CANADA

PRIVY COUNCIL • CONSEIL PRIVÉ

P.C. 2012-857
June 19, 2012

Whereas, pursuant to subsection 332(1) of the *Canadian Environmental Protection Act, 1999*, the Minister of the Environment published in the *Canada Gazette*, Part I, on December 3, 2011, a copy of the proposed *Regulations Amending the Sulphur in Diesel Fuel Regulations*, substantially in the annexed form, and persons were given an opportunity to file comments with respect to the proposed Regulations or to file a notice of objection requesting that a board of review be established and stating the reasons for the objection;

Whereas the Governor in Council is of the opinion that the *Sulphur in Diesel Fuel Regulations*, as amended by the proposed Regulations, could make a significant contribution to the prevention of, or reduction in, air pollution;

And whereas, pursuant to subsection 140(4) of that Act, before recommending the proposed Regulations, the Minister of the Environment offered to consult with the provincial governments and the members of the National Advisory Committee who are representatives of Aboriginal governments;

Therefore, His Excellency the Governor General in Council, on the recommendation of the Minister of the Environment, pursuant to sections 140 and 330 of the *Canadian Environmental Protection Act, 1999*, hereby makes the annexed *Regulations Amending the Sulphur in Diesel Fuel Regulations*.

REGISTRATION - ENREGISTREMENT
NO. SOR/2012-135 DATE June 20, 2012
Jolanne Dansereau
REGISTRAR OF STATUTORY INSTRUMENTS
CANADA
REGISTRAIRE DES TEXTES REGLEMENTAIRES

CERTIFIED TO BE A TRUE COPY–COPIE CERTIFIÉE CONFORME

CLERK OF THE PRIVY COUNCIL–LE GREFFIER DU CONSEIL PRIVÉ

REGULATIONS AMENDING THE SULPHUR IN DIESEL FUEL REGULATIONS

AMENDMENTS

1. (1) The definitions "biodiesel fuel" and "northern supply area" in subsection 1(1) of the *Sulphur in Diesel Fuel Regulations*[1] are repealed.

(2) The definition "diesel fuel" in subsection 1(1) of the Regulations is replaced by the following:

"diesel fuel" means a fuel that can evaporate at atmospheric pressure, that boils within the range of 130°C to 400°C and that is for use in diesel engines or any fuel that is sold or represented as diesel fuel, as biomass-based diesel fuel or as a blend of biomass-based diesel fuel and diesel fuel. (*carburant diesel*)

(3) Subsection 1(1) of the Regulations is amended by adding the following in alphabetical order:

"biomass-based diesel fuel" means a fuel that is composed of or derived from plant or animal oils or plant or animal fats and that is intended for use in diesel engines. (*carburant diesel dérivé de la biomasse*)

"large stationary engine" means a diesel engine, except for aircraft engines, locomotive engines, vessel engines, off-road engines and engines used to propel on-road vehicles, that has a per-cylinder displacement equal to or greater than 30 000 cm^3. (*gros moteur stationnaire*)

"scientific research" does not include research into the preferences of consumers for differing properties of diesel fuel or marketing research. (*recherche scientifique*)

"small stationary engine" means a diesel engine, except for aircraft engines, locomotive engines, vessel engines, off-road engines and engines used to propel on-road vehicles, that has a per-cylinder displacement of less than 30 000 cm^3. (*petit moteur stationnaire*)

"vessel propelled by a large diesel engine" means a vessel that is propelled by one or more diesel engines that have a per-cylinder displacement equal to or greater than 30 000 cm^3. (*bateau propulsé par un gros moteur diesel*)

2. Sections 2 to 4 of the Regulations are replaced by the following:

2. (1) These Regulations do not apply to diesel fuel if

(*a*) the fuel is in transit through Canada, from a place outside Canada to another place outside Canada, and is accompanied by written evidence establishing that the fuel is in transit;

(*b*) the fuel is produced or sold for export and is accompanied by written evidence establishing that the fuel will be exported;

(*c*) the fuel is being imported for a use referred to in section 3, the fuel's sulphur concentration exceeds the concentration referred to in that section and the fuel is accompanied

[1] SOR/2002-254

by written evidence establishing that the fuel will meet the requirements of these Regulations before the fuel is used or sold; or

(*d*) the fuel is being imported in a fuel tank that supplies an off-road engine, a small stationary engine, a large stationary engine or the engine of a conveyance that is used for transportation by water, land or air.

(2) These Regulations, except for section 1, subsections 5(4) to (7) and sections 5.2 and 6, do not apply in respect of diesel fuel for use in scientific research.

3. (1) For the purposes of section 139 of the Act and subject to subsection (2), the concentration of sulphur shall not exceed,

(*a*) in diesel fuel produced, imported or sold for use in on-road vehicles or off-road engines, 15 mg/kg;

(*b*) in diesel fuel produced or imported for use in locomotive engines or in vessel engines other than those installed on a vessel propelled by a large diesel engine, 15 mg/kg;

(*c*) in diesel fuel sold for use in locomotive engines, 500 mg/kg;

(*d*) in diesel fuel sold for use in vessel engines other than those installed on a vessel propelled by a large diesel engine, 500 mg/kg until May 31, 2014 and 15 mg/kg after May 31, 2014;

(*e*) in diesel fuel produced, imported or sold for use in vessel engines installed on a vessel propelled by a large diesel engine, 1000 mg/kg after May 31, 2014;

(*f*) in diesel fuel produced, imported or sold for use in small stationary engines, 15 mg/kg after May 31, 2014; and

(*g*) in diesel fuel produced, imported or sold for use in large stationary engines, 1000 mg/kg after May 31, 2014.

(2) Paragraphs (1)(*f*) and (*g*) do not apply in respect of diesel fuel that is produced, imported or sold for use north of latitude 81°N.

4. The concentration of sulphur in diesel fuel referred to in section 3 shall be measured in accordance with the ASTM International method ASTM D5453-09, *Standard Test Method for Determination of Total Sulfur in Light Hydrocarbons, Spark Ignition Engine Fuel, Diesel Engine Fuel, and Engine Oil by Ultraviolet Fluorescence.*

3. (1) Subsection 5(1) of the Regulations is replaced by the following:

5. (1) Every person who produces or imports diesel fuel shall submit to the Minister a report, for each facility where the person produces diesel fuel and for each province into which the person imports diesel fuel, that contains the information set out in Schedule 1

(*a*) for each calendar quarter during which diesel fuel is produced or imported, within 45 days after the end of that quarter, until December 31, 2012; and

(*b*) for each calendar year during which diesel fuel is produced or imported, within 45 days after the end of that calendar year, after December 31, 2012.

(2) Paragraph 5(2)(*b*) of the Regulations is replaced by the following:

(*b*) a method equivalent to the one specified in paragraph (*a*) on the condition that the producer or importer sends to the Minister, by registered mail or courier at least 60 days before using the method, a description of the method and evidence that demonstrates that it provides results equivalent to those provided by the method specified in paragraph (*a*) and the equivalency of the method is validated in accordance with the following:

(i) if the equivalency is validated on or before the 60th day after the day on which this paragraph comes into force, the ASTM International standard ASTM D4855-97 (Reapproved 2002), *Standard Practice for Comparing Test Methods*, or the standard referred to in subparagraph (ii), and

(ii) if the equivalency is validated after the day referred to in subparagraph (i), the ASTM International standard ASTM D6708-08, *Standard Practice for Statistical Assessment and Improvement of Expected Agreement Between Two Test Methods that Purport to Measure the Same Property of a Material.*

(3) Subsections 5(4) and (5) of the Regulations are replaced by the following:

(4) Every person who intends to produce or import diesel fuel shall submit to the Minister a report that contains the information set out in Schedule 2 no later than five days before the day on which the person produces or imports diesel fuel for the first time.

(5) Subject to subsection (5.1), a person who has submitted a report under subsection (4) shall notify the Minister in writing of any change in the information in the report, except for changes regarding typical annual volumes or the authorized official, no later than five days after the change.

(5.1) A person who submitted a report under subsection (4) before the coming into force of this subsection shall submit a new report no later than 60 days after the day on which this subsection comes into force if the diesel fuel is produced or imported for

(*a*) use in vessel engines other than those installed on a vessel propelled by a large diesel engine;

(*b*) use in vessel engines installed on a vessel propelled by a large diesel engine;

(*c*) use in small stationary engines;

(*d*) use in large stationary engines; or

(*e*) use in scientific research.

(4) Subsection 5(7) of the Regulations is replaced by the following:

(7) A copy of each report or notice that is required under this section shall be kept, for a period of five years after the report or notice is submitted to the Minister, at the production facility in Canada or at the importer's principal place of business in Canada as identified in the information submitted under subsections (4), (5) and (5.1).

4. The Regulations are amended by adding the following after section 5:

5.1 (1) Subject to subsection (4), every person who intends to import diesel fuel shall notify the Minister in writing, at least 12 hours before the time of importation, of their intention to import

(*a*) more than 100 m³ of diesel fuel at any one time; or

(*b*) more than 1000 m³ of diesel fuel into any one province within any one day.

(2) The notice required by subsection (1) shall include

(*a*) the name and civic address of the importer;

(*b*) a statement indicating whether the diesel fuel is intended for

(i) use in vessel engines installed on a vessel propelled by a large diesel engine,

(ii) use in large stationary engines,

(iii) use in scientific research, or

(iv) any other use, if known;

(*c*) the volume of diesel fuel that is to be imported;

(*d*) the point of entry of the diesel fuel into Canada and the estimated date and time of its entry into Canada;

(*e*) the civic address of the first storage facility or refuelling facility to which the diesel fuel is to be delivered and the estimated date and time of its delivery there; and

(*f*) the name and telephone number of a representative of the importer through whom sampling arrangements for the imported volume of diesel fuel can be made.

(3) Every person who imports diesel fuel — other than by pipeline — shall ensure that the diesel fuel is accompanied, from the point of entry into Canada to the point of final delivery, by a record that indicates

(*a*) the name and civic address of the importer;

(*b*) the name and civic address of the person to whom the diesel fuel is to be sold or the ownership is to be transferred;

(*c*) the civic address of the first storage facility or refuelling facility to which the diesel fuel is to be delivered;

(*d*) the volume of the diesel fuel; and

(*e*) whether the diesel fuel is intended for use in scientific research, large stationary engines, vessel engines installed on a vessel propelled by a large diesel engine, or, if known, any other use.

(4) No notice is required if the diesel fuel is imported for use north of latitude 81°N.

5.2 (1) A report or notice that is required under these Regulations shall be sent electronically in the form and format specified by the Minister and shall bear the electronic signature of an authorized official.

(2) If the Minister has not specified an electronic form and format or if it is impractical to send the report or notice electronically in accordance with subsection (1) because of circumstances beyond the person's control, the report or notice shall be sent on paper, be signed by an authorized official and be in the form and format specified by the Minister. However, if no form and format have been so specified, the report or notice may be in any form and format.

5. Section 6 of the Regulations is replaced by the following:

6. (1) Every person who produces or imports diesel fuel shall keep a record of each batch of diesel fuel produced or imported that indicates the volume of the batch, its date of dispatch or importation and whether the concentration of sulphur of the batch is

(*a*) greater than 15 mg/kg but less than or equal to 1000 mg/kg; or

(*b*) greater than 1000 mg/kg.

(2) Every person who produces or imports diesel fuel with a concentration of sulphur greater than 15 mg/kg shall, before the dispatch of a batch of that fuel from the production facility or the importation of a batch of that fuel, indicate in a record the date of the dispatch or importation of the batch and

(*a*) if the dispatch or importation takes place on or before May 31, 2014, include the statement: "not suitable for use in on-road vehicles, off-road engines, locomotive engines or vessel engines other than those installed on a vessel propelled by a large diesel engine"; or

(*b*) if the dispatch or importation takes place after May 31, 2014, include the statement: "not suitable for use in on-road vehicles, off-road engines, locomotive engines, small stationary engines or vessel engines other than those installed on a vessel propelled by a large diesel engine".

(3) Every record made in accordance with subsection (2) shall be kept, for a period of five years after it is made, at the production facility in Canada or at the importer's principal place of business in Canada as identified in the information submitted under subsections 5(4), (5) and (5.1).

6. Schedules 1 and 2 to the Regulations are replaced by the Schedules 1 and 2 set out in the schedule to these Regulations.

COMING INTO FORCE

7. (1) Subject to subsection (2), these Regulations come into force on June 1, 2012, but if they are registered after that day, they come into force on the day on which they are registered.

(2) Section 5.1 of the *Sulphur in Diesel Fuel Regulations*, as enacted by section 4 of these Regulations, comes into force 60 days after the day on which these Regulations come into force.

SCHEDULE
(Section 6)

SCHEDULE 1
(Subsection 5(1))

REPORT OF SULPHUR CONCENTRATION IN DIESEL FUEL

1. Calendar year _____

2. Calendar quarter _____

3. Name of producer or importer

_____

4. Name of the facility in Canada at which the diesel fuel is produced or the province into which it is imported

_____

5. Civic address (and mailing address if different) of the facility in Canada at which the diesel fuel is produced or the importer's principal place of business in Canada

_____

_____

_____

6. Provide the required information for each type of fuel, indicating the volume of diesel fuel in m^3 and the sulphur concentration in mg/kg, in the following table:

TABLE

Item	Column 1 Required Information	Column 2 Diesel Fuel Excluding Biomass-based Diesel Fuel and Blends of Biomass-based Diesel Fuel and Diesel Fuel	Column 3 Biomass-based Diesel Fuel	Column 4 Blends of Biomass-based Diesel Fuel and Diesel Fuel
1.	Diesel fuel with a sulphur concentration that is less than or equal to 15 mg/kg			
	(*a*) volume of diesel fuel	_____	_____	_____
	(*b*) highest sulphur concentration	_____	_____	_____
	(*c*) lowest sulphur concentration	_____	_____	_____
	(*d*) volume-weighted average sulphur concentration	_____	_____	_____
	(*e*) method used (for reporting purposes) to measure sulphur concentration	_____	_____	_____
2.	Diesel fuel with a sulphur concentration that is greater than 15 mg/kg but less than or equal to 1000 mg/kg			

Item	Column 1 Required Information	Column 2 Diesel Fuel Excluding Biomass-based Diesel Fuel and Blends of Biomass-based Diesel Fuel and Diesel Fuel	Column 3 Biomass-based Diesel Fuel	Column 4 Blends of Biomass-based Diesel Fuel and Diesel Fuel
	(*a*) volume of diesel fuel	_____	_____	_____
	(*b*) highest sulphur concentration	_____	_____	_____
	(*c*) lowest sulphur concentration	_____	_____	_____
	(*d*) volume-weighted average sulphur concentration	_____	_____	_____
	(*e*) method used (for reporting purposes) to measure sulphur concentration	_____	_____	_____
3.	Diesel fuel with a sulphur concentration that is greater than 1000 mg/kg			
	(*a*) volume of diesel fuel	_____	_____	_____
	(*b*) highest sulphur concentration	_____	_____	_____
	(*c*) lowest sulphur concentration	_____	_____	_____

Item	Column 1 Required Information	Column 2 Diesel Fuel Excluding Biomass-based Diesel Fuel and Blends of Biomass-based Diesel Fuel and Diesel Fuel	Column 3 Biomass-based Diesel Fuel	Column 4 Blends of Biomass-based Diesel Fuel and Diesel Fuel
	(*d*) volume-weighted average sulphur concentration	_____	_____	_____
	(*e*) method used (for reporting purposes) to measure sulphur concentration	_____	_____	_____

7. Authorized official

Name _____

Title _____

Signature and date _____

Telephone number ( ) _____

Fax number ( ) _____

SCHEDULE 2
(Subsection 5(4))

PRODUCERS OR IMPORTERS OF DIESEL FUEL — REQUIRED INFORMATION

1. Name of producer or importer _____

2. Civic address (and mailing address if different) of producer or importer _____

_____

_____

_____

3. Registration number(s), if any were provided by the Minister under section 7 of the *Benzene in Gasoline Regulations*

4. Indicate if one or more of the following apply:

(*a*) producer in Canada of diesel fuel, excluding biomass-based diesel fuel and blends of biomass-based diesel fuel and diesel fuel, for

[ ] use in on-road vehicles

[ ] use in off-road engines

[ ] use in vessel engines other than those installed on a vessel propelled by a large diesel engine

[ ] use in vessel engines installed on a vessel propelled by a large diesel engine

[ ] use in small stationary engines

[ ] use in large stationary engines

[ ] use in locomotive engines

[ ] use in scientific research

[ ] any other use (specify) _____

(*b*) importer of diesel fuel, excluding biomass-based diesel fuel and blends of biomass-based diesel fuel and diesel fuel, for

[ ] use in on-road vehicles

[ ] use in off-road engines

[ ] use in vessel engines other than those installed on a vessel propelled by a large diesel engine

[ ] use in vessel engines installed on a vessel propelled by a large diesel engine

[ ] use in small stationary engines

[ ] use in large stationary engines

[ ] use in locomotive engines

[ ] use in scientific research

[ ] any other use (specify) _____

(*c*) producer in Canada of biomass-based diesel fuel for

[ ] use in on-road vehicles

[ ] use in off-road engines

[ ] use in vessel engines other than those installed on a vessel propelled by a large diesel engine

[ ] use in vessel engines installed on a vessel propelled by a large diesel engine

[ ] use in small stationary engines

[ ] use in large stationary engines

[ ] use in locomotive engines

[ ] use in scientific research

[ ] any other use (specify) _____

(*d*) importer of biomass-based diesel fuel for

[ ] use in on-road vehicles

[ ] use in off-road engines

[ ] use in vessel engines other than those installed on a vessel propelled by a large diesel engine

[ ] use in vessel engines installed on a vessel propelled by a large diesel engine

[ ] use in small stationary engines

[ ] use in large stationary engines

[ ] use in locomotive engines

[ ] use in scientific research

[ ] any other use (specify) _____

(*e*) importer of a blend of biomass-based diesel fuel and diesel fuel for

[ ] use in on-road vehicles

[ ] use in off-road engines

[ ] use in vessel engines other than those installed on a vessel propelled by a large diesel engine

[ ] use in vessel engines installed on a vessel propelled by a large diesel engine

[ ] use in small stationary engines

[ ] use in large stationary engines

[ ] use in locomotive engines

[ ] use in scientific research

[ ] any other use (specify) _____

5. For each facility in Canada at which diesel fuel is produced

(*a*) indicate the name and civic address (and mailing address if different) of the facility

_____

_____

_____

(*b*) indicate the typical annual volume in m^3 of diesel fuel produced for each intended use, according to fuel type, in the following table:

TABLE

Item	Column 1 Intended Use	Column 2 Diesel Fuel Excluding Biomass-based Diesel Fuel and Blends of Biomass-based Diesel Fuel and Diesel Fuel	Column 3 Biomass-based Diesel Fuel
1.	Use in on-road vehicles		
2.	Use in off-road engines		
3.	Use in vessel engines other than those installed on a vessel propelled by a large diesel engine		
4.	Use in vessel engines installed on a vessel propelled by a large diesel engine		
5.	Use in small stationary engines		
6.	Use in large stationary engines		
7.	Use in locomotive engines		
8.	Use in scientific research		
9.	Any other use (specify)		

6. For importers

(*a*) indicate the civic address (and mailing address if different) of the principal place of business in Canada

_____

_____

_____

(*b*) indicate each usual point of entry into Canada, the province in which the point of entry is located, and the usual mode of importation for the point of entry (e.g. vessel, rail, truck, pipeline)

_____

_____

_____

(*c*) indicate, for each usual point of entry into Canada, the typical annual volume in m^3 of diesel fuel imported for each intended use, according to fuel type, in the following table:

TABLE

Item	Column 1 Intended Use	Column 2 Diesel Fuel Excluding Biomass-based Diesel Fuel and Blends of Biomass-based Diesel Fuel and Diesel Fuel	Column 3 Biomass-based Diesel Fuel	Column 4 Blends of Biomass-based Diesel Fuel and Diesel Fuel
1.	Use in on-road vehicles	_____	_____	_____
2.	Use in off-road engines	_____	_____	_____
3.	Use in vessel engines other than those installed on a vessel propelled by a large diesel engine	_____	_____	_____
4.	Use in vessel engines installed on a vessel propelled by a large diesel engine	_____	_____	_____
5.	Use in small stationary engines	_____	_____	_____

Item	Column 1 Intended Use	Column 2 Diesel Fuel Excluding Biomass-based Diesel Fuel and Blends of Biomass-based Diesel Fuel and Diesel Fuel	Column 3 Biomass-based Diesel Fuel	Column 4 Blends of Biomass-based Diesel Fuel and Diesel Fuel
6.	Use in large stationary engines	_____	_____	_____
7.	Use in locomotive engines	_____	_____	_____
8.	Use in scientific research	_____	_____	_____
9.	Any other use (specify)	_____	_____	_____

7. Authorized official

Name _____

Title _____

Signature and date _____

Telephone number ( ) _____

Fax number ( ) _____

Regulations Amending the Sulphur in Diesel Fuel Regulations

Statutory authority

Canadian Environmental Protection Act, 1999

Sponsoring department

Department of the Environment

REGULATORY IMPACT ANALYSIS STATEMENT

1. Background

Exhaust emissions from diesel engines used on large ships are a substantial source of the total emissions from the transportation sector in Canada. Despite significant reductions over the past three decades, air pollution continues to be a serious problem with major impacts on the environment and health of Canadians.

2. Issue

Canada already has the *Sulphur in Diesel Fuel Regulations* (referred to as the Regulations) which limit the sulphur content of diesel fuel produced, imported or sold for use in marine engines. These existing Regulations limit the sulphur content to 500 mg/kg or less until June 1, 2012, when the limit will be reduced to 15 mg/kg for marine diesel fuel produced or imported for use or sale in Canada. Large marine vessels, however, use heavier marine fuels with much higher sulphur levels (typically over 25,000 mg/kg) and these heavier fuels are not subject to the *Sulphur in Diesel Fuel Regulations*.

The United States, Canada and France (for St. Pierre and Miquelon) proposed the designation of the waters within 200 nautical miles of the east and west coasts of Canada and the United States as an Emission Control Area[1] (ECA). In March 2010, this proposal was adopted by the Parties to Annex VI of the International Convention for the Prevention of Pollution from Ships (known as MARPOL Annex VI). The North American ECA requirements will become enforceable on August 1, 2012. Implementing the ECA requirements will dramatically reduce air pollution from ships and deliver substantial air-quality and public health benefits that extend hundreds of kilometres inland. MARPOL Annex VI requires that when operating in an ECA, ship owner/operators will use lower sulphur fuels, with limits of 10 000 mg/kg or less as of August 1, 2012, and 1 000 mg/kg or less as of January 1, 2015.

Canada now has a commitment to implement fuel-quality and engine emission standards by August 1, 2012, for ships operating in Canadian waters of the ECA. The United States has already implemented domestic regulations and Transport Canada plans to implement similar regulations under the authority of the *Canada Shipping Act, 2001*. The *Regulations Amending the Sulphur in Diesel Fuel Regulations* (referred to as the Amendments) will ensure alignment with Transport Canada regulations to implement the North American ECA requirements.

3. Objectives

Under the ECA and Canada's regulations that implement the ECA, large ships over 400 gross tonnes must meet the standard of being equivalent to burning fuel with a maximum sulphur content of 1 000 mg/kg, compared to heavy fuels currently in use with sulphur contents over 25 000 mg/kg. Compliance may be achieved by using low sulphur content marine fuel or by adopting approaches that produce equivalent emissions, such as emission control technologies, alternative fuels or onboard procedures. MARPOL Annex VI requires that Canada ensure fuel conforming to regulations will not be prevented from being made available in Canadian ports and

[1] A copy of this proposal (International Maritime Organization [IMO] Document MEPC59/6/5, March 27, 2009) is available from Transport Canada on request in either official language.

terminals. The Amendments will allow for the production, import and sale of diesel fuel in Canada with a maximum sulphur content of 1 000 mg/kg for use in large vessels[2].

The Amendments will also align sulphur for diesel fuel produced, imported and sold for use in stationary engines with those of the U.S. Environmental Protection Agency (EPA), and revise several administrative requirements of the *Sulphur in Diesel Fuel Regulations*.

4. Description

The *Sulphur in Diesel Fuel Regulations* currently require that sulphur content in marine diesel fuel be limited to 15 mg/kg beginning on June 1, 2012. Upon registration, the Amendments create a new category of diesel fuel for use in large ships, which will not be subject to sulphur in diesel limits until they are expected to start switching to diesel fuel to meet ECA requirements. Effective June 1, 2014, the maximum sulphur content of this diesel fuel will be limited to 1 000 mg/kg, and this sulphur limit will enable, with Transport Canada's planned regulations, to implement the North American ECA and international standards. The Amendments enable, but do not require that a fuel supplier produce, import or sell any specific fuel type in Canada.

Transport Canada intends to amend the *Vessel Pollution and Dangerous Chemicals Regulations* in the summer of 2012. These vessel emission regulations would require either use of low-sulphur marine fuels and/or the achievement of equivalent emission reductions through emission control technologies, alternative fuels, or alternative onboard compliance procedures. The use of low-sulphur marine fuels would require ship owners and operators, when operating within the ECA, to switch from traditional, high-sulphur heavy fuel oils to lighter distillate fuels. Prior to the Amendments, if the distillate fuel met the "diesel fuel" definition found in the *Sulphur in Diesel Fuel Regulations*, the maximum sulphur limit would have been 15 mg/kg, beginning on June 1, 2012. Without the Amendments, diesel fuel with a sulphur content up to 1 000 mg/kg could not have been produced, imported nor sold in Canada for use in large ships as an alternative to the heavy residual fuels currently in use.

The Regulations had required a sulphur limit of 15 mg/kg in diesel fuel produced or imported for use locomotives and vessels as of June 1, 2012, and 500 mg/kg for sales since 2007, which was aligned with the U.S. requirements. The 500 mg/kg sulphur limit for sales for use in locomotives and smaller vessels was in place to provide a sales outlet for fuel that may be contaminated during distribution. The United States[3] will move to a 15 mg/kg sulphur limit for sales to locomotives and smaller vessels as of June 2012, and considers that the new 1 000 mg/kg diesel fuel class can serve as the sales outlet for off-specification diesel fuel exceeding the 15 mg/kg limit. Based on information provided by the petroleum industry and described below in the Consultations section, the current sulphur limit of 500 mg/kg for sale of diesel fuel for use in locomotives will be retained. Diesel fuel sold for use in smaller vessels will be reduced from 500 mg/kg to 15 mg/kg effective June 1, 2014, since higher sulphur fuel can be sold for use in locomotives or large vessels.

The Amendments include new requirements to limit the sulphur content in diesel fuel produced in, imported to or sold in Canada for stationary diesel engines. The sulphur limits of 15 mg/kg for use in small stationary engines[4], and 1 000 mg/kg for use in large stationary engines[5] will come into force beginning on June 1, 2014. These requirements will eliminate potential future risks of backsliding on diesel fuel quality. These requirements will align with those of the United States[6] which have been in place since 2006, will reflect current fuel supply practices in Canada and would generally have no impact on current industry operations. Production, import and sale of diesel fuel for use in these stationary engines in areas north of the 81st parallel will not be required to comply with these sulphur limits. The rationale is provided below in the comments received section.

The requirements for stationary engines reflect current fuel supply practices in Canada. Ultra low-sulphur diesel (sulphur content of 15 mg/kg) is already used in small stationary engines Canada-wide. Small diesel engines that are designed for use in off-road, rail and marine applications may also be used for stationary applications. It is expected that this fuel requirement will have minimal effect on Canada's diesel fuel pool; therefore, very limited costs to industry would be incurred. There is no high-sulphur diesel production in Canada, and of the minimal amount that is imported, none is supplied for stationary generator use[7] except for that imported for use north of the 81st parallel. Accordingly, the requirements would have no impact on current industry operations, but will eliminate any future risk of backsliding on diesel fuel quality, and ensure low sulphur diesel fuel for potential future Canadian regulations on stationary diesel engine emissions.

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[2] A large ship is defined as a "vessel propelled by a large diesel engine" which means a vessel that is propelled by one or more diesel engines that have a per-cylinder displacement equal to or greater than 30 000 cm'.

[3] The U.S. diesel fuel rule as amended by 75 FR 22968, April 30, 2010, is available at http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr&sid=4ba4f15672832267cb1c2c82323934f2&rgn=div6&view=text&node=40:16.0.1.1.9.9&idno=40.

[4] "Small stationary engine" means a diesel engine, except for aircraft engines, locomotive engines, vessel engines, off-road engines and engines used to propel on-road vehicles, that has a per-cylinder displacement of less than 30 000 cm^3.

[5] "Large stationary engine" means a diesel engine, except for aircraft engines, locomotive engines, vessel engines, off-road engines and engines used to propel on-road vehicles, that has a per-cylinder displacement equal to or greater than 30 000 cm^3.

[6] Since 2006, the United States Environmental Protection Agency (U.S. EPA) has regulated emissions standards for stationary compression ignition engines and corresponding fuel requirements.

[7] Proprietary information reported for 2008 under the *Fuels Information Regulations, No. 1*.

It is important to note that diesel engines that are designed for use in off-road, rail and marine applications may also be used for stationary applications; hence, may already be using diesel fuel with 15 mg/kg sulphur content. Such engines fall under the Regulations' definition of "off-road engine" in the text of the regulatory amendments.

Table 1: Summary of new categories of diesel fuel, sulphur limits and effective dates under the *Sulphur in Diesel Fuel Regulations*

Category of Diesel Fuel	Sulphur limit	Effective date
Large Vessel Marine Diesel Fuel		
• Production , import, or sales	1 000 mg/kg	June 1, 2014
Non-Large Vessel Diesel Fuel		
• Sales	15 mg/kg	June 1, 2014
Small Stationary Engine Diesel Fuel		
• Production , import, or sales	15 mg/kg	June 1, 2014
Large Stationary Engine Diesel Fuel		
• Production , import, or sales	1 000 mg/kg	June 1, 2014

The Amendments also include the following administrative changes:

- Replacing the repealed test method referenced in the Regulations ASTM D 4855-97 *Standard Practice for Comparing Test Methods* with the equivalent standard ASTM D 6708-08 *Standard Practice for Statistical Assessment and Improvement of Expected Agreement Between Two Test Methods that Purport to Measure the Same Property of a Material*;
- Updating the name and edition of the following test method ASTM-D5453-09, *Standard Test Method for Determination of Total Sulfur in Light Hydrocarbons, Spark Ignition Engine Fuel, Diesel Engine Fuel, and Engine Oil by Ultraviolet Fluorescence*;
- Replacing the term "biodiesel fuel" with "biomass-based diesel fuel" to use a commonly accepted term used by regulatees;
- Adding a reporting/sulphur limit exemption for diesel fuel for use in scientific research to reduce the compliance burden associated with this low-volume fuel application and to be consistent with reporting requirements of the *Sulphur in Gasoline Regulations* and the *Benzene in Gasoline Regulations*;
- Changing reporting frequency from quarterly to annually as of 2013 instead of 2015 for on-road, off-road, rail and marine diesel fuel to reduce the administrative burden on industry of quarterly reporting; and
- Adjusting the information that must be reported in advance of imports (including business civic addresses, time and location of imports) in order to improve enforceability of the *Sulphur in Diesel Fuel Regulations* while enabling timely imports.

Environment Canada had proposed to reduce the requirement for 15-day advance notification of first production or import of diesel fuel, to one day advance notification. Based on operational requirements of enforcing the Regulations, this advance notification will be reduced from 15 days to 5 days.

The Amendments come into force on June 1, 2012, but if they are registered after that day, they come into force on the day on which they are registered. Section 5.1 of the Regulations comes into force 60 days after the day on which these Regulations come into force

The Amendments provide a consistent, effective, and efficient approach to continue to manage sulphur in diesel fuel, remove regulatory duplication and stream process. The Amendments are expected to result in reduced costs to industry, and benefits for the government, and Canadians.

The Amendments will reduce administrative burden of the *Sulphur in Diesel Fuel Regulations*, leading to a small and limited decrease in administrative burden on business. This will be achieved by exempting diesel fuel for use in scientific research from certain regulatory requirements, reducing the required lead time for registration information from 15 days to 5 days, excluding small volume imports from requirements for 12-hour notification prior to imports; and allowing for electronic submission of information.

The Amendments are not a new Regulation and will not increase the administrative burden of the current Regulations, and therefore there is no requirement under the one-for-one rule recommendation of the Red Tape Reduction Commission, to repeal another regulation or to amend the administrative burden of any other regulation.

5. Consultation

The Amendments to the *Sulphur in Diesel Fuel Regulations* are being made in order to facilitate Canada's future implementation of the requirements of Annex VI to MARPOL, to support Transport Canada upcoming amendment to the *Vessel Pollution and Dangerous Chemicals Regulations* and to further harmonize Environment Canada's requirements with those of the U.S. EPA diesel fuel program.

Environment Canada consulted with stakeholders in the spring and summer of 2011 on the proposed amendments under consideration. In general, there was broad support for the proposed amendments. Two stakeholders expressed support for the amendments pertaining to diesel fuel for large vessels to be in effect by August 1, 2012. The petroleum industry welcomed the proposed approach to harmonize, to a large extent, Canada's fuels regulations with those in place in the United States. The shipping industry supported those provisions which enable compliance with the ECA provisions. Representatives of the rail industry indicated support for Canada to align itself with the U.S. EPA on sulphur limits.

Environment Canada proposed to align Canada with the United States since they are moving towards 15 mg/kg fuel for rail sales as of 2012, and now consider 1 000 mg/kg marine fuel the outlet for off-specification fuel. During recent consultations, the rail industry indicated support for Environment Canada being aligned with the U.S. EPA on these sulphur limits[8].

Following the publication in June 2005 of the U.S. EPA's proposed new emission standards for stationary, diesel compression-ignition engines and limits on sulphur in the diesel fuel used in those engines, Environment Canada informed stakeholders that, based on its general policy of alignment with the fuel-quality requirements of the United States, it would consider developing similar standards. During consultations in 2011, fuel suppliers have indicated that diesel fuel high in sulphur is not imported nor sold for use in stationary generators, and that the proposed sulphur limits would have no impact on their operations. Discussions with fuel users, such as those in northern communities, confirm that the fuel supplied to such communities is diesel low in sulphur in compliance with the current requirements of the *Sulphur in Diesel Fuel Regulations*.

With respect to the administrative amendment updating the repealed test method, a Discussion Paper outlining this proposed amendment was released in March 2010. The Department received comments from three stakeholders during the public comment period. None of the parties opposed this proposed change to the *Sulphur in Diesel Fuel Regulations*. One party asked whether a grandfather clause could be included and whether more time could be provided for regulatees. This comment was addressed by grandfathering the referenced test method in the Amendments to ensure test methods which have already been deemed equivalent under the Regulations do not require re-qualification under the newly referenced test method.

Conforming to the requirements of the *Canadian Environmental Protection Act, 1999* (CEPA 1999), the Minister of the Environment offered to consult with the provinces and members of the CEPA National Advisory Committee on the elements of the proposed Amendments. No provinces took up the offer to consult on the proposed Amendments.

Upon publication, the World Trade Organization Committee on Technical Barriers to Trade was notified of the proposed Amendments. No comments were received.

Comments received following pre-publication of the proposed Amendments in the *Canada Gazette*, Part I on December 3, 2011

The proposed Regulations were pre-published in the *Canada Gazette*, Part I, for a 60-day public comment period. During that period, 4 written submissions were received from parties including the petroleum industry, a shipping association, and the Department of National Defence.

A summary of the comments and how they are addressed in the final Amendments is provided below.

There was broad support for the proposed regulatory changes to allow for the manufacture, import and sale of diesel fuel with a sulphur content up to 1 000 mg/kg for use in large vessels.

Clarification was requested regarding whether the Amendments would apply to a diesel fuel for use in large vessels prior to the effective date of the 1 000 mg/kg sulphur limit (June 1, 2014). Specifically, clarification was requested that fuel with a maximum sulphur content of 10 000 mg/kg (1.0wt%), that may have a boiling range of 130°C to 400°C, and is intended for use by a large vessel within the ECA, during the period of June 1, 2012 to June 1, 2014, is not considered "diesel fuel for use in large vessels" for the purpose of the Regulations.

EC Response: Upon registration and publication in 2012, the Amendments create a new category of diesel fuel for use in large vessels. At that time, the sulphur limit of 15 mg/kg for "vessels" will apply only to diesel fuel for small and mid-sized vessels. From the date of publication until June 1, 2014, the Regulations do not prescribe any sulphur limit for diesel fuel for use in large vessels. Fuel suppliers may produce, import or sell diesel fuel for large vessels with any sulphur limit during this period.

[8] The 2005 Amendments to the *Sulphur in Diesel Fuel Regulations* stipulate rail diesel sulphur limits of 15 mg/kg for both production and import, along with a 500 mg/kg sulphur limit for sales starting in 2012. The 500 mg/kg limit for sales is in line with the United States limit and is provided to allow for the sulphur contamination of the fuel during transport — an issue for fuel suppliers, not users. Environment Canada consulted extensively on these changes, and no objections were received from the rail industry or others at that time.

Environment Canada had proposed to lower the sales limit for sulphur in locomotive diesel from 500 mg/kg to 15 mg/kg as of June 1, 2014, to align with the U.S requirements, leaving sales to large vessels as the only outlet for off-specification or sulphur-contaminated ultra low sulphur diesel. The petroleum industry requested that the original 500 mg/kg sulphur limit be retained, citing major differences in fuel distribution systems in Canada compared to the U.S. Where most U.S. pipelines and distribution points end near major refining centers and/or marine markets, Canadian distribution system end-points are typically landlocked, not accessible to the marine market, and are not typically near any refining capacity. Furthermore, some Canadian pipelines are unique common pipelines, carrying both crude and refined products where sulphur pick-up in finished products from crude oil is more common. The industry has requested that sulphur pickup in the distribution system be studied prior to any changes to the sulphur limit for sales of diesel fuel for locomotive use.

EC Response: Environment Canada has a policy to generally align fuel standards with those of the U.S., taking Canadian unique circumstances into consideration. Due to the differences in distribution systems between Canada and the U.S., the original 500 mg/kg sulphur limit for diesel fuel sold for use in locomotives is being retained at this time. However, further study of this issue is warranted. However, further study of this issue is warranted. The refining industry has indicated they will support this study, and will gather data on the sulphur pick-up in the pipelines and distribution system for this diesel fuel which may have a sulphur content higher than 15 mg/kg and lower than 500 mg/kg, sold for use in the rail sector. The refining industry will provide this data to Environment Canada in 2014. If Environment Canada determines that future action may be warranted, the feasibility and possible infrastructure changes would be considered, and a regulatory amendment may be required.

The Department of National Defence (DND) requested a regulatory exemption from the proposed sulphur limits for diesel fuel for use in small and large stationary engines for its operations at CFS Alert in the Arctic due to the logistical challenges of supplying this remote station north of the 81st parallel. Specifically, all fuel for use in Alert must be airlifted, and the new requirements for stationary engines would require longer and more resupply flights per year.

EC Response: Due to the remoteness of the location, limitations on supply and storage of fuel at these sites and the unique logistical challenges of supplying CFS Alert, the sulphur limits for diesel fuel produced, imported or sold for use in small and large stationary engines at this and any future facilities north of the 81st parallel, will not be subject to the sulphur limits of 15 mg/kg and 1 000 mg/kg, respectively. DND will still be required to report their annual import volumes of this higher sulphur diesel fuel.

A comment was made regarding the wording of the new notification requirements in paragraph 5.1(2)(b). It was noted that an importer may not have knowledge of intended use of the fuel prior to import, since there are numerous possible uses for diesel fuel and most diesel will be at 15 mg/kg.

EC Response: A regulatee is required to provide information to which s/he has reasonable access to. If the intended use of the diesel fuel is not known, the regulatee is not required to specify when providing information to Environment Canada.

Clarification was requested regarding the exception for pipelines from the record requirements in subsection 5.1(3).

EC Response: An exception was provided for pipelines since records cannot accompany the fuel being imported in a pipeline, whereas records could accompany fuel being imported in a barge or truck, for example.

Comments were received on the wording in the Regulatory Impact Analysis Statement (RIAS).

EC Response: Clarifying revisions were made to the RIAS text.

6. Small Business Lens

The Amendments are expected to result in cost savings for small businesses, so the Small Business Lens provisions do not apply. Cost savings to small businesses will be achieved by exempting diesel fuel for use in scientific research from certain regulatory requirements, reducing the required lead time for registration information from 15 days to 5 days, excluding small volume imports from requirements for 12-hour notification prior to imports; allowing for electronic submission of information; and changing reporting frequency from quarterly to annually as of 2013 to reduce administrative burden.

7. Rationale

The Amendments are needed to allow the benefits of the North American ECA agreement to be realized. Under the MARPOL Convention, countries need to ensure supplies of compliant fuel are available and no ship must be forced to re-route its journey to obtain diesel fuel with a sulphur content up to 1 000 mg/kg. If ships operating in Canadian waters are unable to obtain fuel with 1 000 mg sulphur content in 2015, the ship owner could report to the IMO that diesel fuel with a sulphur content of 1 000 mg/kg was unavailable at Canadian ports and cite an exemption under MARPOL Annex VI for fuel availability whereby they could use fuel with the next

lowest sulphur content, but the sulphur content would exceed 1 000 mg/kg. The Amendments will allow production, import and sale of 1 000 mg/kg diesel fuel after June 1, 2014, for use in large ships. Costs and benefits will be quantified in the planned vessel emission regulations to be enacted under the *Canada Shipping Act, 2001*.

To ensure that the lower sulphur diesel fuel is available as an option for large ships, the Amendments will allow for the production, import and sales limits for marine fuels with a sulphur content of 1 000 mg/kg for use in large vessels, while maintaining a lower sulphur limit of 15 mg/kg for diesel fuel imported and sold for use in small and mid-sized vessels.

The Amendments further align the *Sulphur in Diesel Fuel Regulations* with those of the United States and would support the planned vessel emission regulations to function as intended to implement the international standards of the North American ECA. Together these regulations are expected to lead to significant reductions in air pollution from large marine vessels, which will contribute to improved health and environmental benefits for Canadians.

8. Implementation, enforcement and service standards

Implementation

For the purpose of implementing the amendments to the regulatory requirements, Environment Canada will update its compliance promotion material related to the *Sulphur in Diesel Fuel Regulations*, available at www.ec.gc.ca/energie-energy/default.asp?lang=En&n=48F8FEEC-1.

Distribution of this updated material will be targeted towards raising awareness and encouraging the regulated community to achieve a high level of overall compliance. Compliance promotion activities will be revisited from time to time to ensure that the Regulations are implemented in the most effective and efficient manner.

Enforcement

Since the Regulations would be made under CEPA 1999, enforcement officers will, when verifying compliance with the Regulations, apply the *Compliance and Enforcement Policy for CEPA 1999* implemented under the Act. The Policy sets out the range of possible responses to violations, including warnings, directions, environmental protection compliance orders (EPCOs), ticketing, ministerial orders, injunctions, prosecution, and environmental protection alternative measures (which are an alternative to a court trial after the laying of charges for a CEPA 1999 violation). In addition, the Policy explains when Environment Canada will resort to civil suits by the Crown for cost-recovery.

When, following an inspection or an investigation, an enforcement officer discovers an alleged violation, the officer would choose the appropriate enforcement action based on the following factors:

- Nature of the alleged violation: This includes consideration of the damage, the intent of the alleged violator, whether it is a repeat violation, and whether an attempt has been made to conceal information or otherwise subvert the objectives and requirements of the Act;
- Effectiveness in achieving the desired result with the alleged violator: The desired result is compliance within the shortest possible time and no repetition of the violation. Factors to be considered include the alleged violator's history of compliance with the Act, willingness to cooperate with enforcement officers, and evidence of corrective action already taken; and
- Consistency: Enforcement officers will consider how similar situations have been handled in determining the measures to be taken to enforce the Act.

Environment Canada will monitor sulphur content in diesel fuel and compliance with the Regulations.

Service standards

There are no service standards associated with the Regulations.

9. Contact

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