Environment Canada Guidance Document

QUESTIONS AND ANSWERS ON THE FEDERAL SULPHUR IN GASOLINE REGULATIONS

Oil, Gas & Energy Branch Environment Canada

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Guidance Document -- Sulphur in Gasoline Regulations (June 2001)

NOTICE

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DISCLAIMER

This document does not in anyway supersede or modify the *Sulphur in Gasoline Regulations*, or offer any legal interpretation of those regulations.

PREFACE

The objective of this document is to provide the reader with an understanding of the requirements of the *Sulphur in Gasoline Regulations*. Most of the document is in the format of questions and answers. There is a short outline of the regulations provided at the beginning of the document. The questions and answers that follow are ordered by the sections in the regulations. Additional questions are welcome.

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SULPHUR IN GASOLINE REGULATIONS

Guidance Document

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Outline of the federal Sulphur in Gasoline Regulations

Section 1: INTERPRETATION

This section provides the definitions that are used in the regulations. Some of the more important definitions are "gasoline", "low-sulphur gasoline" "pool average", "primary supplier", "blend" and "batch".

PART 1 – REQUIREMENTS PERTAINING TO SULPHUR IN GASOLINE

Note: Part 1 applies to all primary suppliers and all sellers of gasoline.

Section 2: PRESCRIBED LEVELS

This section specifies the maximum levels of sulphur in gasoline, both for gasoline supplied and gasoline sold. As an alternative to meeting flat limits, a primary supplier may instead elect to meet the requirement for sulphur on the basis of a pool average -- refer to section 9.

This section also defines types of gasoline which do not have to meet the compositional requirements of the regulations. For each type of gasoline, the sections that do not apply are specified.

Section 3: METHODS FOR SAMPLING AND ANALYSIS

This section specifies the methods for sampling and analysis that will be used to determine compliance with the compositional requirements of the regulations.

This section also contains provisions which allow alternative methods to be used for the purposes of records and reports. Only alternative methods that are used under the *Benzene in Gasoline Regulations* at a specific site may be used.

Section 4: REPORT

All primary suppliers must submit an annual report to Environment Canada on their gasoline composition.

Section 5: RECORDS OF TYPE OF GASOLINE

This section specifies how primary suppliers identify the types of gasoline supplied and the records required.

Section 6: GASOLINE-LIKE BLENDSTOCK

This section specifies the requirements for all gasoline identified by the primary supplier as "gasoline-like blendstock" (i.e., gasoline that meets the definition of gasoline but is intended to be further blended downstream of the refinery, blending facility or point of importation).

Section 7: RETENTION OF RECORDS

This section specifies how long the records referred to in the regulations are to be kept.

Section 8: SUBMISSION OF SAMPLES AND RECORDS

This section requires that primary suppliers and sellers of gasoline provide Environment Canada, upon request, with their records and samples of their gasoline.

PART 2 – REQUIREMENTS PERTAINING TO A POOL AVERAGE

Note: Part 2 only applies to those primary suppliers that elect under section 9 to meet the requirements for sulphur on the basis of a pool average.

Section 9: POOL AVERAGE ELECTION

This section provides primary suppliers the option of meeting limits for sulphur on the basis of a pool average and the associated never-to-be-exceeded caps (instead of the flat limits). The section also specifies the information required as part of the election. In its election, a primary supplier may opt to use the alternative averaging calculation method during the period from July 1, 2002 to December 31, 2004.

Section 10: CALCULATION OF POOL AVERAGE

This section specifies how a pool average is calculated. It also sets out which batches a primary supplier includes in its pool average.

Section 11: OPTION FOR AN ALTERNATIVE AVERAGING CALCULATION METHOD

This section allows a primary supplier to use an alternative averaging calculation method during the period from July 1, 2002 to December 31, 2004. The alternative method allows the primary supplier to compute its pool average over the first 2½ years instead of each year of those 2½ years.

Section 12: RECORD OF COMPOSITION

This section specifies information on the composition of gasoline that primary suppliers must record.

Section 13: AUDITOR'S REPORTS

This section requires that an annual third-party audit be done by all primary suppliers who have elected to meet the sulphur requirement on the basis of a pool average. The qualifications of the auditor are set out in Section 1.

PART 3 – COMING INTO FORCE (Section 14)

The regulations come into force on July 1, 2002, except for the definitions (section 1) and those sections pertaining to the election for a pool average (i.e., section 9 and subsection 11(1)), which come into force on May 1, 2002.

Questions and Answers on the federal Sulphur in Gasoline Regulations

GENERAL QUESTIONS

G.1 Why is sulphur in gasoline being regulated?

Sulphur occurs naturally in crude oil and so is found in gasoline. It reduces the efficiency of vehicles' catalytic converters and thus causes vehicles to emit more pollutants. It is also directly emitted from vehicles as sulphur dioxide and sulphate particles. The increased emissions caused by high sulphur levels affects the health of Canadians.

In July 1998, a joint federal-provincial working group found that sulphur levels in Canada should be reduced. In October 1998, the federal Minister of the Environment announced that sulphur in gasoline would be reduced starting in 2002 and further reduced in 2005.

Sulphur in gasoline is currently regulated in other jurisdictions including British Columbia and the European Union. In December 1999, the U.S. Environmental Protection Agency adopted regulations that reduce sulphur to 30 ppm¹ throughout the U.S. starting 2005.

G.2 Why do the regulations look so complicated?

The use of pool averages (which is a compliance option) adds a number of requirements. This feature was incorporated in the regulations at the request of the petroleum industry to provide flexibility in how environmental performance is achieved. Any person who does not opt to use a pool average is <u>not</u> subject to Part 2 of the regulations.

The use of pool averages requires additional enforcement provisions, such as independent audits, additional record-keeping, and never-to-be-exceeded caps. As well, the use of pool averages necessitates that the primary points of compliance be the refinery gate, point of importation and the blending facility. The focus on upstream compliance points requires defining what batches of gasoline are to be included in a "pool" for averaging purposes. This is further complicated by the need to address downstream blending issues.

G.3 To whom do the regulations apply?

No person may sell or offer for sale gasoline with a sulphur content of greater than 300 ppm starting January 1, 2004 and 80 ppm starting April 1, 2005.

The persons most affected by the regulations are those who produce (including by blending) or import gasoline. The term "primary supplier" has been adopted to cover:

- any person who owns, leases, operates, controls, supervises or manages a
 refinery or blending facility or owns the gasoline in a blending facility. (Certain
 blending operations are excluded from the regulations see below); and
- any person who imports gasoline into Canada.

¹ Parts per million. 100 ppm = 0.0100% by weight.

G.4 What types of blending operations are <u>not</u> covered by the regulations?

Any person <u>only</u> mixing together low-sulphur gasolines or California Phase 2 gasoline, or both is not considered, for the purposes of the regulations, to be "blending" gasoline. Therefore, these types of blending operations are not subject to the regulations.

Any person <u>only</u> adding additives to low-sulphur gasoline or California Phase 2 gasoline is not considered, for the purposes of the regulations to be "blending" gasoline. Additives are substances that improve the characteristics of the gasoline, but do not materially affect its composition. Therefore, this type of blending operation is not subject to the regulations.

Any person <u>only</u> adding a sulphur-limited oxygenate or a sulphur-limited butane to low-sulphur gasoline or California Phase 2 gasoline is not considered, for the purposes of the regulations, to be "blending" gasoline. Therefore, this type of blending operation is not subject to the regulations.

G.5 If I only buy gasoline, but do not refine, blend or import myself, what requirements must I meet?

If you <u>only</u> buy low-sulphur gasoline from others (e.g., a wholesaler), then you are not a primary supplier, and therefore you do not have to meet any of the requirements placed upon a primary supplier. However, you cannot sell gasoline with a sulphur level in excess of 300 ppm effective January 1, 2004 and 80 ppm effective April 1, 2005 (subsection 2(3)).

If you buy gasoline-like blendstock, there are other requirements that you must fulfill (refer to questions on section 6).

G.6 What options do I have in meeting the requirements?

All primary suppliers, regardless of size or nature of operations, have the options of electing to meet a pool average limit for each of their refinery or blending facilities and import pools instead of a flat limit. Pool averages provide more flexibility to the primary supplier, but have more administrative requirements. Elections must be made by May 2 for the year 2002 or changed by November 2 for subsequent years. An election cannot be changed part way through a year.

During the first 2½ years of the regulations, primary suppliers electing to meet a pool average limit may either elect to meet the limit each year or over the entire 2½-year period. In the latter case, a primary supplier cannot change its election part way through the period.

G.7 How do these regulations relate to the federal Benzene in Gasoline Regulations?

The federal *Benzene in Gasoline Regulations* control benzene in gasoline and a parameter called the Benzene Emissions Number. Those regulations are separate from the *Sulphur in Gasoline Regulations*. Both regulations must be complied with.

Although the *Sulphur in Gasoline Regulations* share a common structure and many common definitions with the *Benzene in Gasoline Regulations*, there are differences, particularly in regard to the nature of the averaging provisions and the treatment of U.S. Reformulated gasoline.

G.8 How do these regulations relate to the federal Gasoline Regulations?

The federal *Gasoline Regulations* control lead and phosphorous in gasoline. Those regulations are separate from the *Sulphur in Gasoline Regulations*. Both regulations must be complied with.

G.9 How do these regulations relate to the federal Fuels Information Regulations?

The federal *Fuels Information Regulations, No. 1* require that refiners and importers report annually the average levels of sulphur in all liquid fuels, including gasoline, during each quarter of the year. They also require one-time notification of any changes in the use of additives in liquid fuels. Those regulations are separate from the *Sulphur in Gasoline Regulations*. Both regulations must be complied with.

G.10 How do these regulations relate to provincial gasoline regulations?

Some provinces require that the Canadian General Standards Board's (CGSB) standard for sulphur in gasoline of 1000 ppm be met. At present British Columbia, under its *Cleaner Gasoline Regulation*, is the only province to control sulphur in gasoline to a level below the CGSB standard. B.C.'s regulation controls other

characteristics of gasoline as well as sulphur and allows equivalent emissions performance. Both provincial and federal regulations must be complied with.

G.11 What are the important dates in the regulations?

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

IMPORTANT DATES IN THE SULPHUR IN GASOLINE REGULATIONS

May 2, 2002	Election for pool average limits (by November 2 of any subsequent year for a change of status), including submission of information on compliance strategy. Election for alternative averaging calculation method.
July 1, 2002	Requirements for sulphur come into force for refiners, importers and blenders. Must meet: • 170 ppm maximum based on flat limits, or • 150 ppm average if elected to use pool average limits. General reporting, record keeping and auditing requirements also come into force.
February 15, 2003	First annual report on gasoline composition (subsequent annual reports are due by February 15 of each year).
May 31, 2003	First auditor's report is due for those on a pool average (subsequent annual reports are due by May 31 of each year).
October 1, 2003	The never-to-be-exceeded cap for sulphur of 300 ppm comes into force for anyone producing or importing gasoline.
January 1, 2004	The never-to-be-exceeded cap for sulphur of 300 ppm comes into force for anyone selling gasoline.
January 1, 2005	 Final requirements for sulphur come into force for refiners, importers and blenders. Must meet: 40 ppm maximum based on flat limits, or 30 ppm yearly average with a never-to-be exceeded cap of 80 ppm if elected to use pool average limits.

The never-to-be-exceeded cap for sulphur of 80 ppm comes into force for anyone selling gasoline.

QUESTIONS ON SECTIONS OF THE REGULATIONS

Section 1: INTERPRETATION

1.1 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 primary supplier is a corporation, the regulations require that an officer of the corporation sign the relevant forms.

1.2 Why does the definition of "gasoline" have two parts?

The first part of the definition means that any fuel generally sold or represented as gasoline is treated as gasoline for the purposes on the regulations. This part of the definition will usually suffice to distinguish whether or not a fuel is gasoline. The second part of the definition has measurable physical properties, and can be used to distinguish gasoline from other fuels to cover circumstances where the fuel is not readily identifiable as "gasoline".

Note that a fuel is considered to be gasoline under the regulations if it meets <u>either</u> of the parts of the definition; the fuel is not required to meet both parts.

1.3 Why does the definition of "gasoline" include sub-octane gasoline (i.e., a "road" octane of less than 86)?

The second part of the definition of gasoline includes a specification for the antiknock index (the average of Research and Motor octane number and often referred to as road octane). The lowest antiknock index allowed in Canada under the Canadian General Standards Board for unleaded automotive gasoline is 86. At the request of industry, the definition of "gasoline" includes a limit at 80. This is to allow refiners, importers and blenders the flexibility to produce or import unfinished gasoline destined for subsequent blending at a downstream facility as "gasoline-like blendstock" (see below).

1.4 What is "gasoline-like blendstock"?

"Gasoline-like blendstock" is a fuel meeting either parts of the definition for gasoline which is intended to be further refined or blended to produce low-sulphur gasoline and has been identified as gasoline-like blendstock by the primary supplier under section 5. The concept of gasoline-like blendstock provides flexibility to dispatch or to import unfinished gasoline intended to be subsequently blended at a downstream blending facility. The requirements for gasoline-like blendstock are set out in section 6 of the regulations.

1.5 What is the difference between "pool average" in the Sulphur in Gasoline Regulations and "yearly pool average" as defined in the Benzene in Gasoline Regulations?

Under the *Sulphur in Gasoline Regulations*, during the first 2½ years, primary suppliers have the option of meeting an average limit for sulphur over the entire 2½-year period. The term "pool average" has therefore been used in these regulations.

Under the *Benzene in Gasoline Regulations*, primary suppliers must meet the average limits for benzene and BEN each year. Hence, "yearly pool average" is used in those regulations.

1.6 What is "low-sulphur gasoline"?

"Low-sulphur gasoline" is gasoline that meets the compositional requirements of the regulations <u>and</u> is identified as low-sulphur gasoline by the primary supplier under section 5 of the regulations.

1.7 Why does "scientific research" exclude marketing research?

Scientific research means research that furthers scientific understanding. It includes research into the physical and chemical characteristics of gasoline and their effects on vehicles, the health of people, the environment, etc. It does not include any research undertaken by or for the seller of the gasoline into the preferences of the consumer or any type of market research.

1.8 What are "sulphur-limited oxygenate" and "sulphur-limited butane"?

Sulphur-limited oxygenate and sulphur-limited butane are oxygenate and butane that do not exceed the contaminate sulphur levels specified by the regulations. These maximum sulphur contaminate levels are (in % by weight):

	Commercially pure butane	Commercially pure oxygenate
Until January 1, 2005	0.014	0.017
On and after January 1, 20	05 0.004	0.004

The limits prior to January 1, 2005 are the same as those specified in the *Benzene in Gasoline Regulations* for commercial oxygenate and commercial butane. Those levels were set based on recommendations from industry. The later set of limits are the same as the flat limit for sulphur in gasoline set in the *Sulphur in Gasoline Regulations*.

1.9 What do I need to do if I blend gasoline with an oxygenate or butane that does not meet the applicable contaminate levels?

Any person who blends an oxygenate or butane that does not meet the applicable contaminate levels with low-sulphur gasoline or any other type of gasoline is considered a primary supplier. Therefore, this person must comply with the requirements placed upon a primary supplier by the regulations.

1.10 Why is "year" defined differently for the year 2002?

Since the compositional requirements do not come into force until July 1, 2002, the pool average for 2002 is computed using only gasoline supplied during the last half of the year. Therefore the definition of "year" has been written so that the last half of 2002 is treated as a year.

PART 1 -- REQUIREMENTS PERTAINING TO SULPHUR IN GASOLINE

Section 2: PRESCRIBED LEVELS

2.1 Why are there three prohibitions for sulphur?

A primary supplier has the option of either meeting the flat limit for sulphur or electing to meet the pool average limit with an associated never-to-be-exceeded cap.

The first prohibition (subsection 2(1)) applies to each batch of gasoline produced, or imported. (Paragraph 2(1)(b) sets out the flat limits for primary suppliers that do

not elect for pool averages; paragraph 2(1)(a) sets out the never-to-be-exceeded caps that are associated with pool averages.)

The second prohibition (subsection 2(2)) applies to the pool average for gasoline produced or imported by a primary supplier who has elected to be subject to a pool average.

The third prohibition (subsection 2(3)) applies to the sale of gasoline at any point in the gasoline distribution system. This never-to-be-exceeded limit is an upper cap that no gasoline for use in an automobile can exceed.

2.2 Why do the dates for compliance for sales differ from the dates for compliance for production and importation?

The never-to-be-exceeded caps of 300 ppm and 80 ppm comes into force 3 months after the respective caps on production and importation. This is to allow pre-reduction gasoline to work its way through the distribution system to the consumer.

2.3 Why is there such a long delay before the 300 ppm cap comes into force?

The pool average of 150 ppm comes into force on July 1, 2002, whereas the never-to-be-exceeded cap of 300 ppm for production and importation comes into force on October 1, 2003. The later introduction of the cap provides flexibility for primary suppliers opting for the alternative averaging calculation method. This structure allows a primary supplier to produce or import gasoline with higher levels of sulphur during the first part of the interim period, provided that it compensates for this with lower levels of sulphur during the rest of the period.

2.4 What types of gasolines are not required to meet <u>any</u> of the compositional requirements of the regulations?

The following types of gasoline are not required to meet any of the compositional requirements of the regulations (some records must be retained):

<u>Aviation gasoline</u>: Aviation gasoline is a high-octane fuel, specially formulated for use in small aircraft. It is not for use in ground vehicles.

Racing gasoline: Gasoline used in competition vehicles is often specially formulated for racing purposes. Racing gasoline has an antiknock index (road octane) of at least 100. Since it is a special fuel used in small volumes, it is exempt from the compositional requirements.

<u>Scientific research</u>: Gasoline used in scientific research may have unusual properties depending on the nature of the research. In order to allow continued research into the impacts that gasoline has on the health of Canadians, the state of the environment and the operation of vehicles, this type of gasoline is exempt from the compositional requirements.

<u>Exported gasoline</u>: The regulations do not specify any compositional requirements for gasoline that is exported.

<u>Gasoline in transit</u>: Gasoline in transit is a subset of exported gasoline. It is any gasoline that passes through Canada from one location outside Canada to another location outside Canada. An example of this is gasoline transported by ship from Europe to terminals in Nova Scotia for subsequent transport by truck to Maine.

Gasoline-like blendstock: The exemption from the compositional requirements for gasoline-like blendstock is a "temporary" exemption. This type of gasoline is intended to be blended into compliance at a location downstream of the refinery or point of importation. It must meet the compositional requirements before it is sold to the final consumer, or it must be exported or made into aviation gasoline, racing gasoline or used in scientific research. Such a temporary exemption is necessary since a number of primary suppliers dispatch unfinished gasoline to blending terminals to be "finished". This unfinished gasoline may not meet the compositional requirements of the regulations, and therefore would not comply with the regulations unless the exemption is specified.

2.5 Why is California Phase 2 gasoline exempted from meeting <u>one</u> of the compositional requirements of the regulations?

The California Phase 2 gasoline has the same requirements for sulphur as the *Sulphur in Gasoline Regulations*. However, given the averaging provisions of the California program for sulphur, any one batch may have a sulphur level as high as 80 ppm. Therefore, an importer who has selected to be on the flat limit for sulphur (i.e. 40 ppm) would not be able to import just any batch of California gasoline – the importer would have to be selective.

Given the other compositional requirements for California Phase 2 gasoline, it is considered to be an environmentally superior gasoline. To avoid undue burden on importers, this type of gasoline has been exempted from the sulphur limit of 40 ppm. It is, however, required to meet the never-to-be-exceeded sulphur limit for sales of gasoline of 80 ppm.

2.6 Why is U.S. reformulated gasoline not exempted from meeting the compositional requirements of the regulations?

U.S. reformulated gasoline does not specify a limit for sulphur; it has requirements for NOx, VOC and toxic emissions, as computed using the Complex Model. During Phase 2 of the Reformulated Gasoline Program (which starts January 1, 2000), it is likely that sulphur levels in U.S. reformulated gasoline will average between 130 and 180 ppm. Thus, batches of this type of gasoline would usually, but not always meet the sulphur requirements during the interim period (2002-2004). It is unlikely that U.S. reformulated gasoline would meet the sulphur requirements that start in 2005.

Section 3: METHODS FOR SAMPLING AND ANALYSIS

3.1 Why are reference methods required?

Reference methods are required to provide certainty and consistency in the enforcement of the regulations.

3.2 What happens if a reference method is amended?

Any amendment to a reference method by the standards writing organization (e.g., the Canadian General Standards Board (CGSB) or the American Society of Testing and Measurements(ASTM)) is automatically incorporated into the regulations (refer to subsection 1(2)). Amended methods would thereafter be used in determining compliance with the regulations and for assessing the "equivalency" of alternative methods.

3.3 Why does the reference method change in 2005?

The CGSB reference method currently has a lower range limit of 50 ppm. Therefore, it is not satisfactory for determining compliance with a 30 ppm average or a 40 ppm flat limit. If the CGSB method has not been amended to measure sulphur in gasoline less than 10 ppm by November 2, 2004, the reference method changes to an ASTM method. If the CGSB method is improved after that date, the reference method reverts to the revised CGSB method.

3.4 If I am using an approved alternative method under the Benzene in Gasoline Regulations for sampling or analyzing sulphur in gasoline at a particular site, can I

use that method at that site for reporting and record keeping purposes under the Sulphur in Gasoline Regulations?

Yes (as per subsection 3(6)), provided that the alternative method has been approved for low sulphur measurements. Note that, as with the *Benzene in Gasoline Regulations*, compliance with the compositional requirements of the *Sulphur in Gasoline Regulations* (section 2) will be determined using the reference method.

3.5 Can I use a different method for sampling or analyzing sulphur in gasoline than I am using under the Benzene in Gasoline Regulations for a particular site?

No. (Unless CGSB method CAN/CGSB-3.0 No. 16.1-98 is not amended to measure sulphur less than 10 ppm. In that case, the CGSB method would be allowed under the *Benzene in Gasoline Regulations*, whereas the *Sulphur in Gasoline Regulations* would specify the ASTM method as the reference method.)

3.6 Why is it necessary to allow equivalent methods for analyzing samples?

Reference methods may be more expensive or take longer to complete. To reduce administrative costs associated with the regulations, other less expensive or more efficient methods are allowed for record keeping and reporting requirements. This also allows for advancement in measuring technology and techniques, without having to continually revise the regulations.

3.7 How do I apply for an equivalent method?

Under paragraph 3(1)(a) and subsection 3(6) of the *Sulphur in Gasoline Regulations*, alternative sampling and test methods that are being used at a site under the *Benzene in Gasoline Regulations* may be also used at that site under the *Sulphur in Gasoline Regulations*. You can only apply for an equivalent method under section 6 of the *Benzene in Gasoline Regulations*.

Section 4 REPORT

4.1 For which facilities do I submit the report?

The report must be submitted separately for each refinery, blending facility and province of import, or any combination of them that has been elected under subsection 9(1) of the regulations.

4.2 What information on gasoline do I report?

You are required to provide the information listed subsection 4(2). This includes identifying information (such as name, registration number, etc.) and information on the gasoline produced or imported during the reporting period. Information on gasoline includes the annual volume and the maximum concentrations of sulphur during the year and, for those who have elected to meet a pool average, the pool average.

For batches identified as California Phase 2 gasoline, the annual volume and maximum concentration of sulphur in the California Phase 2 gasoline produced or imported must be reported.

For batches identified as gasoline-like blendstock, the annual volume of gasoline-like blendstock produced or imported must be reported. Additional information in respect of gasoline-like blendstock must be reported as an annex to the annual report on gasoline (refer to subsection 6(2).)

There are slightly different reporting requirements for any primary supplier that elects under subsection 11(1) to use the alternative averaging calculation method for a pool average. Under subsection 11(3) a primary supplier who has elected to use the alternative calculation method must report its cumulative volume-weighted average concentration of sulphur in gasoline instead of its pool average.

4.3 Are the reports the same as those I submit under the Benzene in Gasoline Regulations?

The reporting requirements for both regulations must be met. During the year 2002, reports under the *Benzene in Gasoline Regulations* are required quarterly, whereas reports for the *Sulphur in Gasoline Regulations* are required annually. However, after 2002, both regulations require annual reports, to be submitted by the same date. There is nothing to prevent companies from submitting the reports required under the two regulations under one cover. In any case, reports should clearly identify which regulations they are in respect of.

4.4 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 fuels, including gasoline. These reports are to be submitted by January 31 of the following year. These reports do not contain

information on maximum sulphur levels, nor on California Phase 2 gasoline or gasoline-like blendstock.

4.5 What records are suitable for imports of U.S. gasolines?

Records of composition required by the U.S. or California regulations are acceptable for providing the information required in the report on gasoline composition. These records are described in the U.S. regulations on gasoline composition in section 80.74 (for reformulated gasoline) and section 80.104 (for conventional gasoline) and in section 2270 of the California regulation for California Phase 2 gasoline. Refer to subsection 4(3).

4.6 If I do not produce or import gasoline during a reporting period, do I still have to submit a report?

No.

4.7 Where and when 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). The reports are required annually on or before February 15 of the year following the year for which the report was prepared.

Section 5: RECORDS OF TYPE OF GASOLINE

5.1 Why must I keep track of eight different types of gasoline?

For the purposes of the regulations, eight types of gasoline are defined (as described in subsection 9(3)). These are:

- 1 low-sulphur gasoline,
- 2 gasoline that is California Phase 2 gasoline
- 3 gasoline-like blendstock,
- 4 gasoline for export,
- 5 gasoline in transit through Canada,
- 6 gasoline for use in aircraft,
- 7 gasoline for use in competition vehicles, and
- 8 gasoline for use in scientific research.

The first of these types (#1) may be sold for use in vehicles, and so must meet the compositional requirements of the regulation. California Phase 2 gasoline (#2)

may also be sold for use in vehicles, but is exempt from one of the compositional requirements of the regulations. Gasoline-like blendstock (#3) is gasoline that must be further blended to meet the compositional requirements of the regulations. The last five types of gasoline (#4-8) would not be used in ordinary vehicles in Canada, therefore are not required to meet the compositional requirements of the regulations. However there are record keeping requirements under subsection 5(3).

5.2 What happens if I do not identify a batch of gasoline as one of the eight types?

If no record is made, the gasoline is considered to have been identified as low-sulphur gasoline (subsection 5(2)). This provision was added for the convenience of primary suppliers who normally deal with low-sulphur gasoline so that they would not to be burdened with making a record for most of their batches.

5.3 How and when do I identify the type for a batch of gasoline?

The type of gasoline (other than low-sulphur gasoline) must be identified in a record prior to the dispatch or importation of the batch (subsection 5(1)).

Any batch identified as low-sulphur gasoline, either in a record or by default, is required to meet the compositional requirements of the regulations. The identification of batches must occur prior to the dispatch or importation of the batch so that Environment Canada knows how to apply the regulations in the event of any monitoring or enforcement action.

5.4 What records must I keep for specialty types of gasoline?

In addition to records identifying the type of gasoline, other records must be kept under subsection 5(3):

- written evidence that establishes that batches of gasoline for use in aircraft, competition vehicles or scientific research or batches that were exported or in transit through Canada were sold or delivered for the use appropriate to the identified type; and
- written evidence that batches identified as California Phase 2 gasoline meet California's compositional requirements.
- 5.5 Are Bills of Lading or Pipeline Tickets acceptable written evidence under subsection 5(3) that establishes that a batch was sold or delivered for the use appropriate to the type identified for that batch?

It depends on what information is on these records. These records are acceptable if they include information that establishes that the batch was sold or delivered for the appropriate use.

5.6 When do the records need to be made?

A record identifying the type of gasoline (subsection 5(1)) must be made prior to the dispatch or importation of a batch. Other records required by the regulations (subsections 5(3), 6(1), 6(3) and 6(4) and section 12) should be made as soon as possible, so that the record is available to an enforcement officer making an inspection of your facility.

5.7 What do I do if I identified a batch as "low-sulphur gasoline" and later, after the analysis was completed and after the batch entered the pipeline, I discovered it did not meet the compositional requirements of the regulations?

You would be in violation of the regulations. Such infractions are required to be reported in the annual auditor's report under subparagraphs 13(b)(v) and (vi).

5.8 Can I identify a batch as "low-sulphur gasoline, pending completion of analysis" and then re-designate it as "low-sulphur gasoline" or "gasoline-like blendstock" depending on the results of the test?

No. You must identify batches as one of the 8 types of gasoline specified in subsection 5(1) <u>prior</u> to dispatch from your facility or importation. "Low-sulphur gasoline, pending completion of analysis" is not one of these 8 types of gasoline. If you are in doubt as to whether a batch is low-sulphur gasoline, you can identify it as gasoline-like blendstock. You must then comply with the requirements for gasoline-like blendstock.

Section 6: GASOLINE-LIKE BLENDSTOCK

6.1 What is "gasoline-like blendstock"?

"Gasoline-like blendstock" is a fuel that meets the definition for gasoline and that is intended to be further refined or blended to produce low-sulphur gasoline and that has been identified as gasoline-like blendstock by the primary supplier under section 5. The concept of gasoline-like blendstock provides flexibility to dispatch or to import unfinished gasoline intended for subsequent blending at a downstream blending facility.

6.2 What are the requirements for gasoline-like blendstock?

Gasoline-like blendstock must be further refined or blended to make low-sulphur gasoline, aviation gasoline, racing fuel or gasoline for use in scientific research, or it must be exported. There are requirements for records regarding gasoline-like blendstock, to be kept by the primary supplier, any subsequent seller, and the receiver of the gasoline-like blendstock.

6.3 Can gasoline-like blendstock be sold?

Gasoline-like blendstock may be sold as gasoline-like blendstock. Pursuant to subsection 13(5) of the *Benzene in Gasoline Regulations*, gasoline-like blendstock cannot be represented as complying gasoline, or sold or dispensed for use in a spark ignition engine. There is no limitation on who gasoline-like blendstock can be sold to, provided that the required records are made and retained.

6.4 What records must I keep for gasoline-like blendstock?

In addition to the general record keeping requirements for all types of gasoline, a person must, prior to dispatch or importation of a batch of gasoline-like blendstock, record the name and address of the person purchasing or receiving the batch, along with the date of dispatch and the volume of the batch. This information must be provided to Environment Canada (as an annex to the annual report on gasoline composition) for each batch of gasoline-like blendstock produced or imported by the primary supplier.

Anyone who purchases or receives a batch of gasoline-like blendstock must record the name, address and registration number of the primary supplier who originally supplied the batch, and the name and address of the seller or provider of the batch and the date of transfer and the volume of the batch.

Section 7: RETENTION OF RECORDS

7.1 How long are records required to be kept?

Records must be kept for 3 years after they are made.

7.2 Where are the records kept?

Records may be kept at the facility, at your offices, or at a central filing location. All records must be kept in Canada, and enforcement officers must have ready access to them.

Section 8: SUBMISSION OF SAMPLES AND RECORDS

8.1 How will records and samples be requested by Environment Canada?

Access to records would normally be requested by Environment Canada officials inspecting a facility. During an inspection, these officials may also request samples of the gasoline. Requests for records and samples could also arise under other circumstances.

8.2 When must I provide the records and samples to Environment Canada?

You must provide the records and samples to Environment Canada as per the instructions of an enforcement officer.

8.3 Will I be told beforehand that a sample will be requested?

Generally, no.

8.4 Why must I tell Environment Canada from whom I purchased my gasoline?

Retailers and wholesalers of gasoline generally do not have control of the composition of the gasoline that they sell. If a batch of gasoline at a retail or wholesale facility does not meet the compositional requirements of the regulations, Environment Canada may want to trace the origin of the batch in question.

PART 2 – REQUIREMENTS PERTAINING TO A POOL AVERAGE

P2.1 Does Part 2 apply to me?

Part 2 of the regulations only applies to those who have elected to calculate the concentration of sulphur in gasoline on the basis of a pool average.

Section 9: POOL AVERAGE ELECTION

9.1 What is the difference between compliance options?

If you do not elect to meet the compositional requirements on the basis of a pool average, then every batch of gasoline that you supply must meet the flat limits set out in paragraph 2(1)(b) (i.e. 170 ppm for the period beginning on July 1, 2002 and ending on December 31, 2004, and 40 ppm thereafter). There are fewer administrative requirements associated with this option since any batch can be readily tested for compliance.

If you elect to meet the compositional requirements on the basis of a pool average, then your pool average must not exceed the limits set out in subsection 2(2) (i.e. 150 ppm for the period beginning on July 1, 2002 and ending on December 31, 2004, and 30 ppm thereafter). In addition, every batch of gasoline must meet the caps set out in paragraph 2(1)(a) (i.e. 300 ppm for the period beginning on October 31, 2003 and ending on December 31, 2004, and 80 ppm thereafter). The pool average option provides more flexibility; however there are also more administrative requirements.

9.2 How is the election made?

You must submit a notice of election to Environment Canada in writing at least 60 days prior to the beginning of the calendar year for which the election is being made (i.e., by May 2 for 2002 and by November 2 for any subsequent year). Notices should be submitted to the applicable regional office of Environment Canada (addresses are listed in Appendix A).

Your election cannot be changed part way through a calendar year.

9.3 Do I have to make an election every year?

No. You need to make an election for a pool average only once.

9.4 What happens if I do not make an election?

If you do not elect for a pool average, then you must meet the requirements of the regulations on the basis of the flat limits.

9.5 Can I change my compliance option?

Yes. If you wish to change options, you must inform Environment Canada in writing at least 60 days prior to the beginning of the calendar year for which the election is being changed (i.e., by November 2). Changes cannot be made part

way through a calendar year. Once an election for the pool average has been made, it is in place until Environment Canada is informed to the contrary.

If you elect under subsection 11(1) to use the alternative averaging calculation method, you cannot change your election during the course of the 2½ year averaging period (i.e., the period beginning on July 1, 2002 and ending on December 31, 2004).

9.6 If I have more than one facility, can I choose different options for each of the facilities?

Yes, unless you have elected under paragraphs 9(1)(b) or (c) to use a single pool average for the facilities.

For example, if you have two refineries, you can elect to meet the requirements on the basis of a pool average for one refinery and on the basis of flat limits for the other. In the latter case no election is required, as the flat limits are the default option.

Similarly, if you import into Ontario and Quebec, you can elect to meet the requirements on the basis of a pool average for one provincial import pool and on the basis of flat limits for the other. Again, in the latter case no election is required, as the flat limits are the default option.

9.7 If I have more than one facility on the basis of a pool average, must I meet the pool average requirement at each of my facilities or can I combine them?

You must meet the pool average at each of your facilities, unless you can use a single pool average for the facilities under paragraphs 9(1)(b) or (c) and have elected to do so.

Subsection 10(4) also sets out circumstances under which low-sulphur gasoline produced from gasoline-like blendstock at a blending facility may be included in the producing refinery's pool average or in the provincial importation pool.

9.8 What information must I include in my notice of election?

The information requirements are set out in subsection 9(2).

The notice must describe how you will construct and evidence the pool average. It must explain how, where and when samples are to be collected, how they are to be analyzed and recorded, and the location where samples and records are to be

kept. It should clearly present details on the systems, practices and procedures you will use to demonstrate to Environment Canada that the pool average is being met.

9.9 When do I inform Environment Canada of any changes to the information in my notice of election?

You must submit updated information at least 45 days prior to the change.

Section 10: CALCULATION OF POOL AVERAGE

10.1 What types of gasoline do I include in my pool average?

You must include all batches that you have identified as low-sulphur gasoline in your pool average.

You must exclude all batches of gasoline that were:

- identified as another type, or
- exported by you (or an affiliate) regardless of how it is identified.

Note that all gasoline imported by a primary supplier into a province forms one provincial import pool for that primary supplier, unless it is delivered into a refinery or blending facility and included in the pool of a refinery or blending facility under subsection 10(3).

10.2 What other batches of gasoline can I include in a pool average??

Provided that certain associated conditions are met, some additional batches may be included in a pool average,

- under paragraphs 9(1)(b) and (c) you may be able to elect to use a single pool average for more than one facility located in the same province as well as imports into that province;
 - low-sulphur gasoline imported directly into a refinery or blending facility may be included in that facility's pool (refer to subsection 10(3));
- low-sulphur gasoline produced from gasoline-like blendstock at a blending facility may be included in the pool average of the refinery from which the blending facility received the gasoline-like blendstock, or in the pool average for the province of importation, if imported (refer to subsection 10(4));

10.3 If I buy gasoline from someone can I include it in my pool average?

Generally no. You can only include batches of low-sulphur gasoline that you import or dispatch from your refinery or blending facility in the calculation of your pool average. However, if you purchase gasoline-like blendstock, then you may include it in your pool average provided that you blend or further refine the gasoline-like blendstock to meet the compositional requirements of the regulations.

10.4 If I only buy gasoline from refiners or importers, but do not refine, blend or import myself, what do I include in my pool?

If you <u>only</u> buy low-sulphur gasoline from others (e.g., a wholesaler), then you are not a primary supplier, and therefore you do not have to calculate a pool average or meet any of the requirements placed upon a primary supplier. However, you cannot sell gasoline with a sulphur level in excess of 300 ppm effective January 1, 2004 and 80 ppm effective April 1, 2005 (subsection 2(3)).

If you buy gasoline-like blendstock, there are other requirements that you must fulfill (refer to questions on section 6).

10.5 If I sell a batch of low-sulphur gasoline to another person who then exports the batch do I exclude the batch of gasoline from my pool average?

If a batch of gasoline is exported by you or by an affiliate, the batch must be excluded from your pool average.

If a batch is sold to an independent party, you are required to include it in your pool average since you do not control its final destination.

10.6 Does "province" of importation include the territories?

Yes.

10.7 Why do I have to keep separate pools for each province into which I import?

Similar to refiners and blenders which have to keep separate pools for each facility, importers must keep a separate pool for each province that they import into. This is to prevent regional disparities in sulphur levels.

10.8 Can I get credit for the benefits of blending low-sulphur gasoline with sulphur-limited oxygenate or sulphur-limited butane?

Yes, under certain conditions (refer to subsection 10(5) of the regulations).

10.9 For the year 2002, do I include gasoline that I supplied during the period January 1 to June 30 in the calculation of my pool average?

No. Only gasoline supplied between July 1 and December 31 is included in the calculation of your 2002 pool average.

Section 11: OPTION FOR AN ALTERNATIVE AVERAGING CALCULATION METHOD

11.1 What is the difference between the standard averaging calculation and the alternative averaging calculation method?

The limits for the pool average are the same for both calculation methods. The difference is with respect to the averaging periods:

- Under the standard averaging calculation method, the primary supplier must calculate the pool average and meet the 150 ppm limit for each of three periods:
 - July 1, 2002 to December 31, 2002,
 - January 1, 2003 to December 31, 2003, and
 - January 1, 2004 to December 31, 2004.
- Under the alternative averaging calculation method, the primary supplier must calculate the pool average and meet the 150 ppm limit over one 30month period (from July 1, 2002 to December 31, 2004).

Note that under both options there is a never-to-be-exceeded cap of 300 ppm on gasoline produced or imported during the period from October 1, 2003 to December 31, 2004.

11.2 What is the effect of the alternative averaging calculation method?

Under the alternative averaging calculation method, a primary supplier has greater flexibility to produce or import higher sulphur gasoline for part of the interim period, provided that it compensates by producing or importing lower sulphur gasoline during the rest of the interim period.

11.3 If I elect for the alternative averaging calculation method, am I exempt from the never-to-be-exceeded caps?

No. The never-to-be-exceeded cap must be met. Note, however, that under both calculation methods, the cap of 300 ppm does not come into force until October 1, 2003.

11.4 Can I use the alternative averaging calculation method after the end of 2004?

No.

11.5 How do I elect for the alternative averaging calculation method?

The election is done as part of the election under section 9 of the regulations. The procedures specified under section 9 must be followed.

11.6 When can I elect for the alternative averaging calculation method?

The election must be made before May 2, 2002.

11.7 Under the option for an alternative averaging calculation method I do not calculate my pool average until the end of 2004. How do I report my pool average for the years 2002 and 2003?

There are slightly different reporting requirements for any primary supplier that elects under subsection 11(1) to use the alternative averaging calculation method for a pool average. For the years 2002 and 2003, a primary supplier who has elected to use the alternative calculation method must report its cumulative volume-weighted average concentration of sulphur in gasoline instead of its pool average. Refer to subsection 11(3).

11.8 What is meant by "an estimate of the primary supplier's anticipated volume-weighted average concentration of sulphur in its gasoline as of the end of the years 2002, 2003 and 2004"?

This is your anticipated average volume-weighted sulphur level, of gasoline (as per subsection 5(1)), at the end of each of the three years of the interim period. Primary suppliers are required to provide this information to Environment Canada as part of their election notice for the alternative averaging calculation (refer to paragraph 11(1)(b)). The information will facilitate tracking and monitoring of primary suppliers' progress in meeting the pool average of 150 ppm.

Section 12: RECORD OF COMPOSITION

12.1 What records do I have to keep on gasoline composition if I have elected for a pool average?

A record must be kept for each batch, and it must link the sample to the batch from which it was taken. The record must contain the date or dates that the batch was dispatched or imported, and the volume, sulphur concentration and grade of the batch.

12.2 Are these record-keeping requirements in addition to those made under section 5?

Yes, although they can be made on the same physical record.

12.3 Are these record-keeping requirements in addition to those required for the Benzene in Gasoline Regulations?

Yes, although the same physical record could be used for both regulations.

12.4 Where and for how long are the records kept?

All records required by these regulations must be kept in Canada for three years after they are made.

12.5 Can I use records required by the U.S. federal or California state governments to provide the information on composition?

Yes. Refer to subsection 3(6).

Section 13: AUDITOR'S REPORTS

13.1 Do I have to have an independent audit?

You must have an annual audit for each refinery, blending facility and province of importation in respect of which you have elected to use a pool average.

13.2 Why is an independent audit required?

The independent audit is one component of the overall compliance program for a primary supplier who has elected to use a pool average. It provides independent verification that a primary supplier's systems, practices and procedures are

appropriate to demonstrate compliance and that required records and reports are complete and accurate.

13.3 What qualifications must an auditor have?

The auditor must be certified by a nationally or internationally recognized accreditation organization to be <u>able</u> to undertake ISO 9000 product quality assessments. (Note: for the purposes of these regulations, the auditor is not required to undertake an ISO 9000 assessment.) The auditor must be independent of the primary supplier.

13.4 Where can I find a person capable of undertaking an audit?

The following organizations may be able to assist in finding a person capable of undertaking an ISO 9000 assessment:

- the Standards Council of Canada; and
- the Registrar Accreditation Board.

The addresses of these organizations are provided in Appendix B.

13.5 What must my auditor do?

The auditor must assess your compliance with the regulations during the year, and report on any discrepancies and deviations. The auditor must also verify that the required records and reports are complete and accurate. The auditor must sign a report that details its assessment and describes the procedures that it followed to assess the validity of the information required by the regulations.

13.6 What must be reported to Environment Canada and when?

You must submit the auditor's report to Environment Canada by May 31 following the year that the audit covered. This report must contain information on the audit procedures, a compliance assessment by the auditor and a description of any inaccuracies and deviations, as well as basic information on the primary supplier, the auditor and the volume of gasoline produced or imported.

13.7 Can one audit report cover all of my facilities?

Yes. Note that if you have elected under paragraphs 9(1)(b) or (c) to use a single pool average for more than one facility you, then one audit report <u>must</u> cover those facilities.

13.8 Are these requirements for an audit in addition to those required for the Benzene in Gasoline Regulations?

Yes, both sets of requirements must be met. A single audit report that meets the requirements of both regulations is acceptable. All audit reports should clearly indicate which regulations they are in respect of.

13.9 If I have elected to use the alternative averaging calculation method under section 11, am I required to have an audit for the years 2002 and 2003?

Yes.

13.10 If I do not supply gasoline during the year, am I still required to have an audit?

No.

13.11 Will Environment Canada pay for my audit?

No. Engaging and compensating the auditor are your responsibility.

PART 3 – COMING INTO FORCE (Section 14)

P3.1 When do the requirements of the regulations come into force?

Sections 1, 9 and 14 and subsection 11(1) come into force on May 1, 2002. All other sections come into force on July 1, 2002. Note, however, that the various prescribed levels in section 2 have various dates associated with them.

MISCELLANEOUS QUESTIONS

OTHER QUESTIONS

O.1 When will inspections take place?

Inspections by enforcement officers may be scheduled or surprise visits.

O.2 Do I have to submit to inspections?

Yes. Under the *Canadian Environmental Protection Act*, designated inspectors are authorized to conduct routine inspections to verify compliance with the regulations and the Act. The Act also requires that the owner or the person in charge give the inspector reasonable assistance in their duties.

O.3 What are the penalties if I do not comply with the Sulphur in Gasoline Regulations?

Compliance with regulations is mandatory. Environment Canada's Enforcement and Compliance Policy sets out the criteria for enforcement responses. Under the Canadian Environmental Protection Act, 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.

In addition to financial and administrative penalties, if there is a contravention of the regulation, the Minister may require remedial measures, such as refunding or replacing product, a notice to customers, or publishing a public notice (refer to section 40 of the *Canadian Environmental Protection Act*).

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

Director
Office of Enforcement
Environment Canada
Ottawa, Ontario K1A 0H3

O.4 Will information that I submit to Environment Canada be kept confidential?

Information submitted to Environment Canada is treated pursuant to the Canadian Environmental Protection Act, the Access to Information Act, and the Privacy Act.

As noted in the Regulatory Impact Analysis Statement that accompanied the regulations, Environment Canada intends to prepare reports, on a regular basis, comparing the actual performance for each primary supplier's facilities and imports

to the regulated sulphur limits. The reports will be available to the public and will be distributed to interested parties.

0.5 How do I obtain a copy of the Sulphur in Gasoline Regulations?

The regulations were published on June 23, 1999 in the *Canada Gazette, Part II*, pages 1469-1510. While supplies last, copies may be obtained from the address listed below (refer to Question N.1, below). The regulations can also be downloaded from Canada Gazette's web site:

"http://canada.gc.ca/gazette/gazette_e.html"

NEW QUESTIONS

N.1 How do I ask further questions on the Sulphur in Gasoline 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:

Head
Oil and Gas Section
Environment Canada
Ottawa, Ontario K1A 0H3

Fax: 819-953-8903

Replies will be provided to the sender, either verbally or in writing. The question and reply may appear in any future versions of this guidance document.

Oil, Gas & Energy Branch Environment Canada June 2001

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
15th floor, Queen Square
Dartmouth, Nova Scotia B2Y 2N6

Quebec

Director
Environmental Protection -- Quebec Region
Environment Canada
105 rue McGill, 7th floor
Montreal, Quebec H2Y 2E7

Ontario

Director
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

Director
Environmental Protection -- Pacific & Yukon Region
Environment Canada
224 West Esplanade
North Vancouver, British Columbia V7M 3H7

Appendix B

ADDRESSES OF REFERRAL ASSOCIATIONS FOR AUDITORS

Standards Council of Canada 45 O'Connor St. Ottawa, Ontario K1P 6N7

Tel: 613-238-3222

Registrar Accreditation Board 611 East Wisconsin Ave. Milwaukee, Wisconsin 53202-4606 U.S.A.

Tel: 414-272-3937