For Fuels with Other Jurisdictions

Environment Canada plans to continue its approach of generally aligning Canadian environmental fuel requirements with those of the U.S., while taking into consideration environmental standards developed by the European Union. There may be instances, however, where Canada takes additional action to protect the health of Canadians and the environment.

5) Action on Future Standards for Diesel Fuel

On-Road Diesel Fuel:

Environment Canada intends to align with the final U.S. level and timing for sulphur in on-road diesel fuel (i.e. 15-ppm sulphur limit starting June 1, 2006). The Canadian regulatory process will be initiated shortly with a discussion paper soliciting views from stakeholders on the need for and the form of "safety valve" provisions similar to those in the U.S. final rule.

Environment Canada also intends to establish a comprehensive database on diesel fuel composition in order to monitor fuel quality. Refiners and importers of diesel fuel will be requested to provide information on the levels of cetane, aromatics and PAHs in both on-road and off-road diesel starting in January 2001. If participation in this survey is inadequate, Environment Canada will consider mandatory reporting requirements.

Off-Road Diesel:

Environment Canada plans to recommend a regulatory limit for sulphur in off-road diesel. The limit would be established in the same time frame that the EPA plans for developing limits for sulphur in U.S. off-road diesel (expected to be in 2001). In preparation for this, Environment Canada will gather information on where off-road diesel is used, the effects of sulphur reduction on emissions, and the costs of reducing sulphur in diesel for use in all off-road engines and vehicles, including rail and marine applications.

The survey of diesel composition, discussed in the previous section on on-road diesel will also include off-road diesel.

6) Action on Future Standards for Fuel Oils

Environment Canada proposes to develop measures to reduce the level of sulphur in both light and heavy fuel oils used in stationary facilities. Environment Canada intends to commence studies in 2001 of the benefits to the health of Canadians and the environment as well as the cost of reducing sulphur in fuel oils, with the view to matching the requirements set by the European Union for sulphur in fuel oils which will be fully implemented by 2008. Complementary measures to regulations, such as economic instruments, will be examined to accelerate the introduction of low-sulphur fuel oils.

7) Action on Future Standards for Gasoline

There are a number of issues associated with gasoline where action is warranted. The various actions that will be undertaken are itemized separately for each issue.

Gasoline Composition as it Affects Emissions of Air Toxics:

Further analysis is required of the potential for additional controls on gasoline quality to reduce emissions of toxic substances from vehicles. Environment Canada plans to study the effect on emissions of toxic substances from vehicles of setting additional limits for gasoline composition. Possible action to implement

more stringent controls on gasoline composition in order to reduce emissions of air toxics from gasoline-powered vehicles is a lower priority than addressing the quality of diesel and fuel oils used in stationary facilities.

Deposit Control Additives:

Environment Canada intends to examine the current usage patterns of deposit control additives in Canada and the costs of requiring their use at effective levels in all gasoline.

MTBE:

Environment Canada intends to recommend publication in the *Canada Gazette* of a notice under paragraph 71(1)(b) of the *Canadian Environmental Protection Act, 1999* requesting information on the usage and releases of MTBE. This notice would generally apply to those persons handling MTBE or gasoline containing MTBE. Following a review of this information, Environment Canada will consider whether further action in respect of MTBE is warranted.

Ethanol:

The Department will continue to examine this issue in the context of its effects on emissions of greenhouse gases through participation in processes addressing Climate Change.

Driveability Index (controls on distillation):

In order to monitor Canadian gasoline quality in respect of the Driveability Index (DI), Environment Canada intends to ask refiners and importers of gasoline to voluntarily provide information on the input parameters to DI, specifically the distillation values of gasoline (T10, T50, T90) and the concentration of oxygen (by type of oxygenate) starting in July 2001. If participation in this voluntary program is poor, Environment Canada will consider mandating the reporting of the information.

8) Actions to Promote Early Introduction of Cleaner Fuels

Environment Canada will explore complementary measures to regulations, such as economic instruments and other measures, to promote the early introduction of cleaner fuels including low sulphur fuels. Environment Canada also intends to continue to explore with other federal departments the purchase of cleaner fuels for use in government vehicles and facilities. Environment Canada will assess measures to ensure that they should have the desired impacts.

Next Steps

The various planned measures which constitute the federal agenda on cleaner vehicles, engines and fuels will be undertaken following established processes. For example, proposed regulations under the *Canadian Environmental Protection Act, 1999*, will be developed through the normal regulatory process and will provide interested parties with additional opportunities to provide input on formulating the details of future requirements. Other types of measures will be developed using mechanisms which incorporate appropriate consultations with stakeholders.

Further Information

A detailed supporting document entitled "*Support Document to the Notice of Intent on Cleaner Vehicles, Engines and Fuels*", provides details on the various issues considered by Environment Canada in developing the federal cleaner vehicles, engines and fuels agenda, including the comments provided by interested parties during the consultation process, an analysis of the issues, and the Department's intended path forward. This document can be obtained on Environment Canada's website (www.ec.gc.ca) or by contacting Francine Lavallée by telephone at (819) 953-4807 or by fax at (819) 953-7815.

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