Environment Canada Guidance Document

QUESTIONS AND ANSWERS ON THE FEDERAL SULPHUR IN DIESEL FUEL REGULATIONS

under the Canadian Environmental Protection Act, 1999 (CEPA 1999)

Fuels Division Environment Canada

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NOTICE

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DISCLAIMER

Users of this document are advised that it has been prepared for use and as a reference tool. It has no legal force or effect. It does not form part of nor does it in anyway supersede or modify the *Sulphur in Diesel Fuel Regulations (SOR/2002-253)*, or offer any legal interpretation of those regulations. In the event of inconsistency between this document and the Regulations, the Regulations prevail. Persons subject to the regulations must refer directly to the regulations to determine the scope of their obligations and responsibilities.

PREFACE

This document has been produced by Environment Canada as a reference tool to provide the reader with information about the requirements of the *Sulphur in Diesel Fuel Regulations (SOR/2002-253)*,. There is a short outline of the regulations provided at the beginning of the document, followed by questions and answers about the regulations in general and their various sections. It should also be noted that this reference document has been updated to include the recent amendments to the *Sulphur in Diesel Fuel Regulations*. These Regulations were amended by the *Regulations Amending the Sulphur in Diesel Fuel Regulations (SOR/2005-290)* which were published in the Canada Gazette, Part II on October 19th, 2005 and will come into force on January 1st, 2006.

SULPHUR IN DIESEL FUEL REGULATIONS

Guidance Document

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Outline of the federal Sulphur in Diesel Fuel Regulations

Section 1: INTERPRETATION

This section provides the definitions that are used in the regulations.

Section 2: APPLICATION

Section 2 outlines circumstances where the requirements of the regulations do not apply.

Section 3: MAXIMUM CONCENTRATION OF SULPHUR

This section specifies the maximum level of sulphur in diesel fuel for use in on-road vehicles, off-road engines, vessel engines and locomotive engines. The limits apply to diesel fuel produced, imported or sold.

Section 4: ANALYSIS

This section specifies the reference method for analysis that will be used by Environment Canada and the courts to determine compliance with the compositional requirements of the regulations.

Section 5: REPORTS

This section specifies that every person who produces or imports diesel fuel shall submit

• one time registration information (Schedule 2), with updates when there are changes (Schedule 2); and

regular reports on diesel fuel volumes and sulphur concentrations (Schedule 1).

This section also specifies that alternative analysis methods that have been demonstrated to be equivalent to the reference test method may be used for reporting the concentration of sulphur in diesel fuel.

Section 6: RECORDS

This section requires importers and producers to keep records on diesel fuel (low-sulphur or regular). These records have to be maintained for a period of five years at the production facility or place of business in Canada of an importer.

Section 7: REPEAL

The *Diesel Fuel Regulations* (limiting sulphur in diesel fuel for use in on-road vehicles to 500 mg/kg) in effect since January 1, 1998 are repealed on the coming into force of the *Sulphur in Diesel Fuel Regulations*.

Section 8: COMING INTO FORCE

The parent Sulphur in Diesel Fuel Regulations came into force on January 1, 2003. The Regulations Amending the Sulphur in Diesel Fuel Regulations come into force on January 1, 2006.

Schedule 1: REPORT OF SULPHUR CONCENTRATION IN DIESEL FUEL

This Schedule sets out the information required to be reported under subsection 5(1)

Schedule 2: REPORT BY PRODUCERS AND IMPORTERS OF DIESEL FUEL

This Schedule sets out the registration information required to be reported under subsection 5(4)

Questions and Answers on the federal Sulphur in Diesel Fuel Regulations under CEPA 1999

GENERAL QUESTIONS

G.1 What are the penalties if I do not comply with the Sulphur in Diesel Fuel Regulations?

Compliance with regulations is mandatory. Environment Canada's Compliance and Enforcement Policy for CEPA 1999 sets out the criteria for responses by Environment Canada enforcement officers to alleged violations. Under subsections 272 and 273 of the *Canadian Environmental Protection Act*, 1999 (CEPA 1999), every person who is found guilty of contravening or failing to comply with the Act or its regulations is subject to fines, imprisonment or other court orders. These sections should also be read in conjunction with s. 276 of the Act which provides that where an offence is committed or continued on more than one day, then each day on which the offence occurred may be prosecuted as a separate offence.

A copy of Environment Canada's Enforcement and Compliance Policy is available on request from the address listed below:

Director
Enforcement Branch
Environment Canada
351 St. Joseph Boulevard
Gatineau, Quebec K1A 0H3

You may also obtain a copy of the policy at:

www.ec.gc.ca/CEPARegistry¹

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¹ From the CEPA Registry introductory page, click on the heading "Policies" found at the left-hand side of the screen and then click on the title of the CEPA 1999 Compliance and Enforcement Policy.

In addition to financial and administrative penalties, if there is a contravention of the regulation, the Minister may require a producer, processor, importer, retailer or distributor to take any or all of the following measures:

- provide notification of the relevant characteristics of the fuel and of any danger to the environment or to human life or health that might be posed by the fuel:
- replace the fuel with fuel that meets the applicable requirement;
- accept return of the fuel from the purchaser and refund the purchase price;
- take other measures to mitigate the effect of the contravention on the environment or on human life or health; and
- report on the steps taken.

G.2 Why is sulphur in diesel fuel regulated?

Sulphur occurs naturally in crude oil and so is found in diesel fuel. It is directly emitted from vehicles as sulphur dioxide and sulphate particles. Emissions caused by high sulphur levels affect the health of Canadians.

Reduction of sulphur to 15 mg/kg in diesel fuel is required to enable the efficient operation of advanced exhaust emission control technologies needed to comply with the new diesel vehicle and engine emission standards that are coming into effect. The lower sulphur level is required to enable the efficient operation of advanced exhaust emission control technologies needed to comply with the new emission standards.

Sulphur in diesel fuel is currently regulated in other jurisdictions with many countries requiring levels of 15 mg/kg or lower. In December 2000, the U.S. Environmental Protection Agency (EPA) adopted regulations limiting sulphur in diesel fuel for onroad applications to 15 mg/kg² starting June 2006. In June 2004, the U.S. EPA adopted further regulations to limit sulphur in diesel fuel for off-road, rail and marine applications to 500 mg/kg starting June 2007and to 15 mg/kg in 2010 to 2012. In May 2001, the European Union proposed to introduce "zero" sulphur (defined as less than 10 mg/kg sulphur) on-road diesel fuel commencing January 1, 2005.

The *Sulphur in Diesel Fuel Regulations* align Canadian requirements for the allowable level of sulphur in diesel fuels for on-road vehicles, off-road engines, locomotive engines and vessel engines with those of the U.S.

G.3 Why are there limits for sulphur in diesel fuel used in rail and marine applications?

 $^{^{2}}$ 100 mg/kg = 100 parts per million (ppm) = 0.0100% by weight.

Locomotive and marine diesel engines are becoming a more significant contributor to air pollution in many areas. In 2005 the U.S. EPA passed requirements for non-road diesel fuel that include sulphur limits for rail and marine diesel fuels, decreasing allowable levels of sulphur by 99 percent. These fuel improvements will create immediate and significant environmental and public health benefits by reducing particulate matter (PM) from existing engines.

The EPA also announced its intent to propose more stringent locomotive engine emission standards that are modeled after its Clean Air Non-road Diesel Engines Program. Such standards would require the use of advanced emission-control technologies similar to those already passed for heavy-duty diesel trucks and buses. The availability of clean non-road diesel fuel required under the new non-road fuel standards will enable the use of this technology on locomotive engines. EPA estimates that nitrogen oxides (NOx) and PM emissions could be reduced by 90 percent by applying such advanced technology to locomotive engines.

The Sulphur in Diesel Fuel Regulations align Canadian requirements for the allowable level of sulphur in diesel fuels for on-road vehicles, off-road engines, locomotive engines and vessel engines with those of the U.S.

G.4 I understand that the regulations have been amended. Where can I find the various amendments?

The various amendments are available on the CEPA Registry under the parent regulations:

www.ec.gc.ca/ceparegistry

specifically:

www.ec.gc.ca/CEPARegistry/regulations/detailReg.cfm?intReg=63

G.5 I find it confusing to read these regulations and the various amendments. Where can I find a consolidated regulation?

The consolidated regulations are available on-line from the Department of Justice:

http://laws.justice.gc.ca/en/index.html

specifically:

http://laws.justice.gc.ca/en/c-15.31/sor-2002-254/70614.html

Note that the consolidated regulations are updated regularly but may not always reflect the latest amendments.

G.6 To whom do the regulations apply?

The regulations apply to every person who produces, imports or sells diesel fuel.

G.7 Is there diesel fuel that is <u>not</u> subject to the regulations?

Diesel fuel that meets the following criteria is exempt from the regulations, provided that it is accompanied by written evidence establishing that it meets the defined criteria:

- Diesel fuel that is in transit through Canada, from a place outside of Canada to another place outside of Canada;
- Diesel fuel that is produced or sold for export;
- Imported diesel fuel for use in on-road vehicles, off-road engines, vessel
 engines or locomotive engines that exceeds sulphur concentrations and that
 will be further processed to meet the respective sulphur limit before the fuel
 is used or sold.

Persons seeking to avail themselves of these exemptions have to ensure that the diesel fuel is accompanied by written evidence establishing that it meets the defined criteria.

Diesel fuel that is being imported in a fuel tank that supplies the engine of conveyance is also not subject to the regulations.

G.8 What are the sulphur limits and associated timing under the regulations

The production, import and sales limits for diesel fuel are summarized in the table below.

| Sulphur | Limit (mg/kg) | On-Road Diesel Fuel | Off-Road Diesel Fuel | Rail and Marine Diesel Fuel |
|---------|----------------------|--------------------------------|------------------------------|--------------------------------|
| 500 | Production or Import | Since 1998 | June 1, 2007 | June 1, 2007 |
| 500 | Sales | Since 1998 | October 1, 2007 ² | October 1, 2007 ² |
| 45 | Production or Import | June 1, 2006 | June 1, 2010 | June 1, 2012 |
| 15 | Sales | September 1, 2006 ¹ | October 1, 2010 ³ | N/A |

¹ September 1, 2007 in the Northern Supply Area

G.9 Are there sulphur limits for diesel fuel for off-road, rail or marine use prior to 2007?

² December 1, 2008 in the Northern Supply Area

³ December 1, 2011 in the Northern Supply Area

No. Limits for those fuels take effect in 2007. The regulations do however require reporting on diesel fuel for these uses.

Note also that there may be provincial and or municipal regulations that set limits for sulphur in these fuels. In addition, there are commercial standards for these fuels set by the Canadian General Standards Board that may include sulphur levels (available from http://www.pwgsc.gc.ca/cgsb/)

G.10 I only import or produce diesel fuel that is not for use in on- or off-road vehicles, rail or marine applications. Do the regulations apply to me?

Yes, while the sulphur **limits** apply only to diesel fuel for those uses, you are required to submit schedule 2 (Identification Information) and to report as per Section 5. There are also record keeping requirements as per Section 6.

G.11 Does EC plan to regulate diesel fuel for use in stationary facilities?

In June 2005, the U.S. EPA proposed new emission standards for stationary diesel internal combustion engines. This proposed rule would limit the amount of sulphur in the diesel fuel used in those engines.

http://www.epa.gov/ttnatw01/nsps/cinsps/cinspspg.html

Environment Canada has a general policy of alignment with U.S EPA fuel quality requirements. Therefore, if the U.S. EPA regulates requirements for stationary diesel fuel, EC would consider developing similar standards.

It should be noted that diesel engines designed for use in off-road, rail and marine applications may also be used for stationary applications. Such engines fall under the regulations' definition of "off-road engine".

G.12 If I only buy diesel fuel, but do not refine or import myself, what requirements do the regulations require me to meet?

If you buy diesel fuel from others and do not produce or import it, then the regulations only apply to you if you sell the diesel fuel. Refer to G.6 for a summary of the sales limits.

G.13 How do these regulations relate to the federal Fuels Information Regulations No. 1?

The federal *Fuels Information Regulations, No. 1* require that refiners and importers of fuels report annually on the average levels of sulphur in all liquid fuels, including

diesel fuel, for each quarter of the year. They also require one-time notification of any changes in the use of additives in liquid fuels. The *Fuels Information Regulations No. 1* do not limit the sulphur concentration in fuels. Those regulations are separate from the *Sulphur in Diesel Fuel Regulations*, which have both reporting requirements and limits on sulphur concentration in diesel fuel for use in on-road vehicles. Both regulations must be complied with.

G.14 How do these regulations relate to the federal Diesel Fuels Regulations?

The federal *Sulphur in Diesel Fuel Regulations* revoked and replaced the federal *Diesel Fuel Regulations* effective January 1, 2003.

G.15 How do these regulations relate to provincial diesel fuel regulations?

Some provinces require that the Canadian General Standards Board's (CGSB) standard diesel fuel be met. Both provincial and federal regulations must be complied with.

G.16 Do the regulations include labeling requirements at the pump for diesel fuel that is sold?

No.

G.17 The "Minister" is referred to throughout the Regulation. Who is the "Minister"?

The "Minister" is the federal Minister of Environment. Note that where the regulations require information to be submitted to the Minister, it should be sent to the Regional Director of the applicable regional office of Environment Canada, who acts on behalf of the Minister in this regard. The addresses of these offices are provided in Appendix A.

G.18 How do these regulations relate to the On-Road Vehicle and Engine Emission Regulations?

The Sulphur in Diesel Fuel Regulations limit sulphur in diesel fuel to the required level that will enable the efficient operation of advanced exhaust emission control technologies needed to comply with the new emission standards set out in those regulations.

(http://www.ec.gc.ca/CEPARegistry/regulations/detailReg.cfm?intReg=65)

G.19 How do these regulations relate to the Off-Road Compression-Ignition Engine Emission Regulations?

The Sulphur in Diesel Fuel Regulations limit sulphur in diesel fuel to a level that will enable the efficient operation of advanced exhaust emission control technologies needed to comply with the new emission standards set out in the next phase of those regulations.

(http://www.ec.gc.ca/CEPARegistry/regulations/detailReg.cfm?intReg=88)

The next phase of those regulations will align with the Tier 4 standards as described in the U.S. EPA -nonroad rule

G.20 How do the Sulphur in Diesel Fuel Regulations relate to the Off-Road Small Spark-Ignition Engine Emission Regulations?

http://www.ec.gc.ca/CEPARegistry/regulations/detailReg.cfm?intReg=81

Those regulations do not deal with diesel-powered engines. Refer to the *Sulphur in Gasoline Regulations*

http://www.ec.gc.ca/CEPARegistry/regulations/detailReg.cfm?intReg=18 and the Benzene in Gasoline Regulations

<u>http://www.ec.gc.ca/CEPARegistry/regulations/detailReg.cfm?intReg=1</u> for regulations on gasoline.

G.21 What are the important dates in the regulations?

January 1, 2004

A list of important dates in the regulations is presented below:

IMPORTANT DATES IN THE SULPHUR IN DIESEL FUEL REGULATIONS

| January 1, 2003 | Sulphur in Diesel Fuel Regulations (SOR/2002-253) come into force and the Diesel Fuel Regulations (SOR/97-110) are repealed. |
|-----------------|--|
| | Limit for sulphur in diesel fuel for use in on-road vehicles does <u>not</u> change. |
| | Some changes in administrative provisions (eg. reporting, record keeping). |
| March 2, 2003 | Every person who produces or imports diesel fuel must submit registration information as set out in Schedule 2 of the regulations. |
| May 15, 2003 | Every person who produces or imports diesel fuel must submit first quarterly report under the new regulations providing the information prescribed by subsection 5(1). Future reports are due no later than 45 days after the end of each quarter. |

Method for reporting concentration of sulphur in diesel is ASTM D 5453-00

Reference method for measuring the concentration of sulphur in diesel

or an equivalent method if the conditions of 5(2)(f) are met.

changes from CAN/CGSB-3.0 No. 16.0-95 to ASTM D 5453-00.

| October 19, 2005 | The Regulations Amending the Sulphur in Diesel Fuel Regulations (SOR/2005-305) are published in Part II of the Canada Gazette. |
|-------------------|---|
| January 1, 2006 | The Regulations Amending the Sulphur in Diesel Fuel Regulations (SOR/2005-305) come into force. |
| March 2, 2006 | Every person who produces or imports diesel fuel must submit updated registration information as set out in Schedule 2 of the Amending Regulations. |
| June 1, 2006 | 15 mg/kg limit for concentration of sulphur in diesel fuel for use in on-road vehicles comes into effect for <u>production and imports</u> . |
| September 1, 2006 | 15 mg/kg limit for concentration of sulphur in diesel fuel for use in on-road vehicles comes into effect for <u>sales and offers to sell</u> (except in northern supply area). (Note: refer also to question 3.13 regarding possible changes to this date.) |
| June 1, 2007 | 500 mg/kg limit for concentration of sulphur in diesel fuel for use in offroad, rail and marine diesel engines comes into effect for <u>production and imports</u> . |
| September 1, 2007 | 15 mg/kg limit for concentration of sulphur in diesel fuel for use in on-road vehicles comes into effect for sales and offers to sell in the northern supply area. |
| October 1, 2007 | 500 mg/kg limit for concentration of sulphur in diesel fuel for use in offroad, rail and marine diesel engines comes into effect for <u>sales and offers</u> to sell (except in northern supply area). |
| December 1, 2008 | 500 mg/kg limit for concentration of sulphur in diesel fuel for use in offroad, rail and marine diesel engines comes into effect for <u>sales and offers</u> to sell in the northern supply area. |
| June 1, 2010 | 15 mg/kg limit for concentration of sulphur in diesel fuel for use in off-road engines comes into effect for <u>production and imports</u> . |
| October 1, 2010 | 15 mg/kg limit for concentration of sulphur in diesel fuel for use in off-road engines comes into effect for sales and offers to sell (except in northern supply area). |
| December 1, 2011 | 15 mg/kg limit for concentration of sulphur in diesel fuel for use in off-road engines comes into effect for sales and offers to sell in the northern supply area. |
| June 1, 2012 | 15 mg/kg limit for concentration of sulphur in diesel fuel for use in rail and marine diesel engines comes into effect for <u>production and imports</u> . |

QUESTIONS ON SECTIONS OF THE REGULATIONS

Section 1: INTERPRETATION

1.1 What is the "northern supply area"?

The regulations use the term "northern supply area" to denote some remote northern locations of Canada that have a later implementation date for the 15 mg/kg limit that applies to sales and offers to sell. Appendix B of this Guidance Document includes a map showing the northern supply area. The area includes: all of Nunavut, most of the Northwest Territories and some of the northern Yukon; a 50 km strip of land along the Hudson Bay and James Bay coast in northeast Manitoba and northern Ontario; northern Quebec, ,and all of Labrador. The area excludes primary roads in the North.

1.2 Why do the regulations include a definition of "northern supply area"?

Generally, it is difficult to supply these northern locations, especially in the winter. Fuel shipments to these areas take place from mid-May to September. Refuelling facilities in these areas are generally slow to turnover their diesel fuel stock. For these reasons, the regulations provide for a later implementation date for the 15 mg/kg sulphur concentration limit on sales of and offers to sell diesel fuel in these areas.

1.3 How was the region of the "northern supply area" arrived at?

The northern supply area includes remote northern regions of Canada that are supplied with fuel by barge. In defining this area, Environment Canada consulted with stakeholders including the Canadian General Standards Board (CGSB), Natural Resources Canada (NRCan), Industry Canada, Canadian Transportation Agency, Canadian Petroleum Products Institute (CPPI), Engine Manufacturers Association, Northern Transportation Company Limited, Sunoco, Imperial Oil, Shell, Friends of the Earth, the governments of Yukon, Northwest Territories, Nunavut, Quebec and Newfoundland, and the Cree Regional Authority.

1.4 Why is the definition of "diesel fuel" in the Sulphur in Diesel Regulations different from the CGSB definition?

CGSB defines diesel fuel as having a lower end boiling range of 150 °C. The Sulphur in Diesel Fuel Regulations have a modified definition with a lower end

boiling range of 130 °C in order to encompass a broader range of distillate. The definition in the regulation was recommended by CPPI.

The definition of diesel fuel in the regulation also includes biodiesel fuel and blends of biodiesel fuel and diesel fuel. Biodiesel fuel is defined as "a fuel that is composed of or derived from plant or animal oils or plant or animal fats and is intended to be used in diesel engines".

1.5 Why was the definition of "diesel fuel" changed when the regulations were amended in October 2005

Given the increasing use of biodiesel in Canada, the definition was changed to include biodiesel and blends of biodiesel.

A definition of Biodiesel was also added to the regulations.

" biodiesel fuel" means a fuel that is composed of or derived from plant or animal oils or plant or animal fats and is intended to be used in diesel engines.

Note that the definition of biodiesel under these regulations is broader than industry standards such as those from the Canadian General Standards Board (CGSB) and ASTM International.

1.6 Biodiesel is a clean fuel with naturally low sulphur levels. Why is it included in the regulations?

Though biodiesel is generally considered a clean fuel, it may have levels of sulphur greater than the regulated limit of 15 mg/kg. The source of the sulphur could be from production processes, inherent in the feedstock or from contamination during distribution.

Diesel fuel with sulphur less than 15 mg/kg is required for effective operation of advanced exhaust emission control technologies needed to comply with the new diesel vehicle and engine emission standards that are coming into effect, regardless of whether the fuel is produced from biomass or crude petroleum.

Therefore the regulations encompass biodiesel as well as conventionally produced diesel fuel.

Section 2: APPLICATION

2.1 Do the regulations apply to all diesel fuel?

The limits in the regulations apply to diesel fuel for use in on-road vehicles, off-road, vessel (marine) and locomotive (rail) engines. Diesel fuel that is not for use in such engines is not required to meet the compositional requirements of the regulations but is subject to reporting and record keeping requirements.

The regulations do not apply to:

<u>Diesel Fuel in Transit</u>: 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;

<u>Diesel Fuel for Export</u>: The fuel is produced or sold for export and is accompanied by written evidence establishing that the fuel will be exported;

<u>Diesel Fuel to be further processed</u>: The fuel being imported is for use in on-road vehicles, off-road engines, vessel engines or locomotive engines, its concentration exceeds the sulphur limit and the fuel is accompanied by written evidence establishing that it will meet the requirements of the regulations before the fuel is used or sold:

Persons seeking to avail themselves of these exemptions have to ensure that the diesel fuel is accompanied by written evidence establishing that it meets the defined criteria.

The regulations also do not apply to:

<u>Diesel fuel in tank of vehicle</u>: Diesel fuel in a fuel tank that is connected to the engine of a conveyance that is used for transportation by water, land or air.

2.2 I produce / import / sell diesel fuel for use in stationary facilities. What are the requirements under the regulations for this fuel?

Presently, the *Sulphur in Diesel Fuel Regulations* do not have sulphur limits that apply to diesel fuel for use in stationary facilities. There, however may be municipal and/or provincial regulations that limit sulphur in such diesel fuel. It should be noted that diesel engines designed for off-road, rail and marine applications may also be used for stationary applications. Such engines fall under the regulations' definition of "off-road engine".

The regulations do have reporting and record-keeping requirements for all producers and importers of diesel fuel, including stationary diesel fuel. Refer to

Section 5 (Reports) and 6 (Records) for further details on these requirements. In June 2005, the U.S. EPA proposed a rule addressing emission controls for stationary diesel internal combustion engines. This proposed rule contains fuel requirements that limit the amount of sulphur in the diesel fuel used to run these engines.

http://www.epa.gov/ttnatw01/nsps/cinsps/cinspspg.html

2.3 I import or produce diesel fuel for scientific research. Is this fuel exempt from the requirements of the regulations?

No, all requirements of the regulations apply.

2.4 There are barrels of diesel fuel stored throughout northern Canada designated for emergency purposes. Do the regulations apply to such stores of diesel fuel?

There are no exemptions in the regulation for stored diesel fuel. Diesel fuel that is sold is subject to the limits summarized in 3.10.

In developing the regulations, Environment Canada consulted the provinces and territories that might have strategic stores of diesel fuel on whether special provisions were required for this fuel. Environment Canada was advised that no special provisions were required.

As such volumes of diesel fuel have been stored for emergency purposes, it would be desirable that they meet the lowest sulphur limit, 15 mg/kg maximum, in order to be compatible with any engine that could use the fuel.

2.5 Paragraphs 2 (a), (b) and (c) stipulate that the regulations do not apply under certain circumstances, provided that the fuel is "accompanied by written evidence". What is meant by "written evidence"?

The circumstances set out in paragraphs 2 (a), (b) and (c) are copied from subsection 139(2) of CEPA 1999. Persons seeking to avail themselves of these exemptions have to ensure that the diesel fuel is accompanied by written evidence establishing that it meets the defined criteria. CEPA 1999 does not define the requirements for written evidence. If there was an issue around the sufficiency of written evidence during a prosecution under the regulations, it would be decided by the court.

2.6 What requirements apply to diesel fuel in transit between refineries in Canada and intended to be further processed, prior to being sold or transferred?

The regulations do not differentiate diesel fuel in transit between refineries in Canada from other diesel fuel. Such fuel is therefore subject to all of the requirements of the regulations.

Section 3: MAXIMUM CONCENTRATION OF SULPHUR

3.1 What are the limits for sulphur?

The sulphur limits are summarized below.

| Sulphur | Limit (mg/kg) | On-Road Diesel Fuel | Off-Road Diesel Fuel | Rail and Marine Diesel Fuel |
|---------|-----------------------|--------------------------------|------------------------------|--------------------------------|
| 500 | Production and Import | Since 1998 | June 1, 2007 | June 1, 2007 |
| | Sales | Since 1998 | October 1, 2007 ² | October 1, 2007 ² |
| 15 | Production and Import | June 1, 2006 | June 1, 2010 | June 1, 2012 |
| | Sales | September 1, 2006 ¹ | October 1, 2010 ³ | N/A |

¹ September 1, 2007 in the Northern Supply Area

3.2 What diesel fuel is not subject to the compositional requirements of the regulations?

Diesel fuel that is not for use in on-road vehicles, off-road engines, locomotive and vessel diesel engines is not required to meet the compositional requirements of the regulations.

3.3 What is diesel fuel for use in "on-road vehicles"?

Diesel fuel "for use in on-road vehicles" is any diesel fuel that may be used in an on-road vehicle. Under the regulations, an on-road vehicle is defined as a self-propelled vehicle designed for transporting persons, property, material or permanently or temporarily affixed apparatus on a common or public road, street, avenue, parkway or highway.

3.4 What is diesel fuel "for use in off-road engines"?

Diesel fuel "for use in off-road engines" is any diesel fuel that may be used in a off-road engines. The definition for off-road engine in the regulations comes from the Off-Road Compression-Ignition Engine Emission Regulations

http://www.ec.gc.ca/CEPARegistry/regulations/detailReg.cfm?intReg=88

"Off-road engine" is defined by both the regulations as "a diesel engine, except for aircraft engines, locomotive engines, vessel engines and engines used to propel on-road vehicles, that is used or designed to be used

² December 1, 2008 in the Northern Supply Area

³ December 1, 2011 in the Northern Supply Area

- (a) by itself and that is designed and intended to be moved from one location of use to another; or
- (b) in or on a machine that
- (i) is designed and intended to be moved from one location of use to another,
- (ii) is self-propelled,
- (iii) serves a dual purpose by both propelling itself and performing another function, or
- (iv) is designed to be propelled while performing its function.

These engines would be used in equipment such as farm tractors and other agriculture equipment, mining equipment, forestry equipment, etc.

Agricultural equipment such as farm tractors, combines, and other harvesting equipment would be considered to have off-road engines. Construction equipment such as bulldozers and backhoes would also be considered to have off-road engines. Specialty equipment used in forestry, mining would also be considered to have off-road engines.

3.5 Are amphibious vehicles on-road, off-road or marine vehicles/equipment?

The regulations define "on-road vehicle" as a self-propelled vehicle designed for transporting persons, property, material or permanently or temporarily affixed apparatus on a common or public road, street, avenue, parkway or highway.

The regulations define "off-road engine" as a diesel engine, except for aircraft engines, locomotive engines, vessel engines and engines used to propel on-road vehicles, that is used or designed to be used

- (a) by itself and that is designed and intended to be moved from one location of use to another; or
- (b) in or on a machine that
- (i) is designed and intended to be moved from one location of use to another,
- (ii) is self-propelled,
- (iii) serves a dual purpose by both propelling itself and performing another function, or
- (iv) is designed to be propelled while performing its function. (*moteur hors route*)

If an amphibious vehicle is designed for use on a road, it would be an on-road vehicle.

3.6 What is "diesel fuel for use in vessel engines"?

A vessel engine is defined in the regulations as "a diesel engine that is installed on a vessel to move or propel the vessel through the water or to direct its movement or to provide auxiliary power." A vessel is defined in the regulations as "a boat, ship or craft that is designed, used or capable of being used for navigation in, on or through water but is not designed for self-propulsion out of water".

Thus all diesel engines on a boat, ship or marine craft would be considered vessel engines.

With respect to the definition of diesel fuel, diesel fuel is defined in the regulations as "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 biodiesel fuel or as a blend of biodiesel fuel and diesel fuel."

Marine fuels that start boiling below 400 °C but have an end point above this temperature would not be considered as diesel fuel under the regulations unless they were sold or represented as diesel fuel. Such fuels would fall under the categories of other marine fuels such as bunker, marine fuel oil, etc. and are not regulated under these regulations.

3.7 How can I tell if the fuel I use in my vessel (marine) diesel engine falls under the definition of diesel fuel for use in vessel engines?

Vessel engines can burn a wide variety of fuels from diesel fuel up to a heavy bunker, with grades in-between. .

The Regulations define diesel fuel as "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 biodiesel fuel or as a blend of biodiesel fuel and diesel fuel."

Bunker and intermediate marine fuels would normally have a boiling end point above 400 °C. Such fuels would not be considered as diesel fuel under the regulations unless they were sold or represented as diesel fuel.

3.8 What is "diesel fuel for use in locomotive engines"?

A locomotive engine is defined in the regulations as "a diesel engine installed in a locomotive to move or propel it or to provide auxiliary power". A locomotive is defined as "a self-propelled vehicle that is designed to run on rails and for moving or propelling railway cars that are designed to carry freight or other equipment or passengers, but that itself is not designed to carry freight or other equipment or passengers (other than those operating the locomotive), but does not include equipment that is designed to run on both roads and rails, specialized railroad equipment for maintenance, construction, post-accident recovery of equipment and repairs or vehicles propelled by engines with rated horsepower of less than 750 kW."

Therefore all diesel engines on a locomotive would be considered a locomotive engine.

With respect to the definition of diesel fuel, diesel fuel is defined in the regulations as "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 biodiesel fuel or as a blend of biodiesel fuel and diesel fuel."

Note that under the regulations, light fuel oil for use in a locomotive engine is considered as diesel fuel for use in locomotive engines.

3.9 I live in a remote northern community where there are no paved roads. What are the requirements of the regulations regarding fuel sold for use in my diesel pick-up truck?

Under the regulations, an on-road vehicle is defined "as a self-propelled vehicle designed for transporting persons, property, material or permanently or temporarily affixed apparatus on a common or public road, street, avenue, parkway or highway". A pick-up truck is therefore an on-road vehicle under the regulations.

The sulphur limits for diesel fuel sold or offered for sale for on-road vehicle use are as follows:

- For all of Canada except the Northern Supply Area (an area defined in the regulation):
 - o 500 mg/kg until August 31, 2006; and
 - o 15 mg/kg after August 31, 2006, and
- for the Northern Supply Area:
 - o 500 mg/kg until August 31, 2007; and
 - 15 mg/kg after August 31, 2007.
- 3.10 Why is there a 500 mg/kg limit in place until 2006 for on-road vehicles?

The 500 mg/kg limit has been in place since 1998. It was introduced largely because engines for model-year 1997 and later diesel-fueled vehicles at that time could not operate properly with higher-sulphur diesel fuel

3.11 How was the 15 mg/kg sulphur limit arrived at?

Lower sulphur in diesel fuel is required to enable the efficient operation of advanced exhaust emission control technologies needed to comply with the new diesel vehicle and engine emission standards that are coming into effect. The U.S. EPA determined that a maximum sulphur level of 15 mg/kg was required to enable the efficient operation of advanced technologies needed to comply with its new vehicle and engine emission standards. Canada requires the same quality of fuels as the same vehicles and engines are marketed in Canada.

Sulphur in diesel fuel is currently regulated in other jurisdictions. Many countries are bringing the sulphur in diesel fuels down below 15 mg/kg. In December 2000, the U.S. Environmental Protection Agency (EPA) adopted regulations that reduce sulphur in on-road applications down to 15 mg/kg³ throughout the U.S. starting June 2006. In June 2004, the U.S. EPA adopted further regulations to reduce sulphur in off-road, rail and marine applications down to 500 mg/kg and finally 15 mg/kg starting June 2007. In May 2001, the European Union proposed to introduce "zero" sulphur (defined as less than 10 mg/kg sulphur) on-road diesel fuel commencing January 1, 2005.

The *Sulphur in Diesel Fuel Regulations* align Canadian requirements for the allowable level of sulphur in diesel fuels for on-road vehicles, off-road engines, locomotive engines and vessel engines with those of the U.S.

3.12 Why does the 15 mg/kg limit for sales come into effect after the limit for production and imports?

It takes time for "cleaner diesel fuel" to flow through the distribution system. The 15 mg/kg cap concentration of sulphur in diesel comes into force three months after the cap on production and importation. This is to allow diesel fuel produced or imported in accordance with previous regulatory requirements to work its way through the distribution system to the consumer.

3.13 Will the Regulations be amended to reflect the changes that the U.S. EPA has proposed to ease the 2006 transition to 15 mg/kg on-road diesel fuel (i.e a 22 mg/kg sulphur sales limit from September 1, 2006 to October 15, 2006)?

 $^{^{3}}$ 100 mg/kg = 100 parts per million (ppm) = 0.0100% by weight.

A discussion paper looking at a similar Canadian transition period for 15 mg/kg on-road sulphur diesel fuel was published on August 23rd, 2005 http://www.ec.gc.ca/CEPARegistry/documents/regs/sdfr_amend/p_amend.cfm.

Monitor the web-page for the *Sulphur in Diesel Fuel Regulation* in the CEPA Registry for the status of these potential Amendments. http://www.ec.gc.ca/CEPARegistry/regulations/detailReg.cfm?intReg=63

3.14 Why is there a longer delay before the 15 mg/kg sales sulphur limit comes into effect in the northern supply area?

Generally, it is difficult to supply remote northern locations, especially in the winter. Fuel shipments to these areas take place from mid-May to September. Refueling facilities in these areas are generally slow to turnover their diesel fuel stock. For these reasons, the regulations include a later implementation date with respect to the sulphur concentration on sales of diesel in these areas.

3.15 Why are the limits maxima, rather than averages like under the Benzene in Gasoline and Sulphur in Gasoline Regulations?

The goal of the regulations is to ensure that the level of sulphur in diesel fuel used in on-road vehicles in Canada will not impede the effective operation of advanced emission control technologies. This is accomplished by reducing the maximum allowable limit for sulphur in on-road diesel fuel to 500 / 15 mg/kg of fuel. Sulphur concentrations above those levels can have adverse effects on the performance of advance emission control technology.

Average limits would also increase the complexity of a regulation, requiring compliance plans and annual audits.

3.16 I am a producer or importer of diesel fuel. How do I know if the fuel I produce or import is for a certain use?

You may not know the intended use of the diesel fuel. However, if the diesel fuel exceeds the concentration referred to in Section 3 of the regulations for the respective periods, an appropriate record must be made and retained for each batch that is produced or imported, as per Section 6 of the Regulation. A summary of the required wording to be recorded is provided in the table below:

| Sulphur Concentration | Production/Import Dates | Record | |
|-----------------------|---|--|--|
| exceeding 500 mg/kg | until May 31, 2006 | "not suitable for use in on-road vehicles" | |
| exceeding 500 mg/kg | from June 1, 2007 until May 31, 2012 | "not suitable for use in on-road vehicles, off-road engines, locomotive engines or vessel engines" | |

| exceeding 15 mg/kg and less than 500 mg/kg | June 1, 2006 until May 31, 2010 | "not suitable for use in on-road vehicles" |
|--|---|--|
| exceeding 15 mg/kg and less than 500 mg/kg | from June 1, 2010 until May 31, 2012 | "not suitable for use in on-road vehicles or off- road engines" |
| exceeding 15 mg/kg | after May 31, 2012 | "not suitable for use in on-road vehicles, off-road engines, locomotive engines or vessel engines" |

3.17 I am a seller of diesel fuel. How do I know if the fuel I sell is used for its intended use?

You may not know the intended use of the diesel fuel. However, if diesel fuel has a sulphur concentration exceeding the limits for sales set out in Section 3, , then it cannot be sold for the respective uses. The sales limits are summarized below.

| Sulphur limit | On-Road Diesel Fue | Off-Road Diesel Fuel | Rail and Marine Diesel Fuel |
|------------------|--------------------------------|------------------------------|--------------------------------|
| 500 | Since 1998 | October 1, 2007 ² | October 1, 2007 ² |
| 15 | September 1, 2006 ¹ | October 1, 2010 ³ | N/A |

¹ September 1, 2007 in the Northern Supply Area

3.18 Because of contamination or mixing during distribution, diesel fuel that was produced or imported with a sulphur concentration less than 15 mg/kg may end up having a sulphur concentration greater than 15 mg/kg. Can I sell this diesel fuel?

If the diesel fuel does not meet the regulatory requirement of 15 mg/kg or 500 mg/kg sulphur maximums, then it cannot be sold for use in the respective vehicles or engine categories. Refer to question 3.10 for a summary of the sales limits for various uses of diesel fuel.

3.19 A batch of diesel fuel for on-road use with a sulphur level < 15 mg/kg was dispatched from a refinery. The batch picked up some sulphur during distribution and now has a sulphur level > 15 mg/kg. I plan to blend this off-specification diesel fuel with other diesel fuel at my terminal in order to meet the 15 mg/kg sales limit. Would this blending be production of on-road diesel fuel under the regulation? Do I have to report the information set out in Schedule 1 of the Regulations for this blending?

² December 1, 2008 in the Northern Supply Area

³ December 1, 2011 in the Northern Supply Area

No to both questions. The blending operation described did not result in the production of diesel fuel.

3.20 What units are used for compliance purposes?

The units for the limits for the maximum concentration of sulphur are milligrams of sulphur per kilogram of diesel fuel, or mg/kg.

3.21 Why were the units for the limits been changed from 0.05% by mass in the Diesel Fuel Regulations to 500 mg/kg in the 2002 regulations?

Mg/kg are the units used in the test method ATSM D5453-00 which is specified in the new regulations. These units are also the standard for other fuels regulations and are metric.

3.22 In the U.S., there is a "compliance margin" that takes into consideration the variability of test procedures, when assessing compliance with the fuel. What is the acceptable compliance margin under the regulations for the 500 mg/kg limit and the 15 mg/kg limit?

There is <u>no</u> compliance margin included in the *Sulphur in Diesel Fuel Regulations*.

3.23 I sell on-road diesel fuel at a retail outlet. I have no control over the sulphur concentration of diesel fuel that is delivered to me. Am I in contravention of the regulations if I sell diesel fuel with a sulphur level > 15 mg/kg?

Yes, if you sold this fuel for on-road use after August 31, 2006, except in the Northern Supply Area where this limit comes into effect September 1, 2007,

3.24 I sell fuels for marine use that are a blend of diesel fuel and a heavier fuel oil. Does this fuel fall under these regulations?

If the fuel meets the definition of Diesel Fuel under Section 1, Interpretation, in the Regulations, then yes. The key component to note is the boiling point of the fuel. Under the regulation, diesel fuel is defined as a fuel that boils between 130 °C and 400 °C. If the fuel begins to boil below 400 °C and continues to boil above 400 °C, then this fuel would not be considered diesel fuel under the regulations.

Note, that these regulations are not intended to address bunker fuel or Marine Fuel Oils used in large marine diesel engines.

3.25 I am a fuel distributor and deliver diesel fuel to retailers. Is there anything new I need to do to my truck to distribute the 15 mg/kg sulphur diesel fuel? If so, where can I find information on the updated operational procedures?

The Canadian Petroleum Products Institute (CPPI) has issued a handbook titled "Recommended Management Practices, Ultra Low Sulphur Diesel (ULSD) Distribution System", to aide distributors of 15 mg/kg sulphur diesel fuel. Please contact CPPI for a copy of this handbook:

http://www.cppi.ca/cppi.html

3.26. I am a retailer of diesel fuel. Are there any new special requirements or procedures for selling the 15 mg/kg diesel fuel? Will I need to flush out my diesel fuel storage tanks?

The Canadian Petroleum Products Institute (CPPI) has issued a handbook titled "Recommended Management Practices, Ultra Low Sulphur Diesel (ULSD) Distribution System", to aide distributors of 15 mg/kg sulphur diesel fuel. Please contact CPPI for a copy of this handbook:

http://www.cppi.ca/cppi.html

Section 4: ANALYSIS

4.1 Why are specific test methods stipulated in the Sulphur in Diesel Fuel Regulations?

Test methods are specified in order to provide certainty and consistency in the enforcement of the regulations.

4.2 What happens if the test method is amended?

Any amendment to a test method is automatically incorporated into the regulations (refer to subsection 1(2)).

4.3 Why was the test method changed from CAN/CGSB-3.0 No. 16.0-95 to ASTM D 5453-00 after December 31, 2003?

ASTM D 5453-00 has increased accuracy for lower sulphur levels. This was recommended to Environment Canada by the CGSB.

4.4 How do I get copies of the test method?

The method can be purchased from the American Society for Testing and Materials (ASTM):

ASTM International 100 Barr Harbor Drive PO Box C700 West Conshohocken, Pennsylvania USA 19428-2959

www.astm.org

Section 5: REPORTS

<u>Identification Information (subsections 5(4) and 5(5))</u>

5.1 Who is required to submit information under subsection 5(4)?

Every person who produces or imports diesel fuel.

5.2 When do I submit the information under subsection 5(4)?

If you produce or import diesel fuel, you were required to submit the information within 60 days after the amended regulations come into force, (i.e. by March 2nd, 2006). If you commence to produce or import diesel fuel after that date, you are required to submit the information 15 days before you produce or import diesel fuel for the first time.

5.3 How do I submit the information?

You submit the information set out in Schedule 2 of the *Sulphur in Diesel Fuel Regulations* to the applicable regional office of Environment Canada. The addresses of these offices are provided in Appendix A of this guidance document. You must provide information on all of your production facilities and all usual points of importation.

5.4 Will Environment Canada issue me a registration or identification number after I submit the information required in Schedule 2?

Environment Canada does not plan to issue such numbers under the *Sulphur in Diesel Fuel Regulations*.

5.5 What am I required to do if there are changes to the information that I submitted?

You must notify the Minister in writing of any changes in the information that you have provided in Schedule 2, no more than five days after the change. The only exception to that requirement is any change in the information on your typical annual volumes. If typical annual volume changes, no update is required.

Submit changes to the applicable regional office of Environment Canada. The addresses of these offices are provided in Appendix A.

5.6 Why are producers and importers required to submit identification information?

The purpose of requiring the submission of identifying information to Environment Canada is to aid in the administration of the regulations. It allows Environment Canada to identify persons who produce or import diesel fuel and provides basic information needed to administer the regulations.

5.7 Should I include under Schedule 2 of the Regulations (registration information) ports of entry that are not my normal import locations but which are points where I might someday import?

Unless these locations become your "<u>usual</u> port of entry", there is no need to submit the location in your Schedule 2. Note you have the option to update the information in Schedule 2 no more than five days after a change as per subsection 5(5) of the Regulations.

5.8 What is a usual port of entry in Canada?

The "usual port of entry in Canada" can be either a land based border crossing or the first harbour on the Canadian Coast where the imported fuel is usually offloaded. Emergency alternative ports of entry would not be considered as a "usual port of entry".

5.9 I have a terminal at which batches of diesel fuel with different sulphur levels (eg. < 15 mg/kg and > 15 mg/kg) may be mixed together. Do I need to register the terminal as "a facility producing diesel fuel"?

No. The blending operation described does not result in the production of diesel fuel.

5.10 Do I have to use the Schedule 2 form as provided in the Regulations or the Compliance Promotion Package?

The *Sulphur in Diesel Fuel Regulations* do not specify what forms can be used. They require that the regulatee submit the information listed in Schedule 2.

Regular Reports (Quarterly until 2015 then Annual)

5.11 I produce or import diesel fuel. What information do the regulations require me to report?

You are required to submit the information set out in Schedule 1 of the Sulphur in Diesel Fuel Regulations.

5.12 How often and when do I need to report?

Quarterly until 2015; the frequency changes to annual starting January 1, 2015.

5.13 What units should be used for reporting requirements?

Subsection 6(1) of Schedule 1 of the regulations specifies that sulphur concentration is to be reported as mg/kg.

5.14 I only sell diesel fuel, what do I report under the regulations?

If you are not a producer or importer of diesel fuel, you are not required to report under the regulations.

5.15 When must the regular reports be submitted?

Quarterly reports are to be submitted within 45 days after the end of each calendar quarter until 2015. Starting January 1, 2015, these reports become annual and are required to be submitted 45 days after the end of the calendar year.

The last quarterly report would be due February 14th, 2015 covering the fourth quarter, 2014. The next report would cover the calendar year 2015 and would be due February 14th, 2016.

5.16 For which facilities do I submit the regular report?

The Quarterly (Annual starting 2015) Report of Sulphur Concentration in Diesel Fuel (Schedule 1) must be submitted separately for each facility at which a person produces diesel fuel and for each province or territory into which a person imports diesel fuel.

5.17 Are reports required for facilities in the distribution network that may occasionally blend diesel with other distillate components?

Generally no. Paragraph 5 (1) (b) of the regulations requires you to submit a report for each facility at which you produce (or import) diesel fuel. The mixing of batches of diesel fuel does not produce diesel fuel.

If a non-diesel fuel middle distillate were blended with diesel fuel to produce a batch of diesel fuel, then the resulting volume of diesel fuel should be reported under the regulations as diesel fuel that has been produced at the facility

5.18 At my terminal I blend a batch of diesel fuel that has a sulphur level > 15 mg/kg with another batch of diesel fuel and the resulting product has a sulphur level < 15 mg/kg. Am I required to report this activity under subsection 5(1) and to make records under section 6?

No, the blending operation described did not result in the production of diesel fuel.

5.19 At my refinery I blend a batch of diesel fuel that has a sulphur level > 15 mg/kg with another batch of diesel fuel and the resulting product has a sulphur level < 15 mg/kg. Am I required to report this activity under section 5(1) and to make records under section 6?

If either of the batches were produced at your refinery, then you should make records in respect of the resulting product and include it in your reports.

5.20 I reprocess used or virgin motor oil to create 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 (as per the definition of diesel fuel under Section 1, Interpretation, of the Regulations). Am I considered a producer of diesel fuel under the regulation?

Yes, the activity described is production of diesel fuel under the regulation.

5.21 I produce kerosene or light fuel oil at my refinery. After the product has left the refinery, I want to re-designate it and sell it as diesel fuel. How do I deal with this situation under the regulations?

The product that you produced at your refinery would normally be a fuel that can evaporate at atmospheric pressure and that boils within the range of 130°C to 400°C. The product is also for use in diesel engines (as per the definition of diesel fuel under Section 1, Interpretation, of the Regulations.) Therefore the product produced at your refinery is diesel fuel under the regulations.

The product is subject to the sulphur limits set out in section 3. Under section 6 records must be made in respect of diesel fuel; subsection 6(2) requires that a record be made prior to its dispatch of a batch of diesel fuel. Such volumes of diesel fuel must also be reported under subsection 5(1), Schedule 1 of the Regulations

5.22 I have multiple import points in a province or territory. Do I submit a regular report for each import point?

There is only one report required per province or territory of import.

5.23 To whom do I send the report?

Reports are to be submitted to the applicable regional office of Environment Canada. The addresses of these offices are provided in Appendix A.

5.24 Who is an authorized official?

"Authorized official" is defined in section 1 of the regulations. In respect of a corporation, an "authorized official" is an officer of the corporation who is authorized to act on its behalf. In respect to any other person (whether an individual, a commercial entity or a government body) the authorized official is the person authorized to act on behalf of the individual, commercial entity or government body.

5.25 Can an officer of a corporation delegate a senior official of the corporation to act on his/her behalf for the purposes of being an "authorized official"?

No. If the producer or importer is a corporation, the regulations require that an officer of the corporation sign the relevant forms.

5.26 Are the reports the same as those I submit under the Fuels Information Regulations, No. 1?

No. The reports under the *Fuels Information Regulations, No. 1* contain quarterly data on sulphur levels in a number of liquid fuels, including diesel fuel. Those reports are required to be submitted by January 31 of the following year.

5.27 Under the old Diesel Fuel Regulations, I could use the same forms that I used for submitting information under the Fuels Information Regulations, No. 1. Can I still use these forms under the Sulphur in Diesel Fuel Regulations?

The Sulphur in Diesel Fuel Regulations do not specify what forms can be used. They require that the regulatee submit the information listed in Schedule 1. This

information contains items not found in the current form for the quarterly reports under the *Fuels Information Regulations*, *No. 1*.

5.28 Do I have to use the Schedule 1 form as provided in the Regulations or the Compliance Promotion Package?

The *Sulphur in Diesel Fuel Regulations* do not specify what forms can be used. They require that the regulatee submit the information listed in Schedule 1.

5.29 If I do not produce or import diesel fuel during a reporting period, do I still have to submit a report?

No. However a courtesy nil report is welcome if this is an unusual occurrence, and will reduce calls from Environment Canada.

5.30 Why are regular reports required?

Environment Canada considers that a certain minimum amount of information is required to be reported for monitoring purposes. As the 15 mg/kg limit comes into effect this information is required quarterly. In 2015, once there has been a few years experience with most of the diesel fuel pool at the 15 mg/kg limit, the reporting frequency changes to annual in 2015.

5.31 Can I submit electronic copies for reporting purposes?

A report signed by an authorized official is required.

5.32 Where do I submit the reports to Environment Canada?

Reports are submitted to the applicable regional office of Environment Canada (addresses are listed in Appendix A).

5.33 The reporting requirements contain confidential business information. How will Environment Canada protect this information from disclosure?

Information that is submitted will be subject to the *Access to Information Act*, and the *Privacy* Act. In addition, section 313 of CEPA 1999 allows any person submitting information to the Minister of Environment to request that information be treated as confidential. The request for confidentiality must be made to the Minister in writing, and section 315 of the Act allows the Minister to over-ride that request in specific circumstances set out in that section of the Act.

5.34 If the information submitted under the reporting requirements of the regulations is used in reports or other publications by Environment Canada, will individual company data be aggregated regionally, to maintain data confidentiality?

Environment Canada considers information on volume of fuels produced or imported by a company to be confidential. Company reported information on fuel quality may be presented in public reports.

5.35 How will the information that is submitted under the reporting requirements be used?

The information will be used by Environment Canada to report on and monitor diesel fuel quality.

5.36 I import diesel fuel. Am I required to inform Environment Canada regarding such imports 12 hours in advance as is required under the Benzene in Gasoline Regulations?

No

5.37 I produce or import diesel fuel. Prior to the October 2005 amendments to the regulations, paragraph 5(1)(a) required me to report on diesel fuel that I sold in each province, Am I required to report sales information after January 1, 2006?

Only for the last quarter of 2005.

5.38 I produce or import diesel fuel. Do I have to report on provincial sales for 2005?

Yes

3.39 The October 2005 amendments to the Sulphur in Diesel Fuel Regulations introduce changes to Schedule 1 that take effect January 1, 2006. What do I report in 2006?

The last regular report under the pre October amendment Schedule 1 would cover the last quarter of 2005 (Q4/05) and would be due February 14, 2006. The first report under the revised Schedule 1 and per the October 2005 amendments would cover the first quarter of 2006 (Q1/06) and would be due May 15, 2006.

Alternative Test Methods

5.40 Subsection 5(3) states "... method referred to in paragraph (2)(b) is to be used for reporting purposes only and shall not be used for the purpose of determining compliance ...". What does this mean?

The method referred to in section *paragraph* 5(2)(b) may be used for reporting purposes. The test method specified in section 4 is used to determine compliance with the regulations. In the case of any conflict in the results obtained from the methods, the reference test method specified in section 4 will prevail.

5.41 Can I use an alternative test method to determine if diesel fuel that I produce, import or sell meets the sulphur limit?

No. The regulations specify that an alternative test, that is equivalent to the one stipulated in the regulations, may be used for reporting purposes only.

5.42 How do I apply to use an equivalent test method?

At least 60 days before the method is to be used, you must send to Environment Canada, by registered mail or courier, (i) a description of the proposed equivalent method, and (ii) evidence demonstrating that the proposed analysis method is "equivalent" to the method specified in Section 4 of the *Sulphur in Diesel Fuel Regulations*. The information should be sent to the applicable regional office of Environment Canada. The addresses of these offices are provided in Appendix A.

5.43 How do I demonstrate that the alternative method is equivalent to the one specified in Section 4 of the Sulphur in Diesel Fuel Regulations?

Methods must be validated as equivalent in accordance with ASTM D-4855-97 published by the American Society of Testing and Materials.

5.44 If equivalency of a test method has been demonstrated by another regulatee, may I use it?

A producer or importer of diesel fuel may use alternative analysis methods to meet reporting requirements, provided that it advises Environment Canada and submits evidence demonstrating equivalency at least 60 days before use of the method. Alternative test methods must be validated as equivalent under subparagraph 5(2)(f)(i).

Producers or importers of diesel fuel intending to use an alternative analysis method approved for use by another regulatee may reference the evidence provided by the other regulatee in demonstrating equivalency. The producer or importer of diesel fuel still must advise Environment Canada if it intends to use an alternative analysis method at least 60 days before use (subparagraph 5 (2)(f)(ii)).

- 5.45 Is a test method for measuring sulphur that has been approved for use under a U.S. fuel regulation automatically equivalent under section 5?
 - No. An alternative test method must be demonstrated to be equivalent under section 5(2)(f) in order to be used. See question 5.44.
- 5.46 Can I use an method for which equivalency has been demonstrated in accordance with the regulations under the Benzene In Gasoline Regulations?
 - You can only use a test method pursuant to paragraph 5(2)(f) of the *Sulphur in Diesel Fuel Regulations*, which requires that test methods be validated as equivalent and that you provide the Minister with the specified information.
- 5.47 Why do the regulations allow equivalent methods of analysis for sulphur content for reporting purposes?
 - The Sulphur in Diesel Fuel Regulations allow test methods that are validated as being equivalent to be used for reporting purposes. The regulations allow such methods to reduce administrative costs to industry associated with the regulations
- 5.48 Under what circumstances can Environment Canada reject an alternative method?
 - Environment Canada may reject the use of an alternative method for reporting purposes at any time if it is determined that the alternative method does not provide equivalent results to the applicable method. Environment Canada will notify the producer or importer of diesel fuel if a method is rejected.
- 5.49 Will Environment Canada issue a list of methods that have been demonstrated to be equivalent to the test method for reporting purposes?

Environment Canada maintains a list of test methods that have been validated as equivalent to the test method for reporting purposes identified in the regulations. This list is posted on:

http://www.ec.gc.ca/cleanair-airpur/CAOL/OGEB/fuels/reports/Equ_report_diesel/Equivalency_rep_diesel_e.cfm

5.50 Are there test methods for which equivalency has already been demonstrated in accordance with the regulations?

There are methods for which equivalency to the reference test method for reporting purposes has been demonstrated in accordance with the regulation. A list of these methods can be found on the Environment Canada web-site and

may be referred to in respect of evidence of equivalency.

Please note that subparagraph 5(2)(f)(ii) of the regulations requires that a producer or importer proposing to use an equivalent test method send Environment Canada at least 60 days before using the method a description of the method and evidence that it is equivalent.

http://www.ec.gc.ca/cleanair-airpur/Sulphur_in_Diesel_Fuel_Regulations-WS5B4D506F-1_En.htm

5.51 What are the test methods for which equivalency has already been demonstrated?

Refer to question 5.49

5.52 Can I just start using a test methods for which equivalency has been demonstrated?

Subparagraph 5(2)(f)(ii) of the regulations requires that a producer or importer proposing to use an equivalent test method send Environment Canada at least 60 days before using the method a description of the method and evidence that it is equivalent.

Note that an *alternative test method on the* list of these methods at Environment Canada web-site may not necessarily be valid in respect of all products. (E.g. methods may not be equivalent valid for biodiesel.)

Section 6: RECORDS

6.1 How long are records required to be kept under the Sulphur in Diesel Fuel Regulations?

Under the *Sulphur in Diesel Fuel Regulations*, records must be maintained for five years after they are made.

6.2 Why are producers / importers required to identify batches of diesel fuel differently based on sulphur levels?

Identification of batches by sulphur level is based on the regulated sulphur levels. . The regulation has requirements to make records and report in respect of three sulphur levels: <15 mg/kg; > 15 mg/kg and < 500 mg/kg; and >500 mg/kg.

6.3 What are the requirements to record sulphur levels and how do these change as the regulated limits change over time?

Every person who produces or imports diesel fuel must keep a record of each batch of diesel fuel produced or imported that indicates the volume of the batch and,

- a) until May 31, 2006, whether the concentration of sulphur of the batch exceeded 500 mg/kg; and
- b) after May 31, 2006, whether the concentration of sulphur of the batch exceeded 15 mg/kg.

Every person who produces or imports diesel fuel with a concentration of sulphur exceeding the concentration referred to above (a and b) must, prior to dispatch of that fuel from the production facility or the importation of that fuel, identify in a record any batch to be dispatched or imported as "not suitable for [designated use]", along with the date of the dispatch or importation of the batch. Refer to the table below for details on the record of identification:

| Sulphur Concentration | Production/Import Dates | Record |
|--|---|--|
| exceeding 500 mg/kg | until May 31, 2006 | "not suitable for use in on-road vehicles" |
| exceeding 500 mg/kg | from June 1, 2007 until May 31, 2012 | "not suitable for use in on-road vehicles, off-road engines, locomotive engines or vessel engines" |
| exceeding 15 mg/kg and less than 500 mg/kg | June 1, 2006 until May 31, 2010 | "not suitable for use in on-road vehicles" |
| exceeding 15 mg/kg and less than 500 mg/kg | from June 1, 2010 until May 31, 2012 | "not suitable for use in on-road vehicles or off- road engines" |
| exceeding 15 mg/kg | after May 31, 2012 | "not suitable for use in on-road vehicles, off-road engines, locomotive engines or vessel engines" |

6.4 Am I required to identify whether diesel fuel is for on-road vehicle or off-road engine use?

Refer to question 6.3.

6.5 How long are records required to be kept under the Diesel Fuel Regulations?

The Diesel Fuel Regulations were repealed in 2003 by the Sulphur in Diesel Fuel Regulations. The Diesel Fuel Regulations required that records be maintained for five years after they were made. All obligations to maintain records under the Diesel Fuel Regulations continue for a period of five years even after the repeal of those Regulations.

The Sulphur in Diesel Fuel Regulations also have the same requirement to maintain records for a period of five years.

6.6 Where must records be kept?

Subsection 6(3) requires that records be kept at the production facility in Canada or at the place of business of the importer in Canada as identified in Schedule 2. All records must be kept in Canada, and enforcement officers, as well as analysts designated under section 217 of CEPA 1999, must have ready access to them.

6.7 How will records be requested by Environment Canada?

Access to records would normally be requested by Environment Canada enforcement officers and/or CEPA analysts inspecting a facility. During an inspection, the officers or analysts may also request samples of diesel fuel.

6.8 I only sell diesel fuel. What records do the regulations require me to keep?

None.

6.9 When do the records need to be made?

A record identifying the type of diesel fuel (subsection 6(2)) must be made prior to the dispatch or importation of a batch. Other records required by the regulations should be made as soon as possible, so that the record is available to an enforcement officer and/or analyst making an inspection of your facility.

6.10 Continuous blending and on-line blending may involve a combination of testing and calculations to derive the sulphur concentration and quality of a blend, instead of a single concentration as measured in accordance with Section 4. How do I identify the batch to satisfy the records requirements under Section 6?

Section 6 requires that a person producing diesel fuel identify in a record any batch that exceeds the prescribed limits as "not suitable for [[designated use]" prior to dispatch from the production facility. Under the regulations, a batch is an identifiable quantity of diesel fuel with a single concentration of sulphur as measured in accordance with Section 4. Refer to question 6.3 for the identification requirements.

6.11 What do I do if I <u>did not</u> identify a batch as "diesel not suitable for [designated use]" and later I discover it did not meet the limits in the regulations for the noted use?

You would be in violation of the regulations. The batch must be identified properly prior to dispatch.

6.12 Can I identify a batch as "not suitable for use [designated use], pending completion of analysis" and then re-designate it as on-road diesel fuel, depending on the results of the test?

No. If you are a producer or importer, you must identify any batch of diesel fuel with a sulphur concentration exceeding 500 mg/kg or exceeding 15 mg/kg (after May 31, 2006) as "not suitable for [designated use]" as per subsections 6(2), (3) and (4) prior to dispatch from your facility or prior to importation.

- 6.13 Are wording other than that set out in the regulation (and as summarized in the table in question 6.3) acceptable for the purposes of Section 6(2), (3) and (4)?
 - No. You must use the wording provided in the Regulations.
- 6.14 What date is deemed the <u>date of dispatch</u> for batches that continue over more than one calendar day?

The regulations do not specify the date of dispatch for batches that continue over more that one day.

6.15 What are the identification requirements for inter-refinery transfers of diesel fuel?

The requirements of subsection 6(2) apply to all diesel fuel that a person produces or imports.

6.16 How do I identify biodiesel?

Biodiesel is defined under the regulation to be diesel fuel. It must be identified in the same manner as diesel fuel. Refer to the questions above for details on appropriate labeling based on sulphur level and date.

There are no specific requirements to label biodiesel differently than diesel fuel. However there are requirements to report information in Schedule 1 and 2 based on biodiesel and blends of biodiesel and diesel fuel. With the above taken into account, it would be good practice to identify biodiesel as such.

Section 7: REPEAL

7.1 Why were the Diesel Fuel Regulations repealed?

The Diesel Fuel Regulations were replaced by the Sulphur in Diesel Fuel Regulations when the later regulations come into force.

Section 8: COMING INTO FORCE

8.1 When did the requirements of the Sulphur in Diesel Fuel Regulations (SOR/2002-254) come into force?

The parent regulations came into force on January 1, 2003.

8.2 When do the requirements of the Regulations Amending the Sulphur in Diesel Fuel Regulations (SOR/2005-290), which address diesel fuel in off-road engines, locomotive engines and vessel engines come into force?

The amending regulations come into force on January 1, 2006.

Schedules

S.1 How can I obtain copies of Schedules 1 and 2.

The schedules are available on the Environment Canada web-site at:

http://www.ec.gc.ca/cleanair-airpur/Sulphur_in_Diesel_Fuel_Regulations-WS5B4D506F-1_En.htm

They are also available from Environment Canada's regional offices (addresses are provided in Appendix A).

S.2 Are electronic versions of the schedule available?

Environment Canada annually provides compliance promotion material to known regulatees, usually in the late fall,. The material includes the forms in both an electronic template version and a printable version.

Note that reports need to be signed by an Authorized Official and sent to the appropriate Environment Canada Office. Contact regional Environment Canada offices (see Appendix A) for more information on the Compliance Promotion Package.

MISCELLANEOUS QUESTIONS

BIODIESEL QUESTIONS

B.1 Biodiesel fuel is good for the environment. Why do the regulations impose requirements on it?

Though biodiesel is generally considered a clean fuel, some may have levels of sulphur greater than the regulated limit of 15 mg/kg. The source of the sulphur could be from production processes, inherent in the feedstock or from contamination during distribution.

Diesel fuel with sulphur less than 15 mg/kg is required for effective operation of advanced exhaust emission control technologies needed to comply with the new diesel vehicle and engine emission standards that are coming into effect, regardless of whether the fuel is produced from biomass or crude petroleum.

Therefore the regulations encompass biodiesel as well as conventionally produced diesel fuel.

B.2 Biodiesel has no sulphur or very low levels of sulphur. Why do the regulations include biodiesel?

Some biodiesel may have levels of sulphur greater than the regulated limit of 15 mg/kg. The source of the sulphur could be from production processes, inherent in the feedstock or from contamination during distribution.

B.3 The regulations define biodiesel fuel as "a fuel that is composed of or derived from plant or animal oils or plant or animal fats and is intended to be used in diesel engines." Where did this definition come from?

The definition of biodiesel was developed to capture any biodiesel fuel that may be used in a diesel engine. This results in a definition that is broader than either the CGSB or ASTM definitions for biodiesel. The broad definition is necessary as low sulphur fuel is required to enable the efficient operation of advanced exhaust emission control technologies, regardless of the origin or other properties of the fuel.

B.4 What is captured under the definition of biodiesel?

The definition includes any fuel that is either composed of or derived from plant or animal oils or plant or animal fats that is intended to be used in a diesel engine. Though not all formulations are recommended for use in diesel engines, they include virgin vegetable oils, used vegetable oils, animal fats, seed oils, esters and ethers derived from vegetable oils or animal fats, or other chemicals that are derived from oils or fats from vegetables, seeds or animals. (The above list is not all encompassing.)

B.5 Do the regulations apply to biodiesel fuel that does not meet the CGSB or ASTM standards for biodiesel? Why?

Yes, fuel with sulphur less than 15 mg/kg is required to enable the efficient operation of advanced exhaust emission control technologies needed to comply with the new diesel vehicle and engine emission standards that are coming into effect. This is the case, regardless of whether the fuel meets or does not meet CGSB or ASTM standards

B.6 I produce biodiesel fuel. What am I required to do under the regulations?

All aspects of these regulations apply to you. These include

- meeting the limits (Section 3)
- registering your production facility (Schedule 2), and
- submitting regular reports on diesel volumes and sulphur levels (Schedule 1).
- B.7 I produce a very small volume of biodiesel fuel for personal use. Am I still required to do everything set out under the Regulations?

Yes.

B.8 I import or produce biodiesel fuel for scientific research. Is this fuel exempt from the requirements of the regulations?

No, all requirements of the regulations apply.

B.9 I import biodiesel fuel. What am I required to do under the regulations?

All aspects of these regulations apply to you. These include

- meeting the limits (Section 3)
- providing registration information with respect to each province pf import (Schedule 2), and

- submitting regular reports on diesel volumes and sulphur levels (Schedule 1).
- B.10 Why do the regulations require producers and importers of biodiesel fuel to submit registration information (Schedule 2)?

The registration information provides basic information needed by Environment Canada to administer the regulations.

B.11 Why do the regulations require producers and importers of biodiesel fuel to submit regular reports (Schedule 1)?

Biodiesel fuel is a type of diesel fuel under the regulations. A certain minimum amount of information is required to be reported for monitoring purposes. As the 15 mg/kg limit comes into effect this information is required quarterly. In 2015, once there has been a few years experience with most of the diesel fuel pool at the 15 mg/kg limit, the reporting frequency changes to annual in 2015.

B.12 I produce or import biodiesel fuel, do the regulations require me to measure the sulphur in it?

The regulations do not specifically require you to measure the sulphur level for each batch of biodiesel. However, you must report sulphur information that includes maxima, minima and volume weighted averages in Schedule 1.

B.13 How do I measure sulphur in biodiesel?

The reference test method for measuring sulphur in diesel fuel, including biodiesel fuel, is ASTM D5453 from the American Society for Testing and Materials (ASTM):

ASTM International 100 Barr Harbor Drive PO Box C700 West Conshohocken, Pennsylvania USA 19428-2959

www.astm.org

B.14 How much will sulphur analysis cost?

In 2005 the cost to have such an analysis done by a laboratory was \$100 to \$150 per sample.

B.15 Does the test method ASTM 5453-03a apply to biodiesel?

Yes

B.16 Can I use a method other than ASTM D5453?

Please refer to Q's 5.40 to 5.52 for information on alternative test methods.

B.17 Are there any test methods for which equivalency has been demonstrated in accordance with the regulations that can be used for biodiesel?

Not at time of this publication. Refer to Q 5.49 for information on alternative test methods

B.18 Can I have someone else measure the sulphur concentration in the biodiesel I produce or import?

Yes. However it is important to note that the producer or importer of diesel fuel is responsible for complying with the Regulations. Therefore, if it turns out that the method used was not one that is authorized under the regulations or which the Department validated, the importer or producer could find themselves in non-compliance if it turns out that the sulphur concentration exceeds the regulatory limits when tested using the method under Section. 4 of the regulations

B.19 Do the regulations apply to used cooking oil used in diesel vehicles?

Such cooking oil meets the definition of biodiesel and is diesel fuel under the regulations. Though using unprocessed used cooking oil in a diesel engine is generally not recommended by engine manufacturers, anyone producing or selling used cooking oil that is intended to be used in a diesel engine is subject to the regulations. If such fuel does not meet the regulatory sulphur limits, then its producer / seller / importer would be in violation of the Regulations.

B.20 I gather used cooking oil from local businesses and use it in my diesel vehicle. What am I required to do under the regulations?

The regulations do not address purchasers or users of fuels. If you do not import /produce /sell the fuel, you are not subject to the regulations.

B.21 I sell biodiesel fuel. What am I required to do under the regulations?

If you sell biodiesel, then the biodiesel you sell must meet the regulatory sulphur limits as set out in Section 3 of the Regulations.

OTHER QUESTIONS

O.1 When will inspections take place?

Inspections by enforcement officers may be scheduled or unscheduled visits.

O.2 Do I have to submit to inspections?

Yes. Under CEPA 1999, enforcement officers are authorized to inspect, in order to verify compliance with the Act and any regulations made under it. The Act also requires that the owner or the person in charge give the enforcement officer reasonable assistance in their duties.

0.3 Do the regulations require me to keep samples?

No.

O.4 Am I required to provide samples?

Yes, upon request by an Environment Canada enforcement officer or a CEPA analyst. Also s.219 of CEPA, 1999 allows the Minister of Environment to make such a request by registered letter or by a demand served personally upon the regulatee.

O.5 How will the samples be requested by Environment Canada?

During an inspection, Environment Canada enforcement officers or a CEPA analyst may request samples of diesel fuel. Requests for samples could also arise under other circumstances, such as during the execution of an inspection warrant or a search warrant.

Also, as indicated above, the Minister of Environment may request samples by registered letter or by a demand served personally upon the regulatee.

O.6 Will I be told beforehand that a sample will be requested?

No.

0.7 How do I obtain a copy of the Sulphur in Diesel Fuel Regulations (SOR/ 2002-254)?

The regulations were originally published on July 31, 2002 in the *Canada Gazette*, *Part II*, pages 1668 – 1703. (These set limits for sulphur in diesel fuel for on-road vehicles.)

The amendments that address sulphur in diesel fuel for off-road engines, locomotive engines and vessel engines were published on October 19, 2005 in Canada Gazette, Part II, pages 2349 – 2381.

The regulations can be downloaded from the CEPA Environmental Registry web site:

http://www.ec.gc.ca/ceparegistry/default.cfm

(When you click on the site, find the heading "Regulations" on the left-hand side of the page. Click on that heading and, if you scroll down the page, you will note there is a choice between current regulations and proposed regulations. Click on current regulations and the titles of current regulations appear before you. Choose "Sulphur in Diesel Fuel Regulations" and click on "Go".)

Another helpful web site is the Fossil Fuels Section of Environment Canada's Clean Air web site. The web address is:

http://www.ec.gc.ca/cleanair-airpur/Pollution Sources/Fossil Fuels-WS2A8AAD25-1 En.htm

NEW QUESTIONS

N.1 How do I ask further questions on the Sulphur in Diesel Fuel Regulations?

Additional questions may be asked by sending your question, by mail or fax, to Environment Canada at the address or fax number listed below:

> Chief **Fuels Division** Oil, Gas and Energy Branch **Environment Canada** 351 St. Joseph Boulevard Gatineau, Quebec K1A 0H3

Fax: 819-953-8903

Replies will be provided to the sender, either orally or in writing. You may wish to include your e-mail address. The question and reply may appear in a future version of this guidance document.

Oil, Gas & Energy Branch **Environment Canada** Original: October 2002

Updated: December 2005

Appendix A

ADDRESSES OF ENVIRONMENT CANADA'S REGIONAL OFFICES

Newfoundland, Nova Scotia, New Brunswick and Prince Edward Island

Director
Environmental Protection -- Atlantic Region
Environment Canada
45 Alderney Drive
16th floor, Queen Square
Dartmouth, Nova Scotia B2Y 2N6

Quebec

Director
Environmental Protection -- Quebec Region
Environment Canada
105 rue McGill, 4th floor
Montreal, Quebec H2Y 2E7

Ontario

Manager, Emergencies and Enforcement Division Environmental Protection -- Ontario Region Environment Canada 4905 Dufferin Street Downsview, Ontario M3H 5T4

Manitoba, Saskatchewan, Alberta, Nunavut and Northwest Territories

Director
Environmental Protection -- Prairies & Northern Region
Environment Canada
Twin Atria #2, 2nd floor
4999 - 98th Avenue
Edmonton, Alberta T6B 2X3

British Columbia and Yukon

Head of Inspections
Environmental Enforcement Division
Pacific & Yukon Region
Environment Canada
401 Burrard Street – suite 201
Vancouver, British Columbia V6C 3S5

Appendix B MAPS OF NORTHERN SUPPLY AREA



