

**Reply to Comments on Submissions Received on
the August, 2003 Environment Canada Discussion
document “*Reducing the Level of Sulphur in
Canadian Off-Road Diesel Fuel*”**

Oil, Gas, and Energy Branch

Environment Canada

October 2004

Table of Content

| | |
|--|-----------|
| INTRODUCTION | 1 |
| PARTIES PROVIDING SUBMISSIONS | 1 |
| FEDERAL, PROVINCIAL AND MUNICIPAL GOVERNMENTS | 1 |
| OIL INDUSTRY | 1 |
| VEHICLE AND CATALYST MANUFACTURERS | 1 |
| TRANSPORTATION INDUSTRY | 2 |
| OTHERS | 2 |
| ADDITIONAL CONSULTATION ON NORTHERN ISSUES | 2 |
| ADDITIONAL CONSULTATION ON MARINE ISSUES | 2 |
| COMMENTS AND REPLY | 3 |
| GENERAL COMMENTS | 3 |
| COMMENTS ON ALIGNMENT OF THE REGULATIONS WITH US REQUIREMENTS | 4 |
| COMMENTS ON REGULATED SULPHUR LEVEL AND IMPLEMENTATION DATE | 5 |
| COMMENTS ON SIMPLE VERSUS A COMPLEX REGULATION..... | 6 |
| COMMENTS ON ONE-STEP IMPLEMENTATION VERSUS A PHASE-IN | 7 |
| COMMENTS ON INCLUDING CREDIT PROVISIONS IN THE REGULATIONS | 8 |
| COMMENTS ON REQUIREMENTS FOR RAIL AND MARINE DIESEL FUEL..... | 8 |
| COMMENTS ON CETANE AND AROMATICS..... | 10 |
| COMMENTS ON NORTHERN ISSUES | 11 |
| <i>Implementation Timing for Point-of Sales Limits in Northern Regions</i> | 11 |
| <i>Imports from Alaska</i> | 11 |
| COMMENTS ON TEST METHODS FOR SULPHUR LEVELS..... | 12 |
| <i>Appropriate Test Method</i> | 12 |
| <i>Alternative Test Methods for Reporting Purposes</i> | 12 |
| COMMENTS ON FISCAL INCENTIVES FOR LOW SULPHUR DIESEL FUEL..... | 13 |
| COMMENTS ON OTHER INSTRUMENTS USED BY OTHER COUNTRIES | 14 |
| MISCELLANEOUS COMMENTS..... | 14 |
| <i>Cost of Desulphurization</i> | 14 |
| <i>Controlling Sulphur in Distillate for use in other Applications</i> | 14 |
| <i>Test Tolerance on Sulphur Test Method</i> | 15 |
| <i>Estimated Health Benefits</i> | 15 |
| <i>Lubricity</i> | 16 |
| <i>Supply / Misfuelling</i> | 16 |
| <i>Product Transfer Documents</i> | 16 |
| <i>Companion Vehicle Emission Regulations</i> | 17 |
| <i>Emergency Supplies</i> | 17 |
| APPENDIX A | 18 |
| LIST OF ISSUES FROM AUGUST 2003 DISCUSSION DOCUMENT | 18 |
| APPENDIX B | 20 |
| FURTHER COMMUNICATIONS ON DISCUSSION DOCUMENT – TIMING FOR ARCTIC SALES | 20 |
| APPENDIX C | |
| 29 | |
| EMERGENCY SUPPLY COMMUNICATIONS | |
| | 29 |

APPENDIX D

.....33

ENVIRONEMNT CANADA’S CMAC PRESENTATION33

INTRODUCTION

In August 2003 Environment Canada distributed a Discussion document entitled “*Reducing the Level of Sulphur in Canadian Off-Road Diesel Fuel*” to parties with an interest in fuel issues. The cover letter invited parties to provide their views on the approach and design of new regulations to reduce the level of sulphur in Canadian off-road, rail and marine diesel fuels. Appendix A shows the list of issues included in that discussion paper.

This document responds to the comments that Environment Canada received on the discussion paper.

Excerpts of comments submitted by the Ministère des Ressources naturelles, de la Faune et des Parcs du Québec, Ville de Montréal, Ultramar and Armateurs du Saint-Laurent cited in this document were translated from French. Please refer to the copy of the respective letters distributed as part of the October 2003 package entitled “*Reducing the Level of Sulphur in Canadian Off-road Diesel Fuel, Compendium of Stakeholders Comments*” for the original French version.

PARTIES PROVIDING SUBMISSIONS

Submissions on the discussion paper were received from the following parties:

Federal, Provincial and Municipal Governments

- Natural Resources Canada
- Ontario Ministry of Environment
- Québec Ministère des Ressources naturelles, de la Faune et des Parcs
- Saskatchewan Environment
- Toronto
- Ville de Montréal
- Yukon Environment

Oil Industry

- Canadian Petroleum Products Institute (CPPI)
- Imperial Oil
- Petro-Canada
- Shell Canada Limited
- Suncor Energy Products Inc. (Sunoco)
- Ultramar

Vehicle and Catalyst Manufacturers

- Engine Manufacturers Association
- Manufacturers of Emission Controls Association

Transportation Industry

- Armateurs du Saint-Laurent / St. Lawrence Ship Operators
- Canadian Trucking Alliance / Alliance canadienne du camionnage

Others

- John C. Clark
- Ontario Public Health Association
- Ronald D. Tharby
- Saint John Citizens Coalition

Copies of the submissions received were distributed to stakeholders in October 2003.

Additional Consultation on Northern Issues

A number of parties commented on issues specific to implementation of the regulations in northern regions of Canada. Environment Canada and these parties had some further correspondence by email on both extending the time for sales in the northern regions and adjusting the definition of the “Northern Supply Area” in the regulations. (see Appendix B)

Additional Consultation on Marine Issues

In response to concerns raised by The St. Lawrence Ship Operators that the maritime sector was not adequately consulted, Environment Canada undertook further consultations with marine associations through Canadian Marine Advisory Council (CMAC). On November 5, 2003, Environment Canada provided a presentation (Appendix D) and discussed the proposed requirements for reducing sulphur in off-road, rail and marine diesel fuels at a CMAC meeting. Members of CMAC were invited to provide further comments on the Discussion Paper. No further comments were received from CMAC members.

COMMENTS AND REPLY

General Comments

Many industry stakeholders and governments expressed support for the initiative to reduce sulphur in off-road diesel fuel. It is noteworthy that no one opposed new regulations to introduce the regulatory limits.

- Natural Resource Canada *“supports the initiative to reduce sulphur in off-road diesel”*
- Saskatchewan Environment noted *“It would seem that ... the benefits or regulating a low sulphur limit are significant”*.
- *“Toronto Public Health congratulates the federal government for the progress made to date on improving engines and fuels to protect air quality and health.”*
- *“The City of Montreal’s Director of the Environment supports the federal government’s efforts to promote the use of cleaner vehicles, engines and fuels.”*
- *“The Yukon Government supports this initiative”*.
- *“CPPI members fully support the need to address fuels, engines and vehicles as a system*
- *.“EMA [Engine Manufacturers Association] is a strong proponent of the desulfurization of all fuels in order to improve engine emission control.”*

- The St. Lawrence Ship Operators stated *“our entire sector [maritime] was not adequately consulted as this regulatory plan was being developed. We would urge you to postpone the current initiative and to broadly disseminate your preliminary orientations among ship operators.”* and noted *“Surely, there can be no advantage in discouraging the use of the most environmentally friendly mode of transportation, namely ships.”*
- *”The Ontario Public Health Association (OPHA) stated “it is essential that the government act quickly and decisively.”*
- Ronald D. Tharby stated *“This is an important...and overdue item to be tackled in the drive for cleaner air in Canada”*.
- The Saint John Citizens Coalition for Clean Air (SJCCCA) *“commends and thanks Environment Canada for its efforts to date that will result in the substantial reductions of sulphur in off road diesel fuel.”*

Reply: The proposed Canadian regulation incorporates:

- an initial limit of 500 mg/kg for off-road, rail and marine diesel fuels in June 2007;
- a final limit of 15 mg/kg for off-road diesel fuel in June 2010; and

- a final limit of 15 mg/kg for production and imports of rail and marine diesel fuels in June 2012.

Comments on Alignment of the Regulations with US Requirements

Many industry stakeholders and governments expressed support for alignment of requirements for level and timing in Canada's regulations with those of the U.S.

- Natural Resource Canada *"is pleased that Environment Canada has taken the approach of alignment with the fuel specifications and implementation timing in the United States (US)."*
- *"The Ontario Ministry of the Environment supports Environment Canada's intent to align with the U.S Environmental Protection Agency's (U.S. EPA) proposed requirements for sulphur in off-road diesel fuel"*.
- *"Saskatchewan supports the intention to align regulations... for Canadian levels of sulphur for off-road diesel with the requirements of the US EPA."*
- The City of Toronto supports *"limiting the concentration of sulphur in off-road diesel fuel to 15 parts per million by 2010, as proposed in the United States"*.
- *"CPPI members also fully endorse the principle of alignment" and "support Environment Canada's current initiative to design regulations for off-road engine emission standards and sulphur in off-road diesel fuel that align with the proposed U.S. requirements."*
- Imperial Oil endorsed *"the need for Canada to pursue its policy of aligning Canadian engine and fuel standards with those of the USA."* And noted *"in the event that the US EPA makes adjustments to the timing and level in its final rulemaking, it is critical that a parallel Canadian regulation maintains full harmonization with the USA."*
- Shell Canada Products *"continues to support the Environment Canada policy of regulation of both vehicle and engine emission standards and fuel quality in alignment with those of the USA"*.
- Ultramar noted that the *"regulations should: 1. Align the sulphur content of off-road diesel fuel (Environmental Protection Agency (EPA) equivalent: 40 CFR (Code of Federal Registry) Part 89) according to the EPA schedule"*.
- *"EMA strongly supports Environment Canada's proposal to align Canadian requirements for sulphur in diesel fuel with those of the U.S."*
- *"MECA [Manufacturers of Emission Controls Association] supports aligning Canada's off-road diesel fuel regulations with the U.S.'s proposed sulfur limits."*
- *"CTA [Canadian Trucking Alliance] sees no reason why Environment Canada must rely on US action to formulate a distinctive policy with regard to a single grade of off-road fuel as has already done so with the on-road market."*

Reply: Consistent with the policy developed and set out in the Federal Agenda on Cleaner Vehicles, Engines and Fuels, the proposed regulations align with the U.S. EPA requirements for both level and timing.

Comments on Regulated Sulphur Level and Implementation Date

Numerous parties commented on the regulatory limits and implementation date. It is noteworthy that no one suggested timing on limits on production and imports later than 2007 and 2010 respectively.

- The Ontario Ministry of the Environment encouraged *“Environment Canada to move forward on a draft regulation in a timely manner”*.
- Toronto Public Health *“believes that the 15 ppm sulphur limit by 2010 is achievable, and higher allowable levels would not be appropriate”*.
- The City of Montreal feels *“The proposed deadlines... seem too remote”* and recommends *“that the same deadline of June 1, 2006 and the same limit of 15 mg/kg be implemented for both on-road and off-road diesel”*.
- *“Imperial Oil supports providing the lower Sulphur fuel 500 mg/kg)... followed by a further reduction to 15 mg/kg by mid-2010 for the nonroad (part 89) engines.”*
- EMA supported the *“proposed interim limit of 500 mg/kg beginning no later than June 2007. . . [and the] proposed sulfur limit of 15 mg/kg beginning no later than June 2010.”*
- OPHA *“would like to see sulphur levels in off-road diesel aligned with those for on-road diesel as quickly and as simply as possible.”* and *“strongly support the policy option.... that calls for a one-step 15 ppm sulphur standard for all off-road diesel fuels, including rail or marine diesel fuels, by 2008.”*
- SJCCCA *“want to see a straight forward regulation is [in] place with a reasonable time period”*.

Reply: The proposed regulations align with the timing and level for sulphur in off-road diesel fuel set by the U.S. EPA as follows:

- initial limit of 500 mg/kg for off-road, rail and marine diesel fuels in June 2007;
- final limit of 15 mg/kg for off-road diesel fuel in June 2010; and
- final limit of 15 mg/kg for production and imports of rail and marine diesel fuels in June 2012. (It should be noted that sales of rail and marine diesel fuel would remain subject to the 500 mg/kg limit in order to provide for a sales outlet for fuel that may be contaminated during distribution.)

The implementation date for sales in northern regions is 15 months later than in other regions, reflecting fuel distribution and logistical difficulties in

northern Canada. The later sales date for the northern regions is a difference between the U.S. EPA regulations and the proposed Canadian regulation. (See further discussion on northern issues in Section Comments on Northern Issues.)

Comments on Simple versus a Complex Regulation

Comments received from stakeholders indicated that they universally preferred a simple regulation, without the complexities of the U.S. EPA-style provisions that would allow a small part of the off-road diesel pool to exceed the limits for a short period of time.

- The Ontario Ministry of the Environment suggests *“that Environment Canada continue to assess the environmental benefits and costs of a simple regulation versus a complex EPA-style approach.... The Ministry recommends that Environment Canada pursue the regulatory option that yields the greatest environmental benefit.”*
- The Quebec Department of Natural Resources, Wildlife and Parks *“is in favour of the simple regulation proposed by Environment Canada”*.
- *“Saskatchewan Environment would also support a simple direct regulation.”*
- *Toronto Public Health stated “A simple regulation is recommended for Canada”*.
- *“The City of Montreal has always favoured a regulatory approach which is easy to implement. We feel that credit trading programs are too complex to be included in the Canadian Regulation and that such programs are unnecessary”*.
- *“CPPI members support the simple straightforward approach”*.
- Imperial Oil *“supports the simple two step sulphur reduction approach”*.
- Petro-Canada *“recommended a simple regulation”*.
- *“Shell supports the simple approach”*.
- *“Suncor supports the simple, straightforward approach”*.
- Ultramar *“would like the new federal regulations to be simply written”*.
- *“EMA supports a simple regulation”*.
- OPHA *“support the simple regulatory option”*.
- SJCCA stated *“we do not want to see Canada follow the EPA approach that entails a complex averaging banking and trading program. We need a regulation that is simple, effective and timely”*.

Reply: The proposed Canadian regulation use a simple approach with flat limits for production, imports and sales of off-road, rail and marine diesel fuel as follows:

- an initial limit of 500 mg/kg for off-road, rail and marine diesel fuels in June 2007;
- a final limit of 15 mg/kg for off-road diesel fuel in June 2010; and

- a final limit of 15 mg/kg for production and imports of rail and marine diesel fuels in June 2012.

Comments on One-step Implementation versus a Phase-in

Comments received from stakeholders generally were that Canada should implement a one-step of 15 ppm sulphur in off-road diesel starting in 2007 if the U.S. EPA decided to regulate in this manner.

- The Ontario Ministry of the Environment noted *“If the U.S. decides to implement a 15 mg/kg requirement in 2008... Canadian regulation should follow the lead of the U.S. and align with the one-step 2008 mg/kg sulphur limit.”*
- Saskatchewan Environment indicated that *“If the US EPA determines that a one-step 15 mg/kg requirement is more practical, [it] would support Environment Canada following the same approach if the refining industry accepts this approach.”*
- *“Toronto Public Health supports the idea of a one-step limit of 15 ppm sulphur off-road diesel fuel by 2008...asks that the federal government provide an analysis of the projected emissions from one-step option”.*
- The City of Montreal *“is in favour of a direct approach which forgoes a transition period, but 2008 seems too distant target”.*
- CPPI responded that if the US decide to implement a one-step 15 mg/kg requirement in 2008, Canada should follow *“providing Canadian refineries are given sufficient lead time”.*
- Ultramar submitted that *“If the EPA decided to go ahead in 2008 with a one-step, 15 mg/kg requirement for sulphur content of off-road diesel fuel... we suggest Environment Canada align its regulations with the date, sulphur level and time frames”.*
- EMA indicated *“In the event that the U.S. adopts a 15 mg/kg requirement in 2008 for all non-road diesel fuel, EMA would support Canada’s alignment”.*
- John C. Clark felt *“Canada should stay with the two-step approach.”*

Reply: The final U.S. rule includes a stepped approach with:

- an initial limit of 500 mg/kg for off-road, rail and marine diesel fuels in June 2007;
- a final limit of 15 mg/kg for off-road diesel fuel in June 2010; and
- a final limit of 15 mg/kg for production and imports of rail and marine diesel fuels in June 2012.

The proposed Canadian regulation incorporates the same limits and dates.

Comments on Including Credit Provisions in the Regulations

Most parties that commented on this issue were not in favour of including a credit trading program.

- The Quebec Department of Natural Resources, Wildlife and Parks *“is not in favour of a credit trading program”*.
- Saskatchewan Environment was not in favour of a temporary credit trading program.
- The City of Montreal is of the opinion that *“emission credit trading or exception programs should not form part of Environment Canada’s approach”*.
- *“CPPI members favour the simple approach versus the more flexible credit trading program.*
- John C. Clark felt *“a temporary credit trading program is not required.”*
- SJCCCA stated *“There should be no temporary credit trading program”*.

Reply: The proposed regulations adopt a simple, straightforward approach. They do not include provisions for trading or credits as under the U.S. rule.

Comments on Requirements for Rail and Marine Diesel Fuel

Comments received from stakeholders mostly supported a 15 mg/kg sulphur limit for rail and marine diesel fuels. One comment recommended keeping marine diesel at the 500 mg/kg limit and two suggested deferring the issue to a later date.

- The Ontario Ministry of the Environment encouraged *“Environment Canada to consider including rail and marine diesel in the final 15 mg/kg sulphur limit in 2010”*.
- *“Saskatchewan Environment (SE) would support including rail and marine diesel fuel in the 15 mg/kg limit”*.
- The City of Toronto encouraged *“The federal Minister of Environment...to...apply this limit [15 ppm] to diesel fuel used in locomotive and marine applications and generators”*.
- *“Toronto Public Health recommends that all off-road diesel fuels, including locomotive and marine diesel, should be required to meet the limit for 15 ppm sulphur by 2010.”*
- The City of Montreal
 - *“sees no reason not to lower the level of sulphur in rail diesel to 15 mg/kg, as with other uses.”* and *“also believe that no exception should be made for the level of sulphur in marine diesel, where a limit of 15 mg/kg should also be imposed.”* and

- *“are in favour of harmonizing fuel sulphur levels and since on-road diesel in Canada will need to contain less than 15 mg/kg of sulphur by June 1, 2006, the same level and schedule should also apply to marine, rail and off-road diesel.” and “Canada could nonetheless permit ships which have refuelled outside the country to travel in Canadian waters even though they do not comply with the standard, provided that when they refuel in Canada only 15 mg/kg fuel is used.” CPPI responded “There is no justified engine requirement for 15 mg/kg sulphur level in these services. Moving in advance of such a requirement in the U.S.... would be to deviate from the principle of alignment”.*
- *Ultramar noted that the regulations should “Align the sulphur content of marine and rail diesel... according to the schedule and level set by the EPA”.*
- *“EMA supports the proposal to require commercial diesel fuel with a maximum sulphur content of 500 ppm for locomotive and marine usage beginning in 2007.” and “EMA recommends that Environment Canada defer the question of when and whether to require 15 mg/kg sulfur fuel for locomotive and marine engines for future discussion.”*
- *“MECA supports Canada including rail and marine diesel fuel in the final 15 ppm limit.” and “also support initiating a rulemaking in the future to set standards to further reduce emissions from locomotive and marine vessels that would be harmonized with standards that the U.S. EPA is expected to propose.”*
- *The St. Lawrence Ship Operators stated “several initiatives are already underway to reduce the environmental impact of shipping and we believe that you must take these into account in the context of your current initiative, in order to adopt realistic goals which reflect the fuels which are available, as well as the technology which currently exists on ships.”*
- *The Canadian Trucking Alliance felt that rail and marine diesel fuel should be included in the final 15 mg/kg limit and stated “There... appears to be no operational rationale for allowing railways to use higher grade sulphur fuel.” and “should the Government of Canada allow marine and railways to consume 500 ppm diesel fuel while all other on-road and off-road sectors are using 15 ppm fuel; a tax system should be devised so as to ensure these two freight sectors do not gain a financial advantage”.*
- *John C. Clark felt “Rail and marine diesel fuel sulphur standard should remain at 500 mg/kg over the regulated period.”*
- *OPHA saw “no reason to exempt rail or marine diesel fuels from the 15 ppm sulphur limit”.*
- *Ronald D. Tharby felt rail diesel fuel should be subject to the 15 mg/kg limit but that “Marine diesel fuel could stay at 500 ppm S max since there is much less exposure of the public to exhaust fumes”.*
- *SJCCCA stated “Canada definitely should include rail and marine diesel in the final 15 mg/kg”.*

Reply: The proposed regulations align with the U.S. EPA requirements for both level and timing for rail and marine diesel fuels. Marine and rail

diesel fuels would have a limit of 500 mg/kg sulphur in 2007, reduced to 15 mg/kg sulphur in 2012. (Note that, consistent with the EPA rule, the 15 mg/kg limit in 2012 applies only to production, imports with the sales limit for these fuels remaining at the 500 mg/kg limit in order to provide for a sales outlet for fuel that may be contaminated during distribution.

Comments on Cetane and Aromatics

Comments received from stakeholders mostly supported keeping the Canadian General Standards Board (CGSB) as the group responsible for setting cetane and aromatics standards for diesel fuel. Two stakeholders felt the respective limits should match those of the U.S. (a minimum 40 cetane index or a maximum of 35 volume percent aromatics). One stakeholder suggested a minimum cetane number of 45 and another suggested a minimum cetane index of 40.

- The Quebec Department of Natural Resources, Wildlife and Parks noted that *“The question of limits on the cetane index and aromatics content for the Canadian context should be resolved by the CGSB.”*
- The City of Montreal is *“in favour of adopting a minimum cetane index and maximum aromatics content similar to those adopted in the United States.”*
- *“CPPI does not support requirements for minimum cetane/maximum aromatics... The process for setting these fuel property requirements is, and should continue to be, via the Canadian General Standards Board (CGSB) National Standards”.*
- Imperial Oil *“recommends that the Canadian General Standards Board (CGSB) be asked to consider the need for other changes to product specifications”.*
- Petro-Canada recommended that *“like Canada’s on-road ULSD regulations [which do not have a minimum cetane requirement], in effect assigns diesel fuel cetane requirements to the Canadian General Standards Board’s technical committees.”* Ultramar noted that the *“regulations should: 3. Give the Canadian General Standards Board (CGSB) the same mandate it currently has... for determining the cetane level and the level required for each application.”*
- EMA *“encourage Environment Canada to adopt these [US cetane/aromatics] requirements.”*
- John C. Clark felt *“A minimum cetane index of 45 is favored. For flexibility, an alternative standard could be set for a minimum cetane index of 40 and a minimum cetane number of 45.”* With respect to aromatics he stated *“I do not see a need for an aromatics regulation.”*
- Ronald D. Tharby felt that cetane and aromatics should be regulated for off-road diesel fuel. *“Requiring a minimum 40 cetane index...limits the maximum aromaticity of the fuels.”*

Reply: The proposed regulations do not include limits for regulate cetane or aromatics.

Comments on Northern Issues

Four parties submitted comments addressing specific issues associated with the northern regions of Canada. Two follow-up e-mails were provided for discussion and are provided in Appendix B and C.

Implementation Timing for Point-of Sales Limits in Northern Regions

Fuel shipments to northern communities take place from mid-May to September along the Mackenzie River and the Arctic Coast. In mid-winter, the fuel is shipped to sites which are only accessible by ice roads. Because fuel shipments are infrequent, turnover of tank volumes is often slow.

- The Quebec Department of Natural Resources, Wildlife and Parks note that *“conditions must be adapted to the specific situation.”*
- The City of Montreal does *“not see any justification for allowing extra time to apply the standard in the Arctic”*.
- CPPI responded *“Extra time is required to prepare the diesel distribution system for the Arctic”*.
- EMA feels that *“delays for Northern Areas are unnecessary and oppose any such delays.”*

Reply: This is one of the main issues that was addressed through further e-mail consultations with both CPPI members and the affected provinces and territories. As indicated in the e-mails, the proposed regulations provide an additional 15 months in northern regions of Canada for sales of off road, rail and marine diesel fuels.

Imports from Alaska

Under the U.S. EPA regulations, areas of Alaska not served by federal aid highway system are exempt from the requirements for off-road, rail and marine diesel fuels. This results in requirements for only some of the off-road, rail and marine diesel fuels in Alaska.

- The Quebec Department of Natural Resources, Wildlife and Parks felt *“Alaskan off-road diesel fuel must meet Canadian standards.”*

- CPPI stated *“All import volumes, including those from Alaska, must meet Canadian regulatory requirements.”*

Reply: There are some very limited authorities under CEPA to provide for a separate program in environmentally-sensitive or health-sensitive regions of Canada on the condition that such programs are more stringent than in the rest of Canada.

The proposed regulations do not provide any special treatment for Alaskan imports.

Comments on Test methods for Sulphur Levels

Appropriate Test Method

All responding stakeholders recommended the use of ASTM D-5453.

- The Quebec Department of Natural Resources, Wildlife and Parks said *“The test method used for on-road diesel should also apply to off-road diesel fuel”*.
- The City of Montreal stated that *“The current method (ASTM 5453) prescribed under the Canadian regulation should be maintained for all light distillates”*.
- CPPI recommended *“ASTM D-5453.”*
- *“EMA recommends that Environment Canada maintain their current method, ASTM 5453.”*
- Ronald D. Tharby recommended *“ASTM D 5453”*.

Reply: The proposed regulations include ASTM D 5453 as the reference test method.

Alternative Test Methods for Reporting Purposes

Stakeholders that commented on the use of alternative test methods had varying views.

- *“The MRNFP [Quebec Department of Natural Resources, Wildlife and Parks] accepts the method [ASTM 5453] set out in the Environment Canada document. However, it has not yet been able to examine the matter closely enough to comment further on the use of alternative*

methods.” The City of Montreal does “not favour using any methods than those prescribed.”

- CPPI responded *“Provisions for submitting and receiving authorization for alternative test methods should be similar to the provisions of Section 6 of the Benzene in Gasoline Regulations.”*
- Ronald D Tharby felt *“There is no need to use any performance based methods”*.

Reply: The proposed regulations, in essence have not changed the existing provisions for alternative test methods for reporting purposes.

Comments on Fiscal Incentives for Low Sulphur Diesel Fuel

A number of parties commented on the potential use of economic instruments to promote the early introduction of low sulphur diesel fuels.

- Saskatchewan Environment noted that *“Canada should approach the concept of incorporating similar [tax differential] programs with an open mind.”* was interested in understanding the likely costs
- The City of Toronto supports *“providing incentives for the early introduction of low-sulphur diesel”*.
- Toronto Public Health recommends *“Tax differentials, tax deferrals or other economic tools could be used to assist the rail and marine sector in meeting the 15 ppm sulphur limit by 2010”* and *“that the federal government further explore the use of incentives”*.
- *“CTA has and will continue to be an advocate for the creation of tax incentives for companies to choose environmentally friendly alternatives to operators. CTA opposes the use of negative taxation policy of equipment or fuels where no practical operational alternative exists.”*
- OPHA *“would...like to see economic tools used to encourage early adoption.”*
- SJCCCA felt *“there could be some value in using tax instruments”*.

Reply: In the past, Environment Canada has worked with the National Round Table on the Economy and the Environment (NRTEE), to explore opportunities to apply fiscal instruments to complement the vehicles and fuels agenda, including the early introduction of low-sulphur diesel fuel. Many stakeholders including the governments, industries and non-governmental organizations were involved in this process. The Cleaner Transportation Working Group under the NRTEE was not able to reach agreement on a recommendation regarding the use of a tax differential to accelerate the introduction of low-sulphur diesel. There are currently no plans for fiscal instruments addressing low sulphur diesel fuel.

Comments on Other Instruments used by Other Countries

Three parties commented on the use of other instruments for the reduction of sulphur in diesel fuels. No specific instruments were identified.

- *“the MRNFP [Quebec Department of Natural Resources, Wildlife and Parks] does not consider such measures justifiable from a public finance perspective.”*
- The City of Montreal noted *“The instruments used by other countries are, by and large, not necessary”*.
- CPPI responded *“incentive-based approaches which encourage earlier introduction would have to be carefully evaluated.”*

Reply: There are currently no plans for instruments other than the proposed regulations to address low sulphur diesel fuel.

Miscellaneous Comments

Cost of Desulphurization

- Natural Resource Canada noted *“we do have some concerns that the costs... are not well defined.”* and indicated it would *“undertake analysis to better determine the capital and operating costs required to remove sulphur from diesel fuel and light heating oil.”*

Reply: Environment Canada will monitor the study being undertaken by Natural Resources Canada.

Controlling Sulphur in Distillate for use in other Applications

- Toronto Public Health recommended *“For clarity, it is suggested that the regulation explicitly require all types of stationary and portable diesel electricity generators comply with the 15 ppm sulphur limit by 2010.”*
- The City of Montreal’s Director of the Environment *“recommended a 15 mg/kg limit for distillate fuel.”* and believes *“The same grade of fuel should be available and required everywhere at the same time.”*
- John C. Clark favours *“a regulatory approach which results in a minimum number of differential grades of middle distillate diesel-type fuels”* And felt that *“Heating oil should follow the same regulatory framework as rail and marine diesel fuel.”*

Reply: The proposed regulations will regulate diesel fuel for use in on-road, off-road, rail and marine applications, in alignment with the requirements of the U.S. EPA final rule. It is not proposed at this time to regulate diesel fuel for other uses. It should be noted that in April 2003, Environment Canada initiated public consultations on reducing sulphur in fuel oils¹. That process is on a separate track.

Test Tolerance on Sulphur Test Method

- CPPI notes *“the EPA proposed rule allows a 2 mg/kg tolerance” and “requests the same tolerance allowance be written into the Canadian regulation”.*

Reply: Test tolerances are implicit in the test method referenced in the proposed regulation. There is no need to specify a test tolerance in the regulation.

Estimated Health Benefits

- *“CPPI was surprised and disappointed to see the environmental/health benefits’ estimates factored off the U.S. estimates, given the newly raised uncertainties associated with the current status of the AQVM-style analysis.”*

Reply: The Regulatory Impact Analysis accompanying the proposed regulations states:

“There is some evidence that suggests the . . . estimates could be slightly overestimated. In June 2002, John Hopkins University published a revised analysis of the health effects of particulate matter on mortality. This new information suggests that the health benefits associated with reducing emissions from diesel powered vehicles may be overestimated. The scientists, who identified the statistical flaw in certain air quality studies, emphasized that “the key cause-effect relationship between pollution and premature death” remains unquestioned.”

It is noted that the EPA’s cost/benefit analysis indicated benefits of the engine/fuel program outweigh costs by 40 to 1.

¹ Setting Canadian Standards for Sulphur in Heavy and Light Fuel Oils, *Discussion Paper on Meeting the Commitments of the Notice of Intent on Cleaner Vehicles, Engines and Fuels*, Fuels Division, Oil, Gas and Energy Branch, Environment Canada, April 2003.
http://www.ec.gc.ca/energ/fuels/reports/cnslt_rpts/disc_paper/disc_paper_e.pdf

Lubricity

- *“EMA recommends that fuel lubricity meets 3100 g minimum on the SLBOCLE method or, in the alternative, 450 um maximum on the HFRR method at 60°C.... Environment Canada should assure that the effects of fuel sulfur reduction on fuel lubricity and elastomer compatibility are properly accounted for.”*

Reply: The EPA rule does not include requirements for lubricity; nor does the proposed Canadian regulation. Environment Canada notes that the Canadian General Standards Board includes a lubricity specification that is under review.

Supply / Misfuelling

- *MECA “urge Canada to 1) ensure that adequate supplies of low sulfur diesel fuel are available; 2) minimize the likelihood of contamination and misfuelling; and 3) implement a program that avoids confusion in the marketplace”.*

Reply: The proposed regulation does not include the various flexibilities of the EPA rule, thereby minimizing the number of grades of diesel fuel on the market and the potential for misfuelling. Beginning in 2010, all diesel fuel for use in on-road and off-road applications is will be required to meet the 15 mg/kg sulphur limit. The proposed regulation also includes provisions requiring diesel fuel to be identified for its intended use prior to dispatch from a production facility or point of import.

Product Transfer Documents

- The Quebec Department of Natural Resources, Wildlife and Parks note that *“The simple regulation option should minimize requirements in this [Product Transfer Documentation] area.”*
- Saskatchewan Environment was interested in knowing *“if the administrative requirements of the tax-differential approach would be less than the administrative requirements for the product tracking program.”* and suggested *“it may be more practical to consider using a tax-differential program to encourage the use of low sulphur diesel fuel [instead of product transfer requirement]”.*
- CPPI responded *“Under the simple regulation approach, there appears to be no need for product transfer documentation.”*
- The City of Montreal believes *“Harmonizing sulphur levels for different kinds of diesel fuels would eliminate the need for product transfers and their documentation.”*

Reply: The proposed regulation does not include the various flexibilities of the EPA rule. Requirements for product transfer documentation are not included in the proposed Canadian regulation with its simpler approach.

Companion Vehicle Emission Regulations

- Imperial Oil stated *“It is therefore imperative that the Minister introduce [engine] regulations, contemporary with the proposed off-road Diesel Fuel Regulations, establishing emission standards equivalent to those proposed in the USA.*

Reply: The reduction of sulphur in off-road diesel fuel is necessary to ensure new emission control technology required for the upcoming North American emissions standards for off-road diesel-powered engines. Together with the engine emission Regulations that are expected to be published in 2005, the proposed *Regulations Amending the Sulphur in Diesel Fuel Regulations* will significantly reduce emissions of a broad range of pollutants from off-road engines.

Emergency Supplies

CPPI initially expressed some concern about the sales of drummer diesel fuel in the north.

- CPPI proposed *“that drummed regular sulphur diesel be given a further time extension, or preferably be exempted from the regulations, if drummed before a specific date”.*

Reply: Through discussions with affected provinces and territories (see Appendix C) along with CPPI, it was determined that this was not an issue. These supplies are no addressed in the proposed regulations.

APPENDIX A

List of Issues from August 2003 Discussion Document

1. *Should a temporary credit trading program be included in the Canadian regulation, recognizing that to do so would require a much more complex regulation?*
2. *If a credit and trading program were allowed during a transitional period:*
 - (a) *Should trading be restricted within geographic regions? If yes: how should the regions be defined?*
 - (b) *Would there be enough refineries/importers within these regions for a trading program to work?*
 - (c) *Should generation of early credits be allowed during a transition period?*
 - (d) *Would availability of 500 mg/kg diesel fuel throughout Canada during the transitional period be a concern? If so, what provisions would be required in a Canadian trading program to ensure availability?*
 - (e) *What are the competitiveness issues around trading of sulphur credits in relatively small markets?*
 - (f) *What requirements would need to be put into place to minimize misfuelling and contamination, given that more than one grade of sulphur-differentiated off-road (non-rail, none-marine) diesel fuel would be marketed?*
3. *Should Canada include rail and marine diesel fuel in the final 15 mg/kg limit (resulting in a 15 mg/kg limit for all on-road and off-road fuel)?*
4. *If the US decides to implement a 15 mg/kg requirement in 2008 for all off-road diesel fuel, instead of the two-step approach, should Canada follow its lead?*
5. *Should the Canadian regulation include requirements for cetane and aromatics aligned with those of the EPA?*
6. *What requirements for product transfer documentation should be included in the Canadian regulation?*
7. *Is extra time required to prepare the diesel distribution system in the Arctic for the 500 mg/kg and 15 mg/kg requirement (in addition to the three months likely to be allowed elsewhere in Canada)?*
8. *Are there issues about potential imports of off-road diesel fuel from Alaska during the U.S. transition period? (If yes, what are the concerns and how should they be addressed within a regulation under CEPA 1999?)*

9. *What is the appropriate test method for the Canadian regulation to specify for measuring sulphur in off-road diesel at concentrations of less than 500 mg/kg and 15 mg/kg?*
10. *Should alternative methods for the purposes of reporting be allowed? If so, what alternative methods should be allowed? Should performance-based methods be considered?*
11. *Should any of the other instruments that are being used by other countries also be considered?*

APPENDIX B

Further Communications on Discussion Document – Timing for Arctic Sales

Original E-mail

-----Original Message-----

From: Tushingham, Mark [NCR]
Sent: November 3, 2003 11:03 AM
To: 'Derrick Maddocks'; 'Pat.Paslawski'; 'Maureen_Hall@gov.nt.ca'; 'smakpah@gov.nu.ca'; 'david.bezak@gov.ma.ca'; 'raynald.archambault@min.gov.gc.ca'; 'rtsallis@ene.gov.on.ca'
Cc: Guthrie, Jeffrey [NCR]; McEwen, Bruce [NCR]; 'Jack Belletrutti (jackbelletrutti@cppl.ca)'; 'DFriest@ngelaw.com'; 'dfriest@emamail.org'
Subject: Off-road diesel in the North - effect on upcoming federal regulations
Importance: High

(Version française ci-dessous)

Environment Canada is preparing amendments to the *Sulphur in Diesel Fuel Regulations* that will add in new requirements for sulphur in off-road diesel. In August 2003, we distributed a discussion document on the proposal for the regulations. We have received comments from stakeholders. **One issue that was identified was the supply low-sulphur off-road diesel in Arctic regions.**

Comments on this issue came from the Canadian Petroleum Products Institute (CPPI), which represents most refiners in Canada, and the Engine Manufacturers Association (EMA), which represents most engine manufacturers in North America.

- CPPI recommends an additional 15 months for the implementation of the sales limit in the Arctic (i.e., until December 1, 2008). The rationale is that "A number of Arctic locations receive a single marine shipment of diesel fuel each year. If this shipment is not able to reach its destination prior to September 2007 (for the 500 mg/kg sulphur diesel) or September 2010 (for the 15 mg/kg diesel sulphur), it could not be made available for sale." CPPI further states "The dilution of the higher sulphur diesel in these tanks can take a lengthy period."
- EMA "opposes any delay for Northern Regions because of the impacts discussed above [in their letter]". These impacts are for the 500 mg/kg case, "Nonroad engines with EGR [exhaust gas recirculation] will not meet either the manufacturers' or customers' durability requirements if the current sulfur level of nonroad diesel [2000-5000 mg/kg] is maintained." For the 15 mg/kg case, "In order to use those [advanced emission control] technologies effectively, and ensure the durability of nonroad engine and aftertreatment systems over their required useful lives, diesel fuel sulfur must be near zero and no higher than 15 [mg/kg]." Further, "current levels of sulfur in commercially available diesel fuel preclude the use of advanced aftertreatment technologies that will be necessary to comply with the very stringent Tier 4 NOx and PM levels ..."

In 2001-2002, a similar issue was identified for the supply of low-sulphur on-road diesel. This issue was initially described in a paper distributed in July 2001 (attached) and discussed at a teleconference in July 2001 and again via e-mails in March 2002. The result of these discussions was that the current on-road diesel regulation provide a 12-months extension for sales of on-road diesel to meet the sulphur requirements (i.e., Sept. 2007 in the Arctic, instead of Sept. 2006 for the rest of Canada). The regulations define the Northern Supply Areas as the following:

"northern supply area" means the area corresponding to the following geographical areas:

- (a) that part of Yukon that is north of latitude 67 degrees N;
- (b) the Northwest Territories, except
 - (i) those areas within 1 km of the centre line of (A) Highways 2 to 7, and (B) that portion of Highway 1 south of Fort Simpson, and
 - (ii) those areas within the municipalities of Yellowknife, Detah, Hay River, Fort Simpson, Rae, Edzo, Enterprise, Fort Resolution, Fort Smith and Fort Liard;
- (c) Nunavut;
- (d) those parts of Manitoba, Ontario and Quebec within 50 km from the coast of Hudson Bay or James Bay;
- (e) that part of Quebec north of latitude 51 degrees N if west of longitude 63.5 degrees W, and north of latitude 50 degrees N if east of longitude 63.5 degrees W; and
- (f) Newfoundland and Labrador, except the island of Newfoundland.

The question that is before us is: should a similar extension (say, 15 months, as CPPI recommends) be permitted for the sale of higher sulphur diesel used in off-road applications in the Northern Supply Area? If so, should the definition of the Northern Supply Area be modified in the case of off-road diesel?

Please provide your comments and views to me by November 17, 2003. If you have any questions, please contact me at Mark.Tushingam@ec.gc.ca or at 819-994-0510.

As you are potentially affected provinces/territories, we would appreciate your thoughts and comments on this issue.

FYI: July 2001 paper on on-road diesel in the Arctic:



Arctic Discussion
Paper.doc (8...

Mark Tushingam / Fuels Division / Environment Canada / (819) 994-0510

Environnement Canada se prépare à modifier le *Règlement sur le soufre dans le carburant diesel* pour y ajouter des exigences à l'égard de la teneur en soufre du carburant diesel pour usage non routier. En août 2003, nous avons diffusé un document de travail sur les modifications proposées. Les intéressés nous ont soumis leurs commentaires. **Une des préoccupations soulevées concerne l'approvisionnement en carburant diesel à faible teneur en soufre pour usage non routier dans les régions arctiques.**

Elle a été exprimée par l'Institut canadien des produits pétroliers (ICPP), qui représente la plupart des raffineurs au pays, et l'Engine Manufacturers Association (EMA), qui représente la plupart des constructeurs de moteurs en Amérique du Nord.

- 1 L'ICPP recommande de donner 15 mois de plus avant de limiter la concentration de soufre du carburant vendu dans l'Arctique (soit d'attendre au 1^{er} décembre 2008). Il invoque la raison suivante : [Traduction] « À de nombreux endroits dans l'Arctique, on reçoit un seul envoi maritime de carburant diesel par an. Si le carburant n'arrivait pas à destination avant septembre 2007 (dans le cas du carburant contenant 500 mg/kg de soufre) ou septembre 2010 (dans le cas du carburant contenant 15 mg/kg de soufre), il ne pourrait être mis en vente ». L'ICPP ajoute : « La dilution du carburant diesel à plus forte teneur en soufre dans ces réservoirs peut prendre plus de temps. »
- 2 L'EMA [Traduction] « s'oppose à tout report dans les régions nordiques en raison des impacts indiqués plus haut [dans sa lettre] ». Ces impacts sont, dans le cas du carburant à 500 mg/kg de soufre : « Les moteurs à usage non routier avec RGE [recirculation des gaz d'échappement] ne répondront pas aux exigences de durabilité du constructeur ni à celles du consommateur si la concentration actuelle de soufre dans le carburant diesel à usage non routier [2000-5000 mg/kg] est maintenue ». Et dans le cas du carburant à 15 mg/kg de soufre : « Pour que ces technologies [antipollution perfectionnées] fonctionnent efficacement et pour que le moteur à usage non routier et les systèmes de traitement postcombustion durent leur vie utile prévue, la teneur en soufre du carburant diesel doit être presque nulle et ne pas dépasser 15 [mg/kg] ». De plus, « les concentrations actuelles de soufre dans le carburant diesel offert sur le marché empêche l'emploi des technologies perfectionnées de traitement postcombustion qui seront nécessaires pour respecter les concentrations strictement limitées de NOx et de particules au niveau 4 [...] ».

En 2001-2002, une préoccupation analogue avait été soulevée à l'égard de l'approvisionnement en carburant diesel à faible teneur en soufre pour usage routier. Le problème avait d'abord été décrit dans un document diffusé en juillet 2001 (joint) et débattu à une téléconférence le même mois, puis encore par courriels en mars 2002. Par suite de ces échanges, il a été prévu dans le règlement en vigueur visant le carburant diesel à usage routier de retarder de 12 mois l'imposition des exigences concernant le soufre dans ce carburant vendu dans l'Arctique (soit septembre 2007 dans l'Arctique, contre septembre 2006 dans le reste du Canada). Le règlement définit ainsi la zone d'approvisionnement du Nord :

« zone d'approvisionnement du Nord » Zone comprenant les zones géographiques suivantes :

- a) la zone du Yukon située au nord de 67° de latitude N;
- b) les Territoires du Nord-Ouest, à l'exception des zones suivantes :
 - (i) les zones en deçà d'un kilomètre de la ligne médiane des autoroutes suivantes : (A) les autoroutes 2 à 7, (B) l'autoroute 1 au sud de Fort Simpson,
 - (ii) les territoires des municipalités de Yellowknife, Detah, Hay River, Fort Simpson, Rae, Edzo, Entreprise, Fort Resolution, Fort Smith et Fort Liard;
- c) le Nunavut;
- d) les zones du Manitoba, de l'Ontario et du Québec s'étendant en deçà de 50 kilomètres de la côte de la baie d'Hudson et de la baie James;
- e) la zone du Québec située au nord de 51° de latitude N et à l'ouest de 63,5° de longitude O et celle située au nord de 50° de latitude N et à l'est de 63,5° de longitude O;
- f) Terre-Neuve-et-Labrador, à l'exception de l'île de Terre-Neuve.

La question qui se pose à nous est la suivante : Devrait-on prévoir un report analogue (disons 15 mois, comme le recommande l'ICPP) pour le carburant diesel à plus forte teneur en soufre destiné à un usage non routier qui est vendu dans la zone

d'approvisionnement du Nord? Dans l'affirmative, faudrait-il modifier la définition de la zone d'approvisionnement du Nord dans le cas du carburant diesel pour usage non routier?

Prière de me faire parvenir vos commentaires et opinions d'ici le 17 novembre 2003. Si vous avez des questions, veuillez me les adresser par courriel, à Mark.Tushingham@ec.gc.ca, ou par téléphone, au 819 994-0510.

Comme vos provinces et territoires peuvent être touchées, vos réflexions et commentaires sur la question nous seront précieux.

Pour information : Document de juillet 2001 sur le carburant diesel à usage routier dans l'Arctique.



Arctic Discussion
Paper fre.do...

Mark Tushingham / Division des carburants / Environnement Canada / (819) 994-0510

Reponses to Original E-mail

Yukon

-----Original Message-----

From: Pat.Paslowski [<mailto:Pat.Paslowski@gov.yk.ca>]

Sent: November 5, 2003 1:35 PM

To: Tushingham,Mark [NCR]

Subject: RE: Off-road diesel in the North - effect on upcoming federal regulations

Mark,

Thanks for the opportunity to comment.

The "Northern Supply Area" identified for the Yukon is fine as it is written. The only Yukon community captured by this is Old Crow.

The 15-month exemption would allow for blending of existing fuel stocks over one complete cycle and would likely ensure that fuel would meet standard at the end of the exemption period. For this reason the Yukon Government would support the 15-month exemption period.

I hope this is helpful.

Pat

Northwest Territories

-----Original Message-----

Reply to Comments - Reducing Sulphur in Off-Road Diesel Discussion Paper

From: Maureen_Hall@gov.nt.ca [mailto:Maureen_Hall@gov.nt.ca]
Sent: November 13, 2003 5:03 PM
To: Mark.Tushingam@ec.gc.ca
Cc: Maureen_Hall@gov.nt.ca
Subject: Off-Road Diesel in the North:

Mark:

The GNWT tank farms throughout the NWT have space for only one diesel product. As soon as the refineries start making diesel with the 15ppm sulphur content I will be ordering the fuel to that Specification. I understand that will be the product of chose by the refineries.

All the communities that I order fuel for are off-road.

The only concern might be the communities where I order the fuel for the NWTPC, they will have to use the 15ppm in their gensets.

Also: The barging company (NTCL) does not clean their barge holds after each trip as it is impossible to do this in Tuktoyaktuk, with the amount of traffic through there. Has their been any testing done to see how long the blending process will take (500ppm to 15ppm) and what impact this will have on equipment engines etc.

NTCL carries diesel for other clients as well (ESSO, Shell, Exploration Companies, NWTPC, etc.) so their could be a small amount of blending if everyone does not order the 15ppm. The NWTPC also uses the PPD resupply pipelines in a few communities. The lines will have to be flushed by the barging company.

I hope this will help

Maureen Hall
Manager, Operations
Petroleum Products Division
Public Works & Services
P.O. Box 1320
Yellowknife, NT X1A 2L9

PH: (867) 920-3413
FX: (867) 873-0192
email: maureen_hall@gov.nt.ca

Newfoundland and Labrador

-----Original Message-----

From: Derrick Maddocks [<mailto:DMaddocks@gov.nl.ca>]
Sent: November 14, 2003 7:21 AM
To: Mark.Tushingam@ec.gc.ca
Subject: Re: Off-road diesel in the North - effect on upcoming federal regulations

I have had no time to really consider this however what are the real logistics here? Will there be no fuel meeting the specs available in

the country say 2 years ahead of the date so that the high Arctic could be supplied proactively at an earlier date?

Quebec

-----Original Message-----

From: Raynald.Archambault@mrnfp.gouv.qc.ca

[<mailto:Raynald.Archambault@mrnfp.gouv.qc.ca>]

Sent: November 14, 2003 11:11 AM

To: Mark.Tushingham@ec.gc.ca

Subject: Approvisionnement en carburant diesel à faible teneur en soufre pour usage non routier dans les régions arctiques

Bonjour,

Dans ses commentaires au sujet de l'établissement de normes canadiennes pour réduire la teneur en soufre des carburants diesel hors route, le ministère des Ressources naturelles, de la Faune et des Parcs (MRNFP) a traité du sujet mentionné en objet.

À la question 7 « Le réseau de distribution du carburant diesel dans l'Arctique aura-t-il besoin de temps supplémentaire pour se préparer à appliquer l'exigence relative aux normes de 500 mg/kg et de 15 mg/kg (en plus des trois mois qui seront probablement accordés ailleurs au Canada) ? » Réponse: Le réseau de distribution du carburant diesel dans l'Arctique, comme d'ailleurs celui qui dessert la Moyenne et la Basse-Côte-Nord au Québec et le Nunavik (Grand Nord québécois), a des contraintes très spéciales et des exigences particulières. Il faut remarquer notamment que les livraisons sont peu fréquentes et que le parc de réservoirs pour les mélanges et le stockage du carburant dans ces régions est généralement fort limité. Comme dans le cas du diesel routier, il faut prévoir des conditions adaptées à leur situation particulière.

Il importe donc de reconfirmer l'accord du MRNFP à appliquer les mêmes règles et conditions, de même que la même définition de la « zone d'approvisionnement du Nord » que celles adoptées dans la réglementation concernant le diesel routier à basse teneur en soufre. Le MRNFP est d'accord avec l'adoption d'une période de report de la mise en vigueur d'une réglementation sur la teneur en soufre du carburant diesel hors route qui accorde un délai qui soit même supérieur à celui choisi dans la réglementation pour la teneur en soufre du carburant diesel routier.

N'hésitez pas à communiquer avec nous si des précisions supplémentaires sont requises.

Meilleures salutations!

Raynald Archambault, ing.

Direction du développement des hydrocarbures

Ministère des Ressources naturelles, de la Faune et des Parcs Tél. :

(418) 627-6385 poste 8263

Ce message est confidentiel et ne s'adresse qu'au destinataire. Si vous recevez ce message par erreur, veuillez le détruire et m'en aviser aussitôt SVP.

Quebec (English translation)

Hello,

In its comments on the establishment of Canadian standards for reducing the level of sulphur in off-road diesel fuel, the Quebec Department of Natural Resources, Wildlife and Parks (MRNFP), addressed the abovementioned subject.

Question 7: "Is extra time required to prepare the diesel distribution system in the Arctic for the 500 mg/kg and 15 mg/kg requirement (in addition to the three months likely to be allowed elsewhere in Canada)?"

Reply: The diesel distribution system in the Arctic, like the one that services the Middle and Lower North Shore in Quebec and Nunavik (northern Quebec), has very special constraints and particular requirements. Deliveries are infrequent and there are few tank farms for fuel mixtures and storage. As for on-road diesel fuel, conditions adapted to their particular needs are required.

It is important to reconfirm the MRNFP's agreement to apply the same rules and conditions, and the same definition of "northern supply area" as the one adopted in the regulations on low sulphur on-road diesel fuel. The MRNFP supports the postponement of the implementation of regulations on the sulphur level in off-road diesel fuel for even longer than the period provided in the regulations for the sulphur level in on-road diesel fuel.

Please feel free to contact us for further details.

Sincerely,

Raynald Archambault
Hydrocarbons Development Directorate
Department of Natural Resources, Wildlife and Parks
Tel. No.: (418) 627-6385, ext. 8263

This message is confidential and intended only for the recipient. Should you receive it by mistake, please destroy it and inform me immediately.

Environment Canada's Response

-----Original Message-----

> From: Tushingham, Mark [NCR]
> Sent: November 25, 2003 9:08 AM
> To: 'Derrick Maddocks'; 'Pat.Paslawski'; 'Maureen_Hall@gov.nt.ca';
> 'ebaddaloo@gov.nu.ca'; 'dbezak@gov.mb.ca';
> 'Raynald.Archambault@mrnfp.gouv.qc.ca'; 'rkurtes@ene.gov.on.ca';
> 'robyn.kurtes@ene.gov.on.ca'; 'apenn@gcc.ca'

> Cc: Guthrie, Jeffrey [NCR]; McEwen, Bruce [NCR]; 'Jack Belletrutti
> (jackbelletrutti@cpqi.ca)'; 'DFriest@ngelaw.com';
> 'dfriest@emamail.org'

> Subject: Results from Consultations on Off-road diesel
requirement
> in the Arctic

> (Version française ci-dessous)

> This e-mail is following up on the November 3rd e-mail that I sent to
> you on the issue of the timing of sulphur requirement for off-road
> diesel fuel in Arctic areas (original e-mail is attached). We have
> received comments from the governments of Newfoundland, NWT, and Yukon
> (attached), plus from Quebec (who asked that their comments remain
> confidential). The majority of the comments are supportive of
> providing an extended implementation date for the Arctic areas.

> Based on these comments, plus the comments submitted by CPPI and EMA
> on the earlier discussion document, we plan to include the following
> for publication in Part I of the Canada Gazette:

> * The definition of the "northern supply area" will remain the same
as
> currently found in the Sulphur in Diesel Regulations.
> * Timing for production and importation throughout Canada, including
> in the northern supply area, will be aligned with the EPA rule; i.e.,
> June 1, 2007 for 500 mg/kg and June 1, 2010 for 15 mg/kg.
> * The implementation date for the 500 mg/kg limit for sulphur in
> off-road diesel fuel at the point of sale in the northern supply area
> is to be December 1, 2008 (as opposed to October 1, 2007 for sales in
> the southern areas of Canada) -- a 14 month delay as recommended by
CPPI.

> * The implementation date for the 15 mg/kg limit for sulphur in in
> off-road diesel fuel at the point of sale in the northern supply area
> is to be December 1, 2011 (as opposed to September 1, 2010~~07~~ for sales
> in the southern areas of Canada) -- a 15 month delay as recommended by
> CPPI.

> These extensions for sales will permit additional time for diesel fuel
> stock in tanks in the northern supply area to turn over.

> We expect the proposed amendments to be published in Part I of the
> Canada Gazette next spring. There will be a 60 day period for
> commenting on those proposed amendments.

> Mark Tushingham / Fuels Division / Environment Canada / (819) 994-0510
>
>

> Le présent courriel fait suite au courriel du 3 novembre que je vous
> ai envoyé récemment et qui traite du calendrier concernant les
> exigences pour le soufre dans le carburant diesel pour les véhicules
> hors route dans la zone de l'Arctique (le courriel initial est
> annexé). Nous avons obtenu les commentaires (annexés) des
> gouvernements de Terre-Neuve, des T.N.-O et du Yukon, ainsi que ceux
> du Québec (qui a demandé qu'ils demeurent confidentiels). La majorité
> des commentaires sont en faveur d'un prolongement de la date d'entrée
> en vigueur pour la zone de l'Arctique.

>
> D'après ces commentaires, en plus de ceux provenant de l'ICPP et de
> l'EGE dans le document de travail antérieur, nous prévoyons, lors de
> la publication dans la Partie I de la Gazette du Canada, inclure les
> éléments suivants :

>
> 1. La définition de « zone d'approvisionnement du Nord » demeurera la
> même que celle qui figure actuellement dans le Règlement sur le soufre
> dans le carburant diesel.

> 2. Le calendrier pour la production et l'importation partout au
Canada,
> y compris dans la zone d'approvisionnement du Nord, sera aligné sur
> celui du règlement de l'EPA, soit le 1er juin 2007 pour 500 mg/kg et
> le 1er juin 2010 pour 15 mg/kg.

> 3. La date d'entrée en vigueur de la limite de 500 mg/kg pour le
> carburant diesel des véhicules horsroute au point de vente dans la
> zone d'approvisionnement du Nord sera le 1er décembre 2008 (alors
> qu'elle a été fixée au 1er octobre 2007 pour les ventes dans les zones
> du sud du Canada)

> - soit un délai de 14 mois, selon la recommandation de l'ICPP.

> 4. La date d'entrée en vigueur de la limite de 15 mg/kg pour le
soufre
> dans le carburant diesel des véhicules horsroute au point de vente
dans la
> zone d'approvisionnement du Nord sera le 1er décembre 2011 (alors
qu'elle
> a été fixée au 1er septembre 2007 dans les zones du sud du Canada) -
soit
> un délai de 15 mois, selon la recommandation de l'ICPP.

>
> Ces extensions des dates des ventes permettront de laisser du temps
> supplémentaire pour le renouvellement des stocks de carburant diesel
> dans les citernes de la zone d'approvisionnement du Nord.

>
> Nous prévoyons que les modifications proposées seront publiées le
> printemps prochain dans la Partie I de la Gazette du Canada. Une
> période de 60 jours est prévue pour la consultation et les
> commentaires concernant les modifications proposées.

>
> Mark Tushingham / Division des carburants / Environnement Canada /
> (819) 994-0510

APPENDIX C

Emergency Supplies Communications

Original E-mail

-----Original Message-----

From: Guthrie, Jeffrey [NCR]
Sent: December 12, 2003 1:37 PM
To: 'Derrick Maddocks'; 'Pat.Paslawski'; 'Maureen_Hall@gov.nt.ca'; 'ebaddaloo@gov.nu.ca'; 'dbezak@gov.mb.ca'; 'rkurtes@ene.gov.on.ca'; 'robyn.kurtes@ene.gov.on.ca'; 'apenn@gcc.ca'
Cc: McEwen, Bruce [NCR]
Subject: FW: Results from Consultations on Off-road diesel requirement in the Arctic

Further to the earlier correspondence below, Environment Canada is moving to finalize details of the proposed regulations for off-road diesel fuel.

We seek your advice as to whether there might be a need to include provisions in the regulation addressing the sale of diesel fuel to persons in emergency situations in northern areas.

When limits on benzene in gasoline were developed, special provisions were included in the regulation to address the sale of gasoline to persons in emergency situations in northern areas. (Our understanding is that there are caches of gasoline in remote locations for emergency uses. If such gasoline is used, the jurisdiction is later paid for it (so a sale takes place). Such gasoline may have been produced before the regulatory limits came into effect and so may not meet the limits.)

Does this also occur for diesel fuel in your jurisdiction? (If so, should provisions be included in the amended regulation to address it?)

If special provisions were recommended, we need additional information. Specifically:

- 1 would such fuel be only for off-road use, or would it also be used in on-road vehicles?
- 2 a specific description to place in the regulation of how the fuel is stored / where it is located (eg. in xx size barrels labeled 'for emergency use only'?)
- 3 whether such emergency supplies are set out under the specific program of a jurisdiction (eg. 'the emergency fuels program' of a jurisdiction)
- 4 an end date to specify for such a provision.

We would appreciate your advice on this matter by December 17th.

Regards,

Jeffrey Guthrie
Program Engineer
Oil, Gas & Energy Branch
Environment Canada
(819) 956-9279
jeffrey.guthrie@ec.gc.ca

-----Original Message-----

From: Tushingham,Mark [NCR]
Sent: November 25, 2003 9:08 AM
To: 'Derrick Maddocks'; 'Pat.Paslawski'; 'Maureen_Hall@gov.nt.ca'; 'ebaddaloo@gov.nu.ca'; 'dbezak@gov.mb.ca'; 'Raynald.Archambault@mrnfp.gouv.qc.ca'; 'rkurtes@ene.gov.on.ca'; 'robyn.kurtes@ene.gov.on.ca'; 'apenn@gcc.ca'
Cc: Guthrie,Jeffrey [NCR]; McEwen,Bruce [NCR]; 'Jack Belletrutti (jackbelletrutti@cppei.ca)'; 'DFriest@ngelaw.com'; 'dfriest@emamail.org'
Subject: Results from Consultations on Off-road diesel requirement in the Arctic

(Version française ci-dessous)

This e-mail is following up on the November 3rd e-mail that I sent to you on the issue of the timing of sulphur requirement for off-road diesel fuel in Arctic areas (original e-mail is attached). We have received comments from the governments of Newfoundland, NWT, and Yukon (attached), plus from Quebec (who asked that their comments remain confidential). The majority of the comments are supportive of providing an extended implementation date for the Arctic areas.

Based on these comments, plus the comments submitted by CPPI and EMA on the earlier discussion document, we plan to include the following for publication in Part I of the *Canada Gazette*:

- 5 The definition of the "northern supply area" will remain the same as currently found in the *Sulphur in Diesel Regulations*.
- 6 Timing for production and importation throughout Canada, including in the northern supply area, will be aligned with the EPA rule; i.e., June 1, 2007 for 500 mg/kg and June 1, 2010 for 15 mg/kg.
- 7 The implementation date for the 500 mg/kg limit for sulphur in off-road diesel fuel at the point of sale in the northern supply area is to be December 1, 2008 (as opposed to October 1, 2007 for sales in the southern areas of Canada) -- a 14 month delay as recommended by CPPI.
- 8 The implementation date for the 15 mg/kg limit for sulphur in in off-road diesel fuel at the point of sale in the northern supply area is to be December 1, 2011 (as opposed to September 1, 2007 for sales in the southern areas of Canada) -- a 15 month delay as recommended by CPPI.

These extensions for sales will permit additional time for diesel fuel stock in tanks in the northern supply area to turn over.

We expect the proposed amendments to be published in Part I of the *Canada Gazette* next spring. There will be a 60 day period for commenting on those proposed amendments.

Mark Tushingham / Fuels Division / Environment Canada / (819) 994-0510

—

Le présent courriel fait suite au courriel du 3 novembre que je vous ai envoyé récemment et qui traite du calendrier concernant les exigences pour le soufre dans le carburant diesel pour les véhicules hors route dans la zone de l'Arctique (le courriel initial est annexé). Nous avons obtenu les commentaires (annexés) des gouvernements de Terre-Neuve, des T.N.-O et du Yukon, ainsi que ceux du Québec (qui a demandé qu'ils demeurent confidentiels). La majorité des commentaires sont en faveur d'un prolongement de la date d'entrée en vigueur pour la zone de

l'Arctique.

D'après ces commentaires, en plus de ceux provenant de l'ICPP et de l'EGE dans le document de travail antérieur, nous prévoyons, lors de la publication dans la Partie I de la Gazette du Canada, inclure les éléments suivants :

La définition de « zone d'approvisionnement du Nord » demeurera la même que celle qui figure actuellement dans le *Règlement sur le soufre dans le carburant diesel*.

Le calendrier pour la production et l'importation partout au Canada, y compris dans la zone d'approvisionnement du Nord, sera aligné sur celui du règlement de l'EPA, soit le 1^{er} juin 2007 pour 500 mg/kg et le 1^{er} juin 2010 pour 15 mg/kg.

La date d'entrée en vigueur de la limite de 500 mg/kg pour le carburant diesel des véhicules hors-route au point de vente dans la zone d'approvisionnement du Nord sera le 1^{er} décembre 2008 (alors qu'elle a été fixée au 1^{er} octobre 2007 pour les ventes dans les zones du sud du Canada) - soit un délai de 14 mois, selon la recommandation de l'ICPP.

La date d'entrée en vigueur de la limite de 15 mg/kg pour le soufre dans le carburant diesel des véhicules hors-route au point de vente dans la zone d'approvisionnement du Nord sera le 1^{er} décembre 2011 (alors qu'elle a été fixée au 1^{er} septembre 2007 dans les zones du sud du Canada) - soit un délai de 15 mois, selon la recommandation de l'ICPP.

Ces extensions des dates des ventes permettront de laisser du temps supplémentaire pour le renouvellement des stocks de carburant diesel dans les citernes de la zone d'approvisionnement du Nord.

Nous prévoyons que les modifications proposées seront publiées le printemps prochain dans la Partie I de la Gazette du Canada. Une période de 60 jours est prévue pour la consultation et les commentaires concernant les modifications proposées.

Mark Tushingham / Division des carburants / Environnement Canada / (819) 994-0510



Off-road diesel in
the North -...



Re: Off-road diesel
in the Nor...



Off-Road Diesel in
the North:



RE: Off-road diesel
in the Nor...

Reponses to Original E-mail

Manitoba

-----Original Message-----

From: Bezak, Dave (CON) [<mailto:Dbezak@gov.mb.ca>]

Sent: January 5, 2004 3:41 PM

To: 'Guthrie,Jeffrey [NCR]'

Subject: RE: Results from Consultations on Off-road diesel requirement
in the Arctic

Jeffrey, thanks for following up with us on this matter. I have checked again with our Transportation people. They seem to be accepting of your

proposed regulation and have not raised any issues with the timing/situation for northern areas. Thanks. DB.

Yukon

-----Original Message-----

From: Pat.Paslawski [<mailto:Pat.Paslawski@gov.yk.ca>]

Sent: December 12, 2003 5:17 PM

To: Guthrie,Jeffrey [NCR]

Subject: RE: Results from Consultations on Off-road diesel requirement in the Arctic

Jeff,

We're not aware that this is happening with diesel fuel in the Yukon. There are caches of Jet B around the countryside that are intended as refuelling stops for helicopters. However, my understanding is that aviation fuels are not captured here.

There may be caches of diesel fuel in remote location but these are likely associated with mining exploration activities and thus would be there for operational purposes rather than emergency purposes. If that fuel were used for an emergency situation after the effective date of the new off-road diesel standard, it is unlikely that anyone would be looking at the fuel's date of manufacture and origin.

I don't think any special special provisions are warranted in this case.

Cheers, I hope this is helpful.


Pat Paslawski

Environment Yukon

867-667-5934 <http://www.environmentyukon.gov.yk.ca/epa/index.shtml>

APPENDIX D


Environment Canada's CMAC Presentation

 Environment Canada / Environnement Canada


Low Sulphur Diesel Fuel

(not bunker fuel, not IMO)

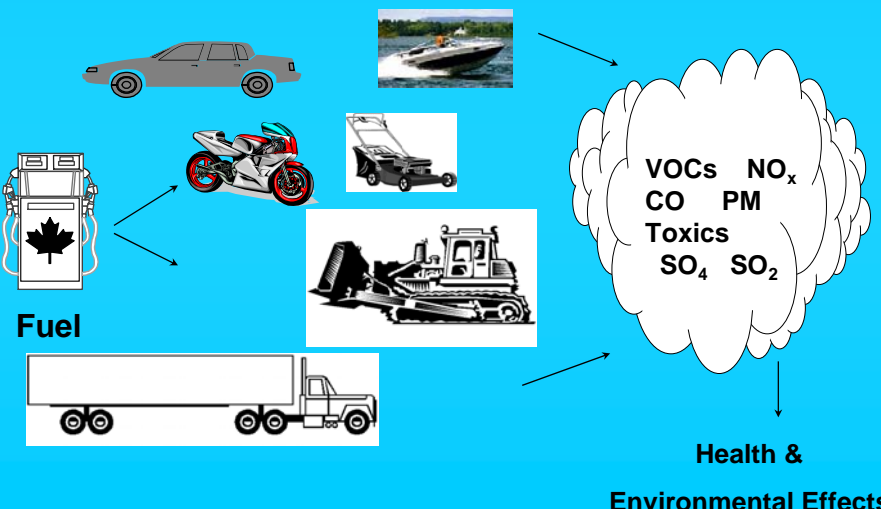
US and EU leading; Canada following



*Presentation to Canadian Marine Advisory Council
November 5, 2003*

 Environment Canada / Environnement Canada

Transportation results in air pollution



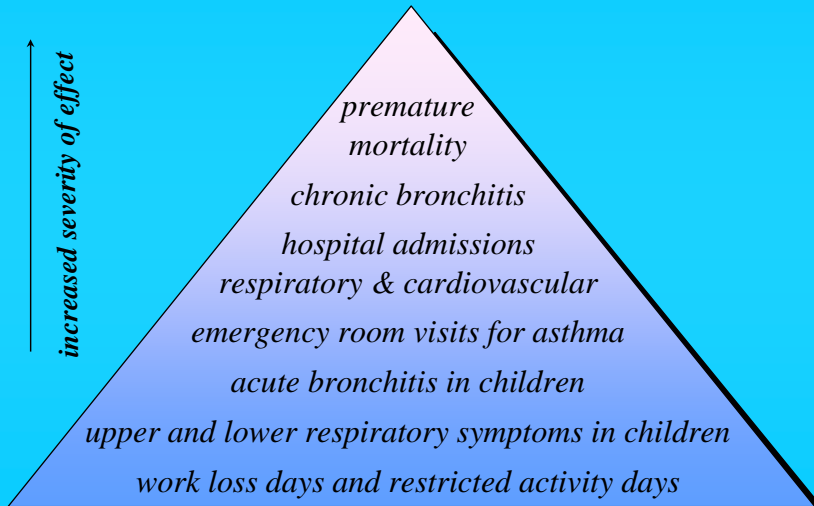
Fuel

Health & Environmental Effects

VOCs NO_x
CO PM
Toxics
SO₄ SO₂



Air pollution affects health of Canadians



Transportation is the largest source of air pollution

| Pollutant | Transportation's Contribution to Emissions in 1995 |
|-------------------------------|--|
| NOx | 57% |
| VOCs | 28% |
| SOx | 5% |
| PM-10 (excl. open sources) | 17% |
| CO | 67% |
| CO2 equivalent | 26% (2000 data) |

Draft 2000 inventory (soon to be released) indicates contribution has increased between 1995 and 2000



Environment Environnement
Canada Canada

Canada is taking action: ***On-road vehicle emission & fuel standards***

Vehicles (regulated since 1971)

- Standards progressively tightened over the years
- Light duty – more stringent limits in MY 2004-2009
- Heavy duty – more stringent limits in MY2004-2010
- In alignment with U.S. standards

Fuels

- Lead in gasoline – banned 1990
- Benzene in gasoline – halved in 1999
- Sulphur in gasoline – 90% reduction by 2005
- Sulphur in on-road diesel – 90% reduction in 1998, further 97% reduction in 2006



Environment Environnement
Canada Canada

Canada is taking action: ***Off-road vehicle emission & fuel standards***

Vehicles & Engines (currently not regulated)

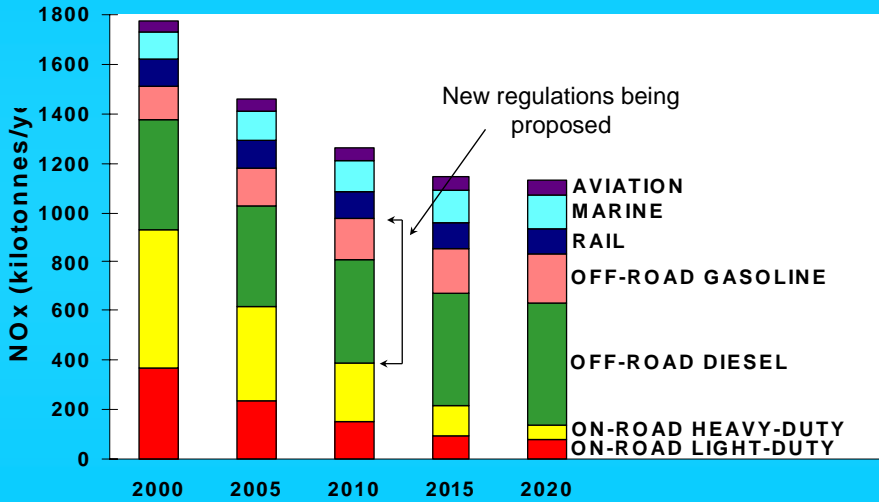
- Off-road small spark-ignition engines (e.g. lawn and garden)
 - proposed standards for MY2005
 - Memorandum of Understanding in effect
- Off-road diesel (e.g. construction and agriculture machines)
 - proposed standards for MY2006
 - Memorandum of Understanding in effect
- Recreational marine engines (e.g. outboards and personal watercraft)
 - Memorandum of Understanding in effect
- Others under development:
 - Recreational Vehicles (e.g. snowmobiles, ATVs, off-road motorcycles)
 - Large spark-ignition engines (e.g. industrial applications)
- In alignment with U.S. standards

Off-road Diesel Fuel (currently not regulated)

- Proposed limits for sulphur starting in 2007



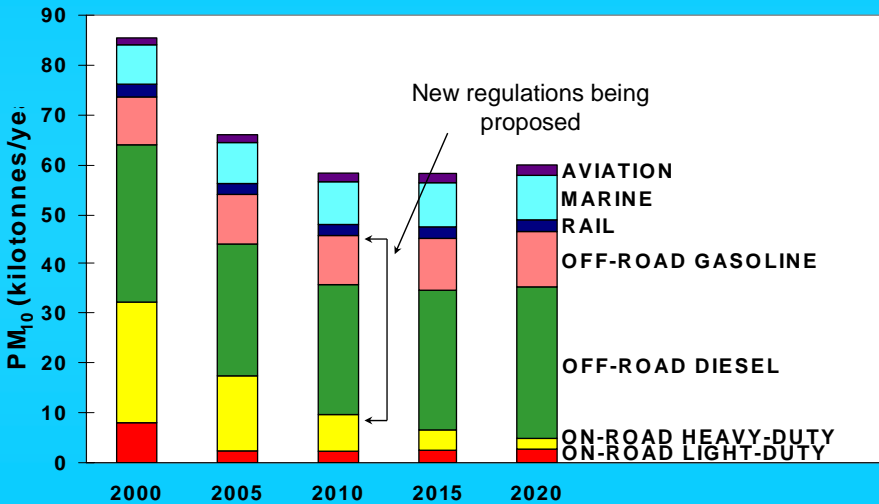
**Rail and Marine emissions are becoming more significant:
e.g. NOx emission forecast for transportation**



Note: includes effect of current regulations (i.e., not off-road engines/fuels)



e.g., PM₁₀ Emission forecast for transportation



Note: includes effect of current regulations (i.e., not off-road engines/fuels)



Environment Canada
Environnement Canada

What's happening on sulphur in diesel fuel in Canada?

On-road

- Regulated since 1998
 - 500 mg/kg
 - further reduction to 15 mg/kg starting 2006
- In alignment with U.S. requirements

Off-road

- Currently not regulated
 - commercial (CGSB) maximum = 5000 mg/kg
 - over 50% of off-road diesel fuel already < 500 mg/kg
 - remaining product averages about 2400 mg/kg



Environment Canada
Environnement Canada

Requirements are driven by Canada's policy on fuel quality

- Generally, align with U.S. standards
- But,
 - taking into account actions in European Union
 - Canada may take additional action to protect health and environment



Environment Canada
Environnement Canada

U.S. controls on off-road diesel fuel

- Proposed in April 2003, final rule expected in April 2004
- Sulphur limits at same level as for on-road diesel, but different timing
 - 500 mg/kg, including rail and marine in 2007
 - 15 mg/kg, excluding rail and marine in 2010
- EPA taking comments on 15 mg/kg limit for rail and marine
 - if not controlled now, EPA expects rulemaking commencing in 2004 for 15 mg/kg starting 2012-2014

European Union requires 350 mg/kg (2000), 50 mg/kg (2005), and 10 mg/kg (2009)



Environment Canada
Environnement Canada

Off-road diesel in Canada

- Canada is following the lead of U.S. (and E.U.)
- Regulation planned to align with U.S. requirements
 - 500 mg/kg, including rail and marine in 2007
 - 15 mg/kg, excluding rail and marine in 2010
 - includes production, importation and sales of diesel for off-road use
- EC is also taking comments on whether to include rail and marine in second step to 15 mg/kg
 - views of stakeholders are split on this issue



Environment Canada Environnement Canada

What are the costs?

- **Unit cost to refiners:**
 - from current to 500 mg/kg = 1.6 cents/litre
 - from 500 to 15 mg/kg = 1.5-2.6 cents/litre
 - these costs include increased use of lubricity additives
- **Price increase (if any) depends on ability of refiners to pass costs on to consumers**



Environment Canada Environnement Canada

What's next?

- EC is reviewing stakeholder comments
 - comments from marine associations are welcome
- Proposed regulation expected Spring 2004
- Final regulation targetted for late 2004-early 2005
- If (when) EPA later limits rail and marine diesel to 15 mg/kg, Canada likely to align
 - expect EPA proposal in 2004



Environment Environnement
Canada Canada

What does this all mean?

- Currently 500-mg/kg diesel is used in marine applications
 - Coast Guard has indicated it is purchasing considerable quantities of 500-mg/kg diesel
- Expect considerable amount of 15-mg/kg diesel to enter the off-road diesel pool, starting in 2006
 - availability of 500-mg/kg diesel may be limited, depending on distribution system