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COUNCIL DIRECTIVE 1999/32/EC

of 26 April 1999

relating to a reduction in the sulphur content of certain liquid fuels and amending Directive 93/12/EEC

(OJ L 121, 11.5.1999, p. 13)

Amended by:

		Official Journal		
		No	page	date
► <u>M1</u>	Regulation (EC) No 1882/2003 of the European Parliament and of the Council of 29 September 2003	L 284	1	31.10.2003
► <u>M2</u>	Directive 2005/33/EC of the European Parliament and of the Council of 6 July 2005	L 191	59	22.7.2005
► <u>M3</u>	Regulation (EC) No 219/2009 of the European Parliament and of the Council of 11 March 2009	L 87	109	31.3.2009
► <u>M4</u>	Directive 2009/30/EC of the European Parliament and of the Council of 23 April 2009	L 140	88	5.6.2009
► <u>M5</u>	Directive 2012/33/EU of the European Parliament and of the Council of 21 November 2012	L 327	1	27.11.2012

**COUNCIL DIRECTIVE 1999/32/EC****of 26 April 1999****relating to a reduction in the sulphur content of certain liquid fuels
and amending Directive 93/12/EEC**

THE COUNCIL OF THE EUROPEAN UNION,

Having regard to the Treaty establishing the European Community, and in particular Article 130s(1) thereof,

Having regard to the proposal from the Commission ⁽¹⁾,Having regard to the opinion of the Economic and Social Committee ⁽²⁾,Acting in accordance with the procedure laid down in Article 189c of the Treaty ⁽³⁾,

- (1) Whereas the objectives and principles of the Community's environmental policy as set out in the action programmes on the environment and in particular the Fifth Environmental Action Programme ⁽⁴⁾ on the basis of principles enshrined in Article 130r of the Treaty, aim in particular to ensure the effective protection of all people from the recognised risks from sulphur dioxide emissions and to protect the environment by preventing sulphur deposition exceeding critical loads and levels;
- (2) Whereas Article 129 of the Treaty provides that health protection requirements are to form a constituent part of the Community's other policies; whereas Article 3(o) of the Treaty also provides that the activities of the Community should include a contribution to the attainment of a high level of health protection;
- (3) Whereas emissions of sulphur dioxide contribute significantly to the problem of acidification in the Community; whereas sulphur dioxide also has a direct effect on human health and on the environment;
- (4) Whereas acidification and atmospheric sulphur dioxide damage sensitive ecosystems, reduce biodiversity and reduce amenity value as well as detrimentally affecting crop production and the growth of forests; whereas acid rain falling in cities may cause significant damage to buildings and the architectural heritage; whereas sulphur dioxide pollution may also have a significant effect upon human health, particularly among those sectors of the population suffering from respiratory diseases;
- (5) Whereas acidification is a transboundary phenomenon requiring Community as well as national or local solutions;
- (6) Whereas emissions of sulphur dioxide contribute to the formation of particulate matter in the atmosphere;

⁽¹⁾ OJ C 190, 21.6.1997, p. 9, and OJ C 259, 18.8.1998, p. 5.

⁽²⁾ OJ C 355, 21.11.1997, p. 1.

⁽³⁾ Opinion of the European Parliament of 13 May 1998 (OJ C 167, 1.6.1998, p. 111), Council Common Position of 6 October 1998 (OJ C 364, 25.11.1998, p. 20) and Decision of the European Parliament of 9 February 1999 (not yet published in the Official Journal).

⁽⁴⁾ OJ C 138, 17.5.1993, p. 5.

▼B

- (7) Whereas the Community and the individual Member States are Contracting Parties to the UN-ECE Convention on Long-Range Transboundary Air Pollution; whereas the second UN-ECE Protocol on transboundary pollution by sulphur dioxide foresees that the Contracting Parties should reduce sulphur dioxide emissions in line with or beyond the 30 % reduction specified in the first Protocol and whereas the second UN-ECE Protocol is based on the premise that critical loads and levels will continue to be exceeded in some sensitive areas; whereas further measures to reduce sulphur dioxide emissions will still be required if the objectives in the Fifth Environmental Action Programme are to be respected; whereas the Contracting Parties should therefore make further significant reductions in emissions of sulphur dioxide;
- (8) Whereas sulphur which is naturally present in small quantities in oil and coal has for decades been recognised as the dominant source of sulphur dioxide emissions which are one of the main causes of 'acid rain' and one of the major causes of the air pollution experienced in many urban and industrial areas;
- (9) Whereas the Commission has recently published a communication on a cost-effective strategy to combat acidification in the Community; whereas the control of sulphur dioxide emissions originating from the combustion of certain liquid fuels was identified as being an integral component of this cost-effective strategy; whereas the Community recognises the need for measures regarding all other fuels;
- (10) Whereas studies have shown that benefits from reducing sulphur emissions by reductions in the sulphur content of fuels will often be considerably greater than the estimated costs to industry in this Directive and whereas the technology exists and is well established for reducing the sulphur level of liquid fuels;
- (11) Whereas, in conformity with the principle of subsidiarity and the principle of proportionality referred to in Article 3b of the Treaty, the objective of reducing the emissions of sulphur dioxide arising from the combustion of certain types of liquid fuels cannot be achieved effectively by Member States acting individually; whereas uncoordinated action offers no guarantee of achieving the desired objective, is potentially counterproductive and will result in considerable uncertainty in the market for the fuel products affected; whereas, in view of the need to reduce sulphur dioxide emissions across the Community, it is therefore more effective to take action at the level of the Community; whereas this Directive limits itself to the minimum requirements necessary to achieve the desired objective;
- (12) Whereas in Council Directive 93/12/EEC of 23 March 1993 relating to the sulphur content of certain liquid fuels⁽¹⁾ the Commission was asked to submit to the Council a proposal prescribing lower limits for the sulphur content in gas oil and new limits for aviation kerosene; whereas it would be appropriate

⁽¹⁾ OJ L 74, 27.3.1993, p. 81.

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to lay down limits for the sulphur content of other liquid fuels, in particular heavy fuel oils, bunker fuel oils, marine gas oils and gas oils, on the basis of cost effectiveness studies;

- (13) Whereas, in accordance with Article 130t of the Treaty, this Directive should not prevent any Member State from maintaining or introducing more stringent protective measures; whereas such measures must be compatible with the Treaty and should be notified to the Commission;
- (14) Whereas a Member State, before introducing new, more stringent protective measures, should notify the draft measures to the Commission in accordance with Council Directive 83/189/EEC of 28 March 1983 laying down a procedure for the provision of information in the field of technical standards and regulations ⁽¹⁾;
- (15) Whereas, with regard to the limit on the sulphur content of heavy fuel oil, it is appropriate to provide for derogations in Member States and regions where the environmental conditions allow;
- (16) Whereas, with regard to the limit on the sulphur content of heavy fuel oil, it is also appropriate to provide for derogations for their use in combustion plants which comply with the emission limit values laid down in Council Directive 88/609/EEC of 24 November 1988 ⁽²⁾ on the limitation of emissions of certain pollutants into the air from large combustion plants; whereas in the light of the forthcoming revision of Directive 88/609/EEC, it may be necessary to review and, if appropriate, to revise certain provisions of this Directive;
- (17) Whereas for refinery combustion plants excluded from the scope of Article 3(3)(i)(c) of this Directive the emissions of sulphur dioxide averaged over such plants should not exceed the limits set out in Directive 88/609/EEC or any future revision of that Directive; whereas, in the application of this Directive, Member States should bear in mind that substitution by fuels other than those pursuant to Article 2 should not produce an increase in emissions of acidifying pollutants;
- (18) Whereas a limit value of 0,2 % for the sulphur content of gas oils has already been established pursuant to Directive 93/12/EEC; whereas that limit value should be changed to 0,1 % until 1 January 2008;
- (19) Whereas, in accordance with the 1994 Act of Accession, Austria and Finland have a derogation for a period of four years from the date of accession regarding the provisions in Directive 93/12/EEC concerning the sulphur content of gas oil;
- (20) Whereas the limit values of 0,2 % (from the year 2000) and of 0,1 % (from the year 2008) for the sulphur content of gas oils intended for marine use in sea-going ships may present technical and economic problems for Greece throughout its territory, for Spain with regard to the Canary Islands, for France with regard to the French Overseas Departments, and for Portugal with regard to

⁽¹⁾ OJ L 109, 26.4.1983, p. 8. Directive as last amended by Commission Decision 96/139/EC (OJ L 32, 10.2.1996, p. 31).

⁽²⁾ OJ L 336, 7.12.1988, p. 1. Directive as last amended by Directive 94/66/EC (OJ L 337, 24.12.1994, p. 83).

▼B

the archipelagoes of Madeira and Azores; whereas a derogation for Greece, the Canary Islands, the French Overseas Departments and the Archipelagoes of Madeira and Azores should not have a negative effect upon the market in gas oil intended for marine use and given that exports of gas oil for marine use from Greece, the Canary Islands, the French Overseas Departments and the Archipelagoes of Madeira and Azores to other Member States should satisfy the requirements in force in the importing Member State; whereas Greece, the Canary Islands, the French Overseas Departments and the Archipelagoes of Madeira and Azores should therefore be afforded a derogation from the limit values of sulphur by weight for gas oil used for marine purposes;

- (21) Whereas sulphur emissions from shipping due to the combustion of bunker fuels with a high sulphur content contribute to sulphur dioxide pollution and problems of acidification; whereas the Community will be advocating more effective protection of areas sensitive to SO_x emissions and a reduction in the normal limit value for bunker fuel oil (from the present 4,5 %) at the continuing and future negotiations on the MARPOL Convention within the International Maritime Organisation (IMO); whereas the Community initiatives to have the North Sea/Channel declared a special low SO_x emission control area should be continued;
- (22) Whereas more profound research into the effects of acidification on ecosystems and the human body is needed; whereas the Community is assisting such research under the Fifth Framework Research Programme ⁽¹⁾;
- (23) Whereas in the case of a disruption in the supply of crude oil, petroleum products or other hydrocarbons, the Commission may authorise application of a higher limit within a Member State's territory;
- (24) Whereas Member States should establish the appropriate mechanisms for monitoring compliance with the provisions of this Directive; whereas reports on the sulphur content of liquid fuels should be submitted to the Commission;
- (25) Whereas, for reasons of clarity, it will be necessary to amend Directive 93/12/EEC,

HAS ADOPTED THIS DIRECTIVE:

*Article 1***Purpose and scope**

1. The purpose of this Directive is to reduce the emissions of sulphur dioxide resulting from the combustion of certain types of liquid fuels and thereby to reduce the harmful effects of such emissions on man and the environment.

⁽¹⁾ OJ L 26, 1.2.1999, p. 1.

▼ M2

2. Reductions in emissions of sulphur dioxide resulting from the combustion of certain petroleum-derived liquid fuels shall be achieved by imposing limits on the sulphur content of such fuels as a condition for their use within Member States' territory, territorial seas and exclusive economic zones or pollution control zones.

The limitations on the sulphur content of certain petroleum-derived liquid fuels as laid down in this Directive shall not, however, apply to:

- (a) fuels intended for the purposes of research and testing;
- (b) fuels intended for processing prior to final combustion;
- (c) fuels to be processed in the refining industry;
- (d) fuels used and placed on the market in the outermost regions of the Community provided that the relevant Member States ensure that, in those regions:
 - air quality standards are respected,
 - heavy fuel oils are not used if their sulphur content exceeds 3 % by mass;
- (e) fuels used by warships and other vessels on military service. However, each Member State shall endeavour to ensure, by the adoption of appropriate measures not impairing the operations or operational capability of such ships, that these ships act in a manner consistent, so far as is reasonable and practical, with this Directive;
- (f) any use of fuels in a vessel necessary for the specific purpose of securing the safety of a ship or saving life at sea;
- (g) any use of fuels in a ship necessitated by damage sustained to it or its equipment, provided that all reasonable measures are taken after the occurrence of the damage to prevent or minimise excess emissions and that measures are taken as soon as possible to repair the damage. This shall not apply if the owner or master acted either with intent to cause damage, or recklessly;

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- (h) without prejudice to Article 3a, fuels used on board vessels employing emission abatement methods in accordance with Articles 4c and 4e.

▼ B*Article 2***Definitions**

For the purpose of this Directive:

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- 1. *heavy fuel oil* means:
 - any petroleum-derived liquid fuel, excluding marine fuel, falling within CN code 2710 19 51 to 2710 19 68, 2710 20 31, 2710 20 35, 2710 20 39, or

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- any petroleum-derived liquid fuel, other than gas oil as defined in points 2 and 3, which, by reason of its distillation limits, falls within the category of heavy oils intended for use as fuel and of which less than 65 % by volume (including losses) distils at 250 °C by the ASTM D86 method. If the distillation cannot be determined by the ASTM D86 method, the petroleum product is likewise categorised as a heavy fuel oil;

2. *gas oil* means:

- any petroleum-derived liquid fuel, excluding marine fuel, falling within CN code 2710 19 25, 2710 19 29, 2710 19 47, 2710 19 48, 2710 20 17 or 2710 20 19, or
- any petroleum-derived liquid fuel, excluding marine fuel, of which less than 65 % by volume (including losses) distils at 250 °C and of which at least 85 % by volume (including losses) distils at 350 °C by the ASTM D86 method.

Diesel fuels as defined in point 2 of Article 2 of Directive 98/70/EC of the European Parliament and of the Council of 13 October 1998 relating to the quality of petrol and diesel fuels ⁽¹⁾ are excluded from this definition. Fuels used in non-road mobile machinery and agricultural tractors are also excluded from this definition;

▼ M4

3. *marine fuel* means any petroleum-derived liquid fuel intended for use or in use on board a vessel, including those fuels defined in ISO 8217. It includes any petroleum-derived liquid fuel in use on board inland waterway vessels or recreational craft, as defined in Directive 97/68/EC of the European Parliament and of the Council of 16 December 1997 on the approximation of the laws of the Member States relating to measures against the emission of gaseous and particulate pollutants from internal combustion engines to be installed in non-road mobile machinery ⁽²⁾ and Directive 94/25/EC of the European Parliament and of the Council of 16 June 1994 on the approximation of the laws, regulations and administrative provisions of the Member States relating to recreational craft ⁽³⁾, when such vessels are at sea;

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- 3a. *marine diesel oil* means any marine fuel as defined for DMB grade in Table I of ISO 8217 with the exception of the reference to the sulphur content;
- 3b. *marine gas oil* means any marine fuel as defined for DMX, DMA and DMZ grades in Table I of ISO 8217 with the exception of the reference to the sulphur content;

⁽¹⁾ OJ L 350, 28.12.1998, p. 58.

⁽²⁾ OJ L 59, 27.2.1998, p. 1.

⁽³⁾ OJ L 164, 30.6.1994, p. 15.

▼ M2

- 3c. *MARPOL* means the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto;
- 3d. *Annex VI to MARPOL* means the annex, entitled ‘Regulations for the Prevention of Air Pollution from Ships’, that the Protocol of 1997 adds to MARPOL;
- 3e. *Ox Emission Control Areas* means sea areas defined as such by the IMO under Annex VI to MARPOL;
- 3f. *passenger ships* means ships that carry more than 12 passengers, where a passenger is every person other than:
- (i) the master and the members of the crew or other person employed or engaged in any capacity on board a ship on the business of that ship, and
 - (ii) a child under one year of age;
- 3g. *regular services* means a series of passenger ship crossings operated so as to serve traffic between the same two or more ports, or a series of voyages from and to the same port without intermediate calls, either:
- (i) according to a published timetable, or
 - (ii) with crossings so regular or frequent that they constitute a recognisable schedule;
- 3h. *warship* means a ship belonging to the armed forces of a State bearing the external marks distinguishing such ships of its nationality, under the command of an officer duly commissioned by the government of the State and whose name appears in the appropriate service list or its equivalent, and manned by a crew which is under regular armed forces discipline;
- 3i. *ships at berth* means ships which are securely moored or anchored in a Community port while they are loading, unloading or hotelling, including the time spent when not engaged in cargo operations;

▼ M4▼ M2

- 3k. *placing on the market* means supplying or making available to third persons, against payment or free of charge, anywhere within Member States' jurisdictions, marine fuels for on-board combustion. It excludes supplying or making available marine fuels for export in ships' cargo tanks;
- 3l. *outermost regions* means the French overseas departments, the Azores, Madeira and the Canary Islands, as set out in Article 299 of the Treaty;

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- 3m. *emission abatement method* means any fitting, material, appliance or apparatus to be fitted in a ship or other procedure, alternative fuel, or compliance method, used as an alternative to low sulphur marine fuel meeting the requirements set out in this Directive, that is verifiable, quantifiable and enforceable;

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4. *ASTM method* means the methods laid down by the American Society for Testing and Materials in the 1976 edition of standard definitions and specifications for petroleum and lubricating products;
5. *combustion plant* means any technical apparatus in which fuels are oxidised in order to use the heat generated.

▼ M2*Article 3***Maximum sulphur content of heavy fuel oil****▼ M5**

1. Member States shall ensure that heavy fuel oils are not used within their territory if their sulphur content exceeds 1 % by mass.
2. Until 31 December 2015, subject to appropriate monitoring of emissions by competent authorities, paragraph 1 shall not apply to heavy fuel oils used:
 - (a) in combustion plants which fall within the scope of Directive 2001/80/EC of the European Parliament and of the Council of 23 October 2001 on the limitation of emissions of certain pollutants into the air from large combustion plants⁽¹⁾, which are subject to Article 4(1) or (2) or Article 4(3)(a) of that Directive and which comply with the emission limits for sulphur dioxide for such plants as set out in that Directive;
 - (b) in combustion plants which fall within the scope of Directive 2001/80/EC, which are subject to Article 4(3)(b) and Article 4(6) of that Directive and the monthly average sulphur dioxide emissions of which do not exceed 1 700 mg/Nm³ at an oxygen content in the flue gas of 3 % by volume on a dry basis;
 - (c) in combustion plants which do not fall under points (a) or (b), and the monthly average sulphur dioxide emissions of which do not exceed 1 700 mg/Nm³ at an oxygen content in the flue gas of 3 % by volume on a dry basis;
 - (d) for combustion in refineries, where the monthly average of emissions of sulphur dioxide averaged over all combustion plants in the refinery, irrespective of the type of fuel or fuel combination used, but excluding plants which fall under points (a) and (b), gas turbines and gas engines, do not exceed 1 700 mg/Nm³ at an oxygen content in the flue gas of 3 % by volume on a dry basis.
3. As from 1 January 2016, subject to appropriate monitoring of emissions by competent authorities, paragraph 1 shall not apply to heavy fuel oils used:
 - (a) in combustion plants which fall within the scope of Chapter III of Directive 2010/75/EU of the European Parliament and of the Council⁽²⁾, and which comply with the emission limits for sulphur dioxide for such plants as set out in Annex V to that Directive or, where those emission limit values are not applicable according to that Directive, for which the monthly average sulphur dioxide emissions do not exceed 1 700 mg/Nm³ at an oxygen content in the flue gas of 3 % by volume on a dry basis;

⁽¹⁾ OJ L 309, 27.11.2001, p. 1.

⁽²⁾ OJ L 334, 17.12.2010, p. 17.

▼ M5

- (b) in combustion plants which do not fall under point (a), and the monthly average sulphur dioxide emissions of which do not exceed 1 700 mg/Nm³ at an oxygen content in the flue gas of 3 % by volume on a dry basis;
- (c) for combustion in refineries, where the monthly average of emissions of sulphur dioxide averaged over all combustion plants in the refinery, irrespective of the type of fuel or fuel combination used, but excluding plants falling under point (a), gas turbines and gas engines, do not exceed 1 700 mg/Nm³ at an oxygen content in the flue gas of 3 % by volume on a dry basis.

Member States shall take the necessary measures to ensure that no combustion plant using heavy fuel oil with a sulphur concentration greater than that referred to in paragraph 1 is operated without a permit issued by a competent authority, which specifies the emission limits.

*Article 3a***Maximum sulphur content in marine fuel**

Member States shall ensure that marine fuels are not used within their territory if their sulphur content exceeds 3,50 % by mass, except for fuels supplied to ships using emission abatement methods subject to Article 4c operating in closed mode.

▼ B*Article 4***Maximum sulphur content in gas oil****▼ M5**

1. Member States shall ensure that gas oils are not used within their territory if their sulphur content exceeds 0,10 % by mass.

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*Article 4a***▼ M5**

Maximum sulphur content of marine fuels used in territorial seas, exclusive economic zones and pollution control zones of Member States, including SO_x Emission Control Areas and by passenger ships operating on regular services to or from Union ports

1. Member States shall take all necessary measures to ensure that marine fuels are not used in the areas of their territorial seas, exclusive economic zones and pollution control zones falling within SO_x Emission Control Areas if the sulphur content of those fuels by mass exceeds:

- (a) 1,00 % until 31 December 2014;
- (b) 0,10 % as from 1 January 2015.

▼ M5

This paragraph shall apply to all vessels of all flags, including vessels whose journey began outside the Union. The Commission shall have due regard to any future changes to the requirements pursuant to Annex VI to MARPOL applicable within SOx Emission Control Areas, and, where appropriate, without undue delay make any relevant proposals with a view to amending this Directive accordingly.

1a. Member States shall take all necessary measures to ensure that marine fuels are not used in the areas of their territorial seas, exclusive economic zones and pollution control zones if the sulphur content of those fuels by mass exceeds:

(a) 3,50 % as from 18 June 2014;

(b) 0,50 % as from 1 January 2020.

This paragraph shall apply to all vessels of all flags, including vessels whose journey began outside of the Union, without prejudice to paragraphs 1 and 4 of this Article and Article 4b.

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2. The application dates for paragraph 1 shall be as follows:

(a) for the Baltic Sea area referred to in regulation 14(3)(a) of Annex VI to MARPOL, 11 August 2006;

(b) for the North Sea:

— 12 months after entry into force of the IMO designation, according to established procedures, or

— 11 August 2007,

whichever is the earlier;

(c) for any other sea areas, including ports, that the IMO subsequently designates as SOx Emission Control Areas in accordance with regulation 14(3)(b) of Annex VI to MARPOL: 12 months after the date of entry into force of the designation.

3. Member States shall be responsible for the enforcement of paragraph 1 at least in respect of:

— vessels flying their flag, and

— in the case of Member States bordering SOx Emission Control Areas, vessels of all flags while in their ports.

Member States may also take additional enforcement action in respect of other vessels in accordance with international maritime law.

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4. Member States shall take all necessary measures to ensure that marine fuels are not used in their territorial seas, exclusive economic zones and pollution control zones falling outside SOx Emission Control Areas by passenger ships operating on regular services to or from any Union port if the sulphur content of those fuels exceeds 1,50 % by mass until 1 January 2020.

Member States shall be responsible for the enforcement of this requirement at least in respect of vessels flying their flag and vessels of all flags while in their ports.

5. Member States shall require the correct completion of ships' logbooks, including fuel-changeover operations.

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5a. Member States shall endeavour to ensure the availability of marine fuels which comply with this Directive and inform the Commission of the availability of such marine fuels in its ports and terminals.

5b. If a ship is found by a Member State not to be in compliance with the standards for marine fuels which comply with this Directive, the competent authority of the Member State is entitled to require the ship to:

- (a) present a record of the actions taken to attempt to achieve compliance; and
- (b) provide evidence that it attempted to purchase marine fuel which complies with this Directive in accordance with its voyage plan and, if it was not made available where planned, that attempts were made to locate alternative sources for such marine fuel and that, despite best efforts to obtain marine fuel which complies with this Directive, no such marine fuel was made available for purchase.

The ship shall not be required to deviate from its intended voyage or to delay unduly the voyage in order to achieve compliance.

If a ship provides the information referred to in the first subparagraph, the Member State concerned shall take into account all relevant circumstances and the evidence presented to determine the appropriate action to take, including not taking control measures.

A ship shall notify its flag State, and the competent authority of the relevant port of destination, when it cannot purchase marine fuel which complies with this Directive.

A port State shall notify the Commission when a ship has presented evidence of the non-availability of marine fuels which comply with this Directive.

6. Member States shall, in accordance with regulation 18 of Annex VI to MARPOL:

- (a) maintain a publicly available register of local suppliers of marine fuel;
- (b) ensure that the sulphur content of all marine fuels sold in their territory is documented by the supplier on a bunker delivery note, accompanied by a sealed sample signed by the representative of the receiving ship;
- (c) take action against marine fuel suppliers that have been found to deliver fuel that does not comply with the specification stated on the bunker delivery note;
- (d) ensure that remedial action is taken to bring any non-compliant marine fuel discovered into compliance.

7. Member States shall ensure that marine diesel oils are not placed on the market in their territory if the sulphur content of those marine diesel oils exceeds 1,50 % by mass.

▼ M5*Article 4b***Maximum sulphur content of marine fuels used by ships at berth in Union ports**

1. Member States shall take all necessary measures to ensure that ships at berth in Union ports do not use marine fuels with a sulphur content exceeding 0,10 % by mass, allowing sufficient time for the crew to complete any necessary fuel-changeover operation as soon as possible after arrival at berth and as late as possible before departure.

Member States shall require the time of any fuel-changeover operation to be recorded in ships' logbooks.

2. Paragraph 1 shall not apply:

- (a) whenever, according to published timetables, ships are due to be at berth for less than two hours;
- (b) to ships which switch off all engines and use shore-side electricity while at berth in ports.

3. Member States shall ensure that marine gas oils are not placed on the market in their territory if the sulphur content of those marine gas oils exceeds 0,10 % by mass.

*Article 4c***Emission abatement methods**

1. Member States shall allow the use of emission abatement methods by ships of all flags in their ports, territorial seas, exclusive economic zones and pollution control zones, as an alternative to using marine fuels that meet the requirements of Articles 4a and 4b, subject to paragraphs 2 and 3 of this Article.

2. Ships using the emission abatement methods referred to in paragraph 1 shall continuously achieve reductions of sulphur dioxide emissions that are at least equivalent to the reductions that would be achieved by using marine fuels that meet the requirements of Articles 4a and 4b. Equivalent emission values shall be determined in accordance with Annex I.

2a. Member States shall, as an alternative solution for reducing emissions, encourage the use of onshore power supply systems by docked vessels.

3. The emission abatement methods referred to in paragraph 1 shall comply with the criteria specified in the instruments referred to in Annex II.

4. Where justified in the light of scientific and technical progress regarding alternative emission abatement methods and in such a way as to ensure strict consistency with the relevant instruments and standards adopted by the IMO, the Commission shall:

- (a) be empowered to adopt delegated acts in accordance with Article 9a amending Annexes I and II;

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- (b) adopt implementing acts laying down the detailed requirements for monitoring of emissions, where appropriate. Those implementing acts shall be adopted in accordance with the examination procedure referred to in Article 9(2);

*Article 4d***Approval of emission abatement methods for use on board ships flying the flag of a Member State**

1. Emission abatement methods falling within the scope of Council Directive 96/98/EC ⁽¹⁾ shall be approved in accordance with that Directive.

2. Emission abatement methods not covered by paragraph 1 of this Article shall be approved in accordance with the procedure referred to in Article 3(2) of Regulation (EC) No 2099/2002 of the European Parliament and of the Council of 5 November 2002 establishing a Committee on Safe Seas and the Prevention of Pollution from Ships (COSS) ⁽²⁾, taking into account:

- (a) guidelines developed by the IMO;
- (b) the results of any trials conducted under Article 4e;
- (c) effects on the environment, including achievable emission reductions, and impacts on ecosystems in enclosed ports, harbours and estuaries; and
- (d) the feasibility of monitoring and verification.

*Article 4e***Trials of new emission abatement methods**

Member States may, in cooperation with other Member States, as appropriate, approve trials of ship emission abatement methods on vessels flying their flag, or in sea areas within their jurisdiction. During those trials, the use of marine fuels meeting the requirements of Articles 4a and 4b shall not be mandatory, provided that all of the following conditions are fulfilled:

- (a) the Commission and any port State concerned are notified in writing at least six months before trials begin;
- (b) permits for trials do not exceed 18 months in duration;
- (c) all ships involved install tamper-proof equipment for the continuous monitoring of funnel gas emissions and use it throughout the trial period;
- (d) all ships involved achieve emission reductions which are at least equivalent to those which would be achieved through the sulphur limits for fuels specified in this Directive;

⁽¹⁾ OJ L 46, 17.2.1997, p. 25.

⁽²⁾ OJ L 324, 29.11.2002, p. 1.

▼ M5

- (e) there are proper waste management systems in place for any waste generated by the emission abatement methods throughout the trial period;
- (f) there is an assessment of impacts on the marine environment, particularly ecosystems in enclosed ports, harbours and estuaries throughout the trial period; and
- (g) full results are provided to the Commission, and made publicly available, within six months of the end of the trials.

*Article 4f***Financial measures**

Member States may adopt financial measures in favour of operators affected by this Directive where such financial measures are in accordance with State aid rules applicable and to be adopted in this area.

▼ B*Article 5***Change in the supply of fuels**

If, as a result of a sudden change in the supply of crude oil, petroleum products or other hydrocarbons, it becomes difficult for a Member State to apply the limits on the maximum sulphur content referred to in Articles 3 and 4, that Member State shall inform the Commission thereof. The Commission may authorise a higher limit to be applicable within the territory of that Member State for a period not exceeding six months; it shall notify its decision to the Council and the Member States. Any Member State may refer that decision to the Council within one month. The Council, acting by a qualified majority, may adopt a different decision within two months.

▼ M5*Article 6***Sampling and analysis**

1. Member States shall take all necessary measures to check by sampling that the sulphur content of fuels used complies with Articles 3, 3a, 4, 4a and 4b. The sampling shall commence on the date on which the relevant limit for maximum sulphur content in the fuel comes into force. It shall be carried out periodically with sufficient frequency and quantities in such a way that the samples are representative of the fuel examined, and in the case of marine fuel, of the fuel being used by vessels while in relevant sea areas and ports. The samples shall be analysed without undue delay.

1a. The following means of sampling, analysis and inspection of marine fuel shall be used:

- (a) inspection of ships' log books and bunker delivery notes;

and, as appropriate, the following means of sampling and analysis:

▼ M5

- (b) sampling of the marine fuel for on-board combustion while being delivered to ships, in accordance with the Guidelines for the sampling of fuel oil for determination of compliance with the revised MARPOL Annex VI adopted on 17 July 2009 by Resolution 182(59) of the Marine Environment Protection Committee (MEPC) of the IMO, and analysis of its sulphur content; or
- (c) sampling and analysis of the sulphur content of marine fuel for on-board combustion contained in tanks, where technically and economically feasible, and in sealed bunker samples on board ships.

1b. The Commission shall be empowered to adopt implementing acts concerning:

- (a) the frequency of sampling;
- (b) the sampling methods;
- (c) the definition of a sample representative of the fuel examined.

Those implementing acts shall be adopted in accordance with the examination procedure referred to in Article 9(2).

2. The reference method adopted for determining the sulphur content shall be ISO method 8754 (2003) or PrEN ISO 14596 (2007).

In order to determine whether marine fuel delivered to and used on board ships is compliant with the sulphur limits required by Articles 3a, 4, 4a and 4b the fuel verification procedure set out in Appendix VI to Annex VI to MARPOL shall be used.

▼ M2*Article 7***Reporting and review****▼ M5**

1. Each year by 30 June, Member States shall, on the basis of the results of the sampling, analysis and inspections carried out in accordance with Article 6, submit a report to the Commission on the compliance with the sulphur standards set out in this Directive for the preceding year.

On the basis of the reports received in accordance with the first subparagraph of this paragraph and the notifications regarding the non-availability of marine fuel which complies with this Directive submitted by Member States in accordance with the fifth subparagraph of Article 4a(5b), the Commission shall, within 12 months from the date referred to in the first subparagraph of this paragraph, draw up and publish a report on the implementation of this Directive. The Commission shall evaluate the need for further strengthening the relevant provisions of this Directive and make any appropriate legislative proposals to that effect.

1a. The Commission may adopt implementing acts concerning the information to be included in the report and the format of the report. Those implementing acts shall be adopted in accordance with the examination procedure referred to in Article 9(2).

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2. By 31 December 2013 the Commission shall submit a report to the European Parliament and to the Council which shall be accompanied, if appropriate, by legislative proposals. The Commission shall consider in its report the potential for reducing air pollution taking into account, inter alia: annual reports submitted in accordance with paragraphs 1 and 1a; observed air quality and acidification; fuel costs; potential economic impact and observed modal shift; and progress in reducing emissions from ships.

3. The Commission shall, in cooperation with Member States and stakeholders, by 31 December 2012, develop appropriate measures, including those identified in the Commission's staff working paper of 16 September 2011 entitled "Pollutant emission reduction from maritime transport and the sustainable waterborne transport toolbox" promoting compliance with the environmental standards of this Directive, and minimising the possible negative impacts.

4. The Commission shall be empowered to adopt delegated acts in accordance with Article 9a concerning the adaptations of Article 2, points 1, 2, 3, 3a, 3b and 4, point (b) of Article 6(1a) and Article 6(2) to scientific and technical progress. Such adaptations shall not result in any direct changes to the scope of this Directive or to sulphur limits for fuels specified in this Directive.

Article 9

Committee procedure

1. The Commission shall be assisted by a committee. That committee shall be a committee within the meaning of Regulation (EU) No 182/2011 of the European Parliament and of the Council of 16 February 2011 laying down the rules and general principles concerning mechanisms for control by Member States of the Commission's exercise of implementing powers⁽¹⁾.

2. Where reference is made to this paragraph, Article 5 of Regulation (EU) No 182/2011 shall apply.

Where the committee delivers no opinion, the Commission shall not adopt the draft implementing act and the third subparagraph of Article 5(4) of Regulation (EU) No 182/2011 shall apply.

Article 9a

Exercise of the delegation

1. The power to adopt delegated acts is conferred on the Commission subject to the conditions laid down in this Article.

2. The power to adopt delegated acts referred to in Article 4c(4) and Article 7(4) shall be conferred on the Commission for a period of five years from 17 December 2012. The Commission shall draw up a report in respect of the delegation of power not later than nine months before the end of the five-year period. The delegation of power shall be tacitly

⁽¹⁾ OJ L 55, 28.2.2011, p. 13.

▼M5

extended for periods of an identical duration, unless the European Parliament or the Council opposes such extension not later than three months before the end of each period.

3. The delegation of power referred to in Article 4c(4) and Article 7(4) may be revoked at any time by the European Parliament or by the Council. A decision to revoke shall put an end to the delegation of the powers specified in that decision. It shall take effect the day following the publication of the decision in the *Official Journal of the European Union* or at a later date specified therein. It shall not affect the validity of any delegated acts already in force.

4. As soon as it adopts a delegated act, the Commission shall notify it simultaneously to the European Parliament and to the Council.

5. A delegated act adopted pursuant to Article 4c(4) and Article 7(4) shall enter into force only if no objection has been expressed either by the European Parliament or the Council within a period of three months of notification of that act to the European Parliament and the Council or if, before the expiry of that period, the European Parliament and the Council have both informed the Commission that they will not object. That period shall be extended by three months at the initiative of the European Parliament or of the Council.;

▼B*Article 10***Transposition**

Member States shall bring into force the laws, regulations and administrative provisions necessary to comply with this Directive before 1 July 2000. They shall immediately inform the Commission thereof.

When Member States adopt these provisions, these shall contain a reference to this Directive or shall be accompanied by such reference at the time of their official publication. The procedure for such reference shall be adopted by Member States.

Member States shall communicate to the Commission the text of the provisions of national law which they adopt in the field covered by this Directive.

▼M5*Article 11***Penalties**

1. Member States shall determine the penalties applicable to breaches of the national provisions adopted pursuant to this Directive.

2. The penalties determined must be effective, proportionate and dissuasive and may include fines calculated in such a way as to ensure that the fines at least deprive those responsible of the economic benefits derived from their infringement and that those fines gradually increase for repeated infringements.

▼B

Article 12

Entry into force

This Directive shall enter into force on the day of its publication in the *Official Journal of the European Communities*.

Article 13

Addressees

This Directive is addressed to the Member States.

▼ **M5***ANNEX I***EQUIVALENT EMISSION VALUES FOR EMISSION ABATEMENT
METHODS AS REFERRED TO IN ARTICLE 4c(2)**

Marine fuel sulphur limits referred to in Articles 4a and 4b and regulations 14.1 and 14.4 of Annex VI to MARPOL and corresponding emission values referred to in Article 4c(2):

Marine fuel Sulphur Content (% m/m)	Ratio Emission SO ₂ (ppm)/CO ₂ (% v/v)
3,50	151,7
1,50	65,0
1,00	43,3
0,50	21,7
0,10	4,3

Note:

- The use of the Ratio Emissions limits is only applicable when using petroleum based Distillate or Residual Fuel Oils.
- In justified cases where the CO₂ concentration is reduced by the exhaust gas cleaning (EGC) unit, the CO₂ concentration may be measured at the EGC unit inlet, provided that the correctness of such a methodology can be clearly demonstrated.

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ANNEX II

CRITERIA FOR THE USE OF EMISSION ABATEMENT METHODS REFERRED TO IN ARTICLE 4c(3)

The emission abatement methods referred to in Article 4c shall comply at least with the criteria specified in the following instruments, as applicable:

Emission abatement method	Criteria for use
Mixture of marine fuel and boil-off gas	Commission Decision 2010/769/EU of 13 December 2010 on the establishment of criteria for the use by liquefied natural gas carriers of technological methods as an alternative to using low sulphur marine fuels meeting the requirements of Article 4b of Council Directive 1999/32/EC relating to a reduction in the sulphur content of certain liquid fuels as amended by Directive 2005/33/EC of the European Parliament and of the Council on the sulphur content of marine fuels ⁽¹⁾ .
Exhaust gas cleaning systems	Resolution MEPC.184(59) adopted on 17 July 2009 "Wash water resulting from exhaust gas cleaning systems which make use of chemicals, additives, preparations and relevant chemical created in situ", referred to in point 10.1.6.1 of Resolution MEPC.184(59), shall not be discharged into the sea, including enclosed ports, harbours and estuaries, unless it is demonstrated by the ship operator that such wash water discharge has no significant negative impacts on and do not pose risks to human health and the environment. If the chemical used is caustic soda it is sufficient that the washwater meets the criteria set out in Resolution MEPC.184(59) and its pH does not exceed 8,0.
Biofuels	Use of biofuels as defined in Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources ⁽²⁾ that comply with the relevant CEN and ISO standards. The mixtures of biofuels and marine fuels shall comply with the sulphur standards set out in Article 3a, Article 4a(1), (1a) and (4) and Article 4b of this Directive.

⁽¹⁾ OJ L 328, 14.12.2010, p. 15.

⁽²⁾ OJ L 140, 5.6.2009, p. 16.