

Response to consultation for the Merchant Shipping (Prevention of Air Pollution from Ships) (Amendment) Regulations 2009

	Respondent	Submission Date	Summary of Comments	Response
1	Eberspacher UK	04 June 09	1. Consultation seems to be aimed solely at Merchant Shipping. Not clear how amendments will affect the leisure boat industries and general boating public. At this time a majority of this market is using high sulphur off road gas oil / household heating oil.	1. Article 4b(1)(a) of the directive requires inland waterway vessels not to use marine fuels with a sulphur content exceeding 0.10% by mass, and article 4b(3) requires that with effect of 1 January 2010 marine gas oils are not placed on the market if their sulphur content exceeds 0.10% by mass. Both these articles, which affect inland waterway vessels, are transposed by these regulations.
2	Society of International Gas Tanker and Terminal Operators Ltd. (SIGTTO)	17 June 09 & 22 June 09	1. Response only addresses the issues as they pertain to steam propelled LNG vessels. 2. Response highlights concerns with the use of low sulphur fuel (<0.10% S) by LNG carriers whilst at berth in UK ports. Specifically, SIGTTO identify a potential hazard to ships using boilers when undertaking fuel changeover from High Sulphur Marine Fuel to Low Sulphur Marine Fuel (distillates). 3. Response identifies an alternative compliance scheme, that is, one where LNG ships that use "Boil Off Gas", which results in zero sulphur emissions, for propulsion at sea are given dispensation against the requirement to burn low sulphur fuel in port, as the overall emissions could be lower than if LNG ships burnt High Sulphur Marine Fuel at sea and Low Sulphur Marine Fuel in port.	1. Noted. 2. The UK does not consider the use of distillate to present any greater risk where the unit is designed to burn distillate and correct operational procedures are followed. 3. We consider such an approach to be equivalent to the use of emission abatement technologies. As such any scheme should conform to the criteria that emission abatement technologies are required to comply with in Article 4c(4). Specifically we do not consider that the proposed scheme would comply with the criteria "continuously achieve emission reductions which are at least

				<p>equivalent to those which would be achieved through the limits on sulphur in fuel specified in this Directive”.</p> <p>Further the policy objective of the Directive, that is, to improve human health and protect the environment could be undermined should such a scheme be introduced, in that, ports would not see the reduction in ship emissions being sought.</p>
3	Lloyd’s Register	29 June 09	<p><u>Specific comments on draft SI:</u></p> <p>Schedule 2A 1. The exemption clauses currently given under MARPOL Annex VI reg. 3 or EU Directive Article 1 (f) or (g) are not contained in this regulation. Is this given elsewhere in the overall regulations?</p> <p>Interpretation 2. References given to ISO8217 are given without date which actually defines the edition. Since the viscosity or density limits could change in future editions of the standard (it is currently under review) the edition should be specified.</p> <p>Paragraph 2(2)(b) 3. This reads “...oxide, from both auxiliary and main propulsion engines...”. This listing covers only some of the fuel oil combustion devices which may be onboard. It is noted that the 1997 MARPOL Annex VI reg. 14(4)(b) prefaces this listing with the word “including” before “from” hence indicating that the control applies to the whole range of combustion machinery. We suggest either inserting the word “including” or deleting the text “from both auxiliary and main</p>	<p>1. S.I. 2008/2924 provides for these exemptions at Regulation 3(13)(a) and 3(13)(b)</p> <p>2. Agreed. The version is 2005. Insert “(2005)” after ISO 8217</p> <p>3. Agreed. We will delete the text “from both” and insert “including” which reflects MARPOL Annex VI text.</p>

			<p><i>propulsion engines.”</i></p> <p>Paragraph 3</p> <p>4. We assume that this paragraph is given in order to address the requirements of the Directive Article 4a subsection 1, which in turn reflect the relevant MARPOL Annex VI requirements, whereas paragraph 2 enacted the sulphur oxide controls as given MARPOL Annex VI.</p> <p>Therefore, it would appear that paragraph 3 is redundant since it is unclear under which circumstances the requirements of paragraph 2 in respect of the controls to be applied in a sulphur oxide emission control area would not be applicable. This point is further reinforced by the reference in paragraph 3(2)(b) to the use of emission abatement technologies as given by paragraphs 7 & 8.</p> <p>If a ship is using an approved exhaust gas cleaning system, duly approved by that ship's flag State – as per paragraph 2(2)(b) – then it would be meeting the Annex VI requirement. However, where a ship may be using the same device, now described as an emission abatement technology approved as per paragraph 7 & 8, it would not have the required MARPOL Annex VI certification and hence could be subject to detention as a result of the application of the Annex VI port State guidelines.</p> <p>It should be further noted in this regard that whereas an <i>“approved exhaust gas cleaning system”</i> would be approved only by the ship's flag State the approval of <i>“abatement technologies”</i> would not be undertaken by the ship's flag State but by each Member State in whose territory the</p>	<p>4. The UK considers exhaust gas cleaning systems to be an emission abatement technology.</p> <p>So in making these regulations it is important that the UK regulations do not create two systems for approval of emission abatement technology.</p> <p>The regulations need to be drafted to ensure that an exhaust gas cleaning system, as approved under paragraph 2(2)(b) can be used to comply with the requirements under paragraphs 3, 4, 5.</p> <p>We have amended the definition of emission abatement technologies to reflect that provided in the directive as this includes exhaust gas cleaning systems.</p>
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			<p><i>“Sampling of marine fuels to determine its sulphur content.”</i> We believe that the word used to commence this sentence should be <i>“Analysis.”</i></p> <p>13. Paragraph 11(2) and Paragraph 11(3) the ISO 14596 test method given is defined in its scope as being applicable to products having a sulphur content in the range 0.001% m/m to 2.50% m/m – it is not therefore applicable to fuel oils as may be used in accordance with Paragraph 2(3) where the limit value is 4.5 per cent mass.</p> <p>14. Additionally it is noted that the ISO 14596 test method is given without date reference (whereas the ISO 8754 is so defined) which is essential to exactly define the test method – the current method is dated 2007.</p> <p>Paragraph 11(2)</p> <p>15. This states ISO8754 (1992) as a possible test method however that method is now redundant having been replaced by ISO8754 (2003).</p>	<p>Title of paragraph 11. Amend paragraph 11(1) by deleting “Sampling” and inserting “Analysis”</p> <p>13. The test method given in MARPOL Annex VI is ISO 8754 (2003) which states <i>“The method is applicable to products having sulfur contents in the range 0,03 % (m/m) to 5,00 % (m/m).”</i>.</p> <p>We note that ISO 14596 only allows testing to 2.50% (m/m), it is quoted in the directive. Amend paragraph 11(3) after “and” and before “PrEN ISO 14596” insert “,for marine fuels not exceeding 2.50 per cent by mass,” And delete after “PrEN ISO 14596” marine fuels.</p> <p>14. Agreed. Whilst the UK is obliged to implement the directive as drafted we also need to consider the practical implementation by industry. As the standard has been updated we should refer to the amended version. Amend paragraph 11(2) and 11(3) by inserting “(2007)” after ISO 14596.</p> <p>15. Agreed. Whilst the UK is obliged to implement the directive as drafted we also need to consider the current status of a standard as used by industry. As the standard has been updated we should refer to the amended version. Amend paragraph 11(2) by deleting</p>
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			<p>Paragraph 11(3) 16. Under MARPOL Annex VI, as entered into force 2005, the ISO 8754 test method is the given method for fuel oil suppliers to assess the sulphur content of any fuel oil supplied to ships. The use of another test method as the reference method by the UK MCA would be of concern.</p> <p>Schedule 2</p> <p>Item 9(d), (3A) 17. Since an <i>“exhaust gas cleaning system”</i> could be the same device as an <i>“emission abatement technology”</i> it would need to be clear that if, in the former case, such a device had been approved by the flag State in accordance with the relevant</p>	<p>“(1992)” and inserting “(2003)”.</p> <p>16. We agree the test protocol is ISO 8754. Whilst ISO 14596 is a different test protocol the UK is obliged to implement the directive as drafted, and note that in practice ISO 8754 is the protocol usually used by industry. Further we note that for ISO 14596 <i>“The method is applicable to products or additives having sulfur contents in the range 0,001 % (m/m) to 2,50 % (m/m)”</i></p> <p>For ISO 8754 - Whilst the UK is obliged to implement the directive as drafted we also need to consider the current status of a standard as used by industry. As the standard has been updated we should refer to the amended version. Amend paragraph 11(3) by inserting date “2003”.</p> <p>Paragraph 11(4) ISO 4259 - Whilst the UK is obliged to implement the directive as drafted we also need to consider the current status of a standard as used by industry. As the standard has been updated we should refer to the amended version. So amend paragraph 11(4) delete “(1992)” insert “(2006)”.</p> <p>17. Agreed. See 3.4</p>
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		<p>MEPC guidelines whether the use of such a device would be subject to prosecution if it had not also be approved in accordance with paragraph 7 or 8 of Schedule 2A.</p> <p>Item 9(d), (3B)(b) 18. This gives a limit value of “0.10” whereas Schedule 2A Paragraph 10(2) gives the limit value as “0.1” – as is given in the Directive. The two should be consistent.</p> <p>Item 13 19. This gives “Density at 35° (kg/m³).” It would appear that this should read “°C” and furthermore the value of “35” is questioned. Fuel oil density is normally given at 15°C.</p> <p><u>Issues related to the application of the “at berth” requirements:</u></p> <p>20. How will the requirements “as soon as possible” / “as late as possible” be evaluated and the resulting time taken assessed as acceptable or unacceptable?</p> <p>21. In a free interpretation of “as soon as possible after arrival and as late as possible before departure” one could say that when a vessel is finished with main engines, all auxiliaries ought to be burning (or switching over?) to 0.1% sulphur fuel. Considering that the anchorage is covered as well, then if a vessel arrives first at anchorage and then (after a few days) proceeds to the port then it is assumed that the main engine is covered under 0.1% sulphur requirements as well?</p> <p>22. What would be the status / action taken of a</p>	<p>18. Agreed. See 3.11</p> <p>19. Agreed. Amend to read “Density at 15°C (kg/m³)....”</p> <p>20. See answer to 3.23 below</p> <p>21. Correct. The main engine is covered under 0.1% sulphur requirements when at anchorage.</p> <p>22. Yes, as the directive states “as soon</p>
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		<p>ship arriving at a UK port without the fuel oil onboard which would enable it to comply with the “at berth” requirement? In this regard, consider the situation where a vessel arrives at port without 0.1% sulphur fuel but has already arranged for a bunker stem for this to be delivered right upon arrival. Would this be considered accepted as “as soon as possible”?</p> <p>23. The consultation letter states <i>“The Directive requires a period of time which is “sufficient” to allow the crew to complete any necessary fuel oil changeover operation. We propose that the definition of “sufficient” be left to the professional judgement of a surveyor.”</i> We consider that this will leave considerable for different interpretations leading to inconsistencies in applying these regulations.</p> <p>24. Would a ship be able to use an exhaust gas cleaning system approved by its flag State in</p>	<p>as possible after arrival”, however, reliance on bunker delivery on arrival would leave the ship at risk of non-compliance should a bunker delivery fail. Further we would expect any fuel delivery to prioritise the delivery of compliant fuel over delivery of other fuels. See also answer to 3.23.</p> <p>23. The decision as to what is “sufficient” is dependent on numerous parameters and variables. For example, consideration of factors such as type of ship, size of ship, number of engines, engine size(s), etc. will determine what is “sufficient”, and,</p> <p>Our proposal will permit a significant degree of pragmatic interpretation and flexibility, and as with other requirements under UK Merchant Shipping regulation should be left to the judgement of the surveyor.</p> <p>For example, Article 4b does not apply where, according to published timetables, ships are due at berth for less than two hours. This could be considered as providing an indicative maximum time for fuel changeover to be completed, that is, one hour after arrival, however, the final judgement would remain that of the surveyor.</p> <p>MCA will issue guidance on this matter.</p> <p>24. See 3.4</p>
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		<p>accordance with the relevant MEPC guidelines as having equivalence to using 0.10% maximum sulphur fuel oil to meet these requirements – or would such a device also require to be approved by UK in accordance with Directive Article 4c?</p> <p>25. For ships were it is necessary to test (after overhaul, refitting, etc.) an engine’s capability to operate on a residual fuel oil (with a sulphur content inevitably above the 0.1% m/m limit) how will this be allowed for?</p> <p>26. In relation to the ‘at berth’ requirement what is the status of shipyards / ship repair facilities which (a) are or (b) are not part of a “port”?</p> <p>27. What is the status of ships securely anchored but outside “port” limits – however defined.</p> <p><u>Additional Considerations</u></p> <p>28. The feasibility for the existing machinery systems to be ready for burning the ultra low sulphur fuels is highly dependent on technological developments regarding engine boiler design.</p> <p>29. In addition, a practical consideration is whether all the modifications required have been readily available so that owners can undertake the necessary modifications in time. It is noted that in a large number of cases the level of modifications required (pumps, boilers (burners/ flame supervision for safety / atomising medium etc)) will require careful planning both from production and the operators. Similar</p>	<p>25. Article 1(a) exempts “fuels intended for the purposes of research and testing”. In the situation described we would consider the fuels to be used for testing. The regulations will be amended to include exemptions provided in Article 1(2) (a), (b), (c).</p> <p>26. The directive does not provide for any exemption for ships at berth in shipyards/ship repair facilities whether those facilities are part of a port or not.</p> <p>27. If securely anchored outside ‘port limits’ then the requirements for ships at berth do not apply.</p> <p>28. Noted.</p> <p>29. Noted.</p>
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			considerations apply for tanks and piping arrangements.	
4	Chevron Products UK Limited	01 July 09	<p>1. Due to the limited amount of time available, we will not be in a position to provide answers to all the specific questions included in your letter.</p> <p>2. It did seem to be a shame not to include the future requirement of MARPOL coming into force in July 2010 in your consultation. Maybe this could have been a 'policy option 3', which would have included the requirement of Marine Fuel Oil to have a sulphur content of 1% max.</p> <p>3. There seems to be a mistake on §10. (1) page 7 of Annex A: the word 'From' should replace the word 'Before'.</p>	<p>1. To minimise the risk of infraction by the European Commission the Minister agreed to shorten the consultation period from the recommended twelve weeks to six weeks.</p> <p>Please note that during the consultation period the UK has been referred to the European Court of Justice for failing to transpose the directive.</p> <p>2. Regulations implementing the revision of MARPOL Annex VI will be brought forward as soon as practicable. It was decided that to implement the directive the most straightforward approach would be to bring forward amending regulations to the 2008 regulations at this stage.</p> <p>3. Article 4(1) requires member states to restrict the use of marine gas oils in their territory from 1 January 2008 if the sulphur content exceeds 0.10% by mass. The use of the word "before" is therefore correct. The limit on use is deleted from Article 4 of the directive on 1 January 2010. Instead Article 4b(3) requires that on or after 1 January 2010 the placing on the market of marine gas oil with sulphur content exceeding 0.10% is prohibited. Paragraph 10(2) transposes this requirement.</p>

		<p>4. The idea of leaving to a surveyor to define what 'sufficient time' is interesting; however, greater clarity is required. For example, after arriving at anchor and having switched to auxiliary engines (that would have to be burning Gas Oil meeting 0.1% S), a ship would have to be burning 0.1% S Fuel in its main engines to get to a berth? If that was the case, that would cause major issues to the ships (financially and operationally). So far it's left to interpretation, as the Directive says 'as soon as possible after arrival'.</p> <p>5. If the requirement is 'only' to have ships on 0.1% S when they are not moving and only using auxiliary engines, this shouldn't be so much of an issue.</p> <p>6. Details of proposed penalties not seen, and the link provided on Annex C didn't work.</p> <p>7. It would seem to me that the MCA has not consulted enough shipping companies; to provide more accurate feedback on financial and operational issues. I think it would have been necessary to consult more Ferry and Cruise company (regularly calling the UK) as they all seem to have a different interpretation of the EU Directive as well.</p>	<p>4. See answer to question 3.23. The requirement is that "ships at berth" use 0.1% S fuel. These regulations transpose that requirement.</p> <p>5. Noted</p> <p>6. The draft regulations amend the 2008 regulations. Regulation 32 of S.I. 2008/2924 outlines the offences with penalties given in regulation 32(2). Paragraph 9 of Schedule of the draft regulations makes amendments to Regulation 32.</p> <p>MCA external website was checked on 2 July 2009 and the link to Annex C was working. Further please note no other respondee has identified this problem.</p> <p>7. We acknowledge that the list of consultees could be extended, however, it is difficult to judge when it is complete. Hence our question in the consultation asking whether the correct stakeholders have been consulted? We note your response for future consultations.</p>
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			<p>8. As a supplier, our, current practices will be meeting the new requirements, as we are only supplying gas oil with a sulphur content of 0.1% max.</p> <p>9. Agree with the scope of potential benefits to the environment, health, etc.. but we need to be conscious that this will drive freight prices further up and will have repercussions on the cost of goods and raw products transported by ship. Hence I'm not sure the financial benefits arising from the new requirements will be easy to measure in the short term.</p> <p>10. Again, the short timeframe does not allow us to be able to provide you quantified costs of benefits.</p>	<p>8. Noted</p> <p>9. Noted</p> <p>10. Please note answer given above to question 4.1.</p>
5	P&O Ferries Holdings Limited	01 July 09	<p>General points extracted from submission:</p> <ol style="list-style-type: none"> 1. Maximum sulphur content of marine fuels used at berth in EU Ports from 1st January 2010 2. Cost to the passenger sector of the shipping industry – marine fuel of 0.1% sulphur content at berth 3. Downturn of global economy 4. Lack of availability of ultra low sulphur (0.1% sulphur content) fuel 5. Technical feasibility for ships fuel systems – fuel changeover requirements 6. Safety of operation of ships machinery and 	<p>Specific answers are not given rather we have provided a general response to the points made by P&O.</p> <p>The UK is obliged to implement the directive and as it has failed to so far do so has been referred to European Court of Justice. Continued failure to implement the directive is likely to result in significant economic penalties being imposed on the UK.</p> <p>The draft regulations implement the sulphur content of liquid fuels directive, as amended, by a directive regarding the sulphur content of marine fuels which was published in July 2005. We therefore dispute the notion that the</p>

			<p>boilers</p> <p>7. Machinery failures since introduction of 1.5% sulphur content fuel</p> <p>8. Impact of imposition of high cost of 0.1% for ships at berth in EU Ports proposal on passenger and ferry industry</p> <p>9. Modal shift across transport modes</p> <p>10. Use of Emission Abatement Technologies</p> <p>11. Introduction of economic instruments</p> <p>12. Derogation for 16 Greek Ferries from the 0.1% sulphur requirement at berth of the SCLFD</p>	<p>industry has not had significant notice of the requirements of the directive and specifically the imposition of the 0.1% sulphur content of fuel for ships at berth.</p> <p>As by far the majority of points made by P&O concern European Union policy as opposed to UK policy we would advise that they be addressed to the European Commission directly as they are currently undertaking an impact assessment in order to bring forward a revised directive to reflect the revision of Annex VI of MARPOL adopted by IMO in October 2008.</p> <p>Under point 2 the accuracy of the figures quoted in the draft impact assessment were challenged as being grossly underestimated. The figures given reflect the costs and benefits as calculated in 2006 when the impact assessment was undertaken. Whilst we appreciate that there has been significant fluctuation in fuel prices since this date we consider the figures to remain broadly accurate in that the cost-benefit ratio is likely to have remained reasonably constant. Indeed option 2 of the proposed policy options indicates that the imposition of more stringent emission requirements would bring significantly greater benefits to society as a whole.</p> <p>See also the relevant responses given to the British Chamber of Shipping under 6.</p>
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6	The British Chamber of Shipping	02 July 09	<p>1. Limited time to provide a response.</p> <p>2. Revision to MARPOL Annex VI which enters into force in July 2010. Global economic downturn. Future revision of the directive to reflect revision of MARPOL Annex VI. Seek to minimise "valuable administrative and parliamentary time".</p>	<p>1. See answer to 4.1. Further the reason for the delay in bringing forward these regulations that implement the directive is that as there are common areas of policy with MARPOL Annex VI the UK determined that it should bring forward regulations to implement MARPOL Annex VI first and then make amending regulations to implement the directive. The MARPOL Annex VI regulations (S.I. 2008/2924) came into force on 8th December 2008. The delay in implementing S.I. 2008/2924 is, in part, because the UK had to bring forward primary legislation to enable the MCA then to make secondary legislation concerning the control of air emissions from ships.</p> <p>The UK is obliged to implement the directive and as it has failed to so far do so has been referred to European Court of Justice. Continued failure to implement the directive is likely to result in significant economic penalties being imposed on the UK.</p> <p>2. Once the UK has made regulations to implement the directive we shall be looking to make regulations to implement the revised MARPOL Annex VI. However, this will be in the context of the UK negotiating with the European Commission the draft directive and our aim this time would be to ensure that regulations can be brought forward that implement both the revised MARPOL Annex VI and the revised directive</p>
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			<p>3. Costs in impact assessment under-estimated,</p> <p>4. Requirements will require some ships to carry three different fuels of varying sulphur content</p> <p>5. Policy option 2 as proposed would be an order of magnitude greater.</p> <p>6. Use of economic instruments and review by the European Commission</p>	<p>together.</p> <p>3. The figures given reflect the costs and benefits as calculated in 2006 when the impact assessment was undertaken. Whilst we appreciate that there has been significant fluctuation in fuel prices since this date we consider the figures to remain broadly accurate in that the cost-benefit ratio is likely to have remained reasonably constant. Indeed option 2 of the proposed policy options indicates that the imposition of more stringent emission requirements would bring significantly greater benefits to society as a whole.</p> <p>4. Whilst we acknowledge there are additional technical challenges for operators we do not consider them to be insurmountable.</p> <p>5. Policy option 2 goes beyond the requirements of the directive. In part, the option was included in the impact assessment to be indicative of the significant additional benefits that can be gained through the imposition of more stringent emission standards. Whilst this may be so, with the concerns expressed by the Chamber and other industry stakeholders regarding costs during this economic recession, the government will not be seeking to implement option 2.</p> <p>6. Whilst the directive makes reference to the development of economic instruments in its preamble, and requires</p>
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			<p>7. Schedule 2A, Paragraph 5(5) – exemption clause “The Secretary of State may permit the use by a ship…….”</p> <p>8. Safety hazard associated with the use of marine gas oil in boilers</p> <p>9. Parameters as to what reflects “sufficient”</p> <p>10. Agree that definition of “short voyage” should be amended to reflect amendment to IMO resolution</p>	<p>a review of the directive by the Commission by 2008, we are not aware of any such review having taken place, and if it has then is likely to have been linked to the revisions to MARPOL Annex VI adopted by IMO in October 2008.</p> <p>7. The exemption is provided by Article 5 of the directive which refers to Article 3 and 4 only. Article 3 refers to heavy fuel oils used on land and Article 4 is limited to marine gas oils only. The draft regulations are amended to reflect the limit of this exemption.</p> <p>Providing an exemption beyond that provided for in the directive would risk the UK being subject to further infraction by the European Commission for failing to implement the directive in full.</p> <p>8. See answer to 2.2</p> <p>9. The MCA welcomes the constructive advice provided by the Chamber on this matter. As stated in the answer to 3.23 we plan to issue guidance on the matter, and will note the Chamber’s suggestions for that guidance.</p> <p>10. Noted.</p>
7	Shell International	02 July 09	1a. Agree that, as drafted, the proposed	1a. Noted

	<p>Trading and Shipping Company Limited</p>		<p>Regulations appropriately cover the requirements of the SCMFD. 1b. Further it is agreed that Option 1 is the most appropriate route to comply with the EU directive. Option 2 is considered impractical.</p> <p>2. The time required for changeover will vary from vessel to vessel and also depending on operational circumstances. Surveyors should take into account equipment manufacturers' guidance, company and vessel specific procedures, and the professional opinion of ships' staff.</p> <p>3. Agree definition of "short voyage" of 1000 miles</p> <p>4a. Technically, most ships will need to be modified in order to be able to burn a distillate fuel. Ships are currently typically configured to burn one or two grades of residual fuels, possibly in combination with LNG for LNG carriers. Distillate fuel is generally only used for start-up and shutdown from re-fit and thus there is usually not enough tank capacity for extended use. Distillate fuels with corresponding reduced fuel viscosity and increased energy content requires modification to fuel systems, boilers and corresponding control systems. 4b. Specific safety concerns associated with marine boilers requires careful engineering of systems to ensure continued safe operation.</p> <p>4c. We are currently in the process of engineering the modifications to its owned and operated fleet of 29 vessels, with the intention for vessels to be compliant with the regulation. Prioritisation of modifications will be geared to the trading pattern of the ships. The cost of compliance in CAPEX terms is estimated at GBP13million excluding the</p>	<p>1b. See answer to 6.5</p> <p>2. The MCA welcomes the constructive advice provided by Shell on this matter. As stated in answer to 3.23 we plan to issue guidance on the matter, and will note Shell's suggestions for that guidance.</p> <p>3. Noted</p> <p>4a. Noted.</p> <p>4b. Agreed. See answer to 2.2</p> <p>4c. Noted. The directive was published in August 2005 and so we consider the shipping industry to have had nearly 4 years notice of the 0.1% S requirements, to instigate a programme of modifications e.g., ships' withdrawal from service, and</p>
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			<p>cost of lost revenue resulting from need to withdraw vessels from service for completion of modification works.</p> <p>4d. Some vessels will not have sufficient distillate fuel storage capacity and thus may require re-engineering with additional fuel tanks. Large oil tankers with steam plant for cargo discharging face similar boiler problems to the LNG vessels but do not have the option to operate on LNG fuel.</p> <p>5a. The EU directive is not aligned with Marpol Annex VI which only requires the use of 0.1% Sulphur fuel from 2015 in the ECA designated zones.</p> <p>5b. Furthermore Option 2 differs even more from Annex VI by the introduction of another limit (0.5%S) and significantly changes the existing SECA requirement. This would generate significant difficulties in terms of managing impacts.</p> <p>5c. The Marpol provisions took into account relevant input from all stakeholders and is structured with phased changes on a global basis. The EU directive is out of step with this and will result in significant practical operational difficulties.</p> <p>6a. Overall costs related to changed practices</p>	<p>so costs associated with the now urgent requirement to comply by 1 January 2010 cannot be considered the responsibility of UK. Further it is unclear from the response whether all the ships identified by Shell (a) trade within UK waters, (b) are registered on the UK flag?</p> <p>4d. See answer to 6.4.</p> <p>5a. The requirements under the directive are not aligned with revised MARPOL Annex VI, as the directive was adopted in 2005 and the revision of MARPOL Annex VI in 2008.</p> <p>5b. See answer to 6.5</p> <p>5c. The directive was published in August 2005 and reflects EU policy on control of sulphur emissions from ships</p> <p>6a. Noted</p>
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		<p>have not yet been assessed and in any case will depend on fuel costs that are as yet unknown but are expected to be significant. Historically the differential in price between distillate and residual fuels has varied between 100 and 500 US\$ per tonne.</p> <p>6b. Ships are not currently capable of compliance. As a consequence, engineering of modifications to ships to permit use of distillate fuels is currently in hand (refer to above). The timescale for compliance with Option 1 is challenging, however the intent is for our owned and operated vessels to be compliant. Costs are estimated to be in the order of GBP 800,000 per vessel for (steam turbine) LNG carriers and GBP 300,000 for motor ships.</p> <p>7. Do not agree with the scope of potential benefits arising from the new requirements, specifically the DfT value for money statement claims that there will be reduced nitrous oxide emissions and CO₂. There is ample evidence to suggest that switching to distillate fuels does not result in reduced NOx. Furthermore, any reduction in CO₂ through burning distillate on board ship is more than offset by the increased CO₂ involved in the production of the fuel in refineries.</p> <p>Consider that the potential costs to ship owners are significantly understated.</p> <p>The key assumption that lack of low sulphur fuel availability is low risk may not be valid.</p> <p>8. There is a claimed benefit for the UK shipping reputation. It is not clear how this legislation</p>	<p>6b. Noted</p> <p>7. Noted. See answer to 6.3</p> <p>The impact assessment was undertaken in 2006 and the DfT VFM statement is based, in part, on this assessment. Currently the UK is undertaking an impact assessment for the revision of MARPOL Annex VI. As more evidence has become available since 2006 we are able to provide a more holistic analysis of the costs and benefits for the policy options.</p> <p>8. The UK has been a strong advocate for the development of international</p>
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			<p>would result in a better reputation for UK flag vessels</p> <p>9. Very difficult to estimate the on-going annual costs. Some examples of the variables involved are as follows;</p> <ul style="list-style-type: none"> • Scale of future shipping activities in European ports is unknown at this time. • Fuel costs are unknown. • Refinery upgrade costs and scale are unknown. • Decisions on utilisation of abatement technology yet to be made 	<p>instruments that reduce emissions from international shipping. We consider the implementation of these regulations as supporting the goals of quality shipping, and so the reputation of UK ships as quality ships is enhanced.</p> <p>9. We agree the identification and quantification of all the variables in any impact assessment of the introduction of these regulations is extremely challenging. Shell identifies some of these variables and we note that they too are unable to provide a degree of certainty on any of them.</p>
8	UK Petroleum Industry Association Ltd	02 July 09	<p>1. How UKPIA members supply 0.1% product is a commercial decision for each company, however 0.1% sulphur Gasoil material is already available in the UK market.</p> <p>2. 0.5% sulphur residue is not readily available in the market and, while small volumes may be provided by supplying 0.1% distillate fuel, the provision of larger volumes of 0.5% material will require substantial further refining processing</p> <p>3. UKPIA supports the change to option 1 which requires marine fuels with a maximum of 1.5% sulphur in UK SECAs to be maintained and the requirement that ships at berth in Community Ports use 0.1% S marine fuel from 1 January</p>	<p>1. Noted</p> <p>2. The 0.5% requirement relates to policy option 2 – see answer to 6.5</p> <p>3. Noted.</p>

			<p>2010.</p> <p>4. Further we note that IMO Marpol Annex VI requires the maximum sulphur level in SECAs to be reduced to 1.0% sulphur max on 1st July 2010 & trust we will be seeing a consultation for this change in due course. Also the Fuels Quality Directive 'FQD' requires 'inland waterway vessels' to use 10ppm sulphur max for propulsion (but can use 1000ppm for heating) from 1st January 2011.</p>	<p>4. The revision to MARPOL Annex VI, as adopted by IMO in October 2008, and the EU Fuel Quality Directive, as adopted in April 2009, will be subject to separate consultation.</p>
9	CalMac Ferries Ltd.	02 July 09	<p>1. Consider directive is focussed on main sea routes and not more regional operations</p> <p>2. Seek clarification on Schedule 2A, paragraph 5 as to whether the regulations create a conflict for operators</p> <p>3. Seek clarification on the exemption in paragraph 5(5)</p> <p>4. Identifies parameters to be considered when</p>	<p>1. The directive concerns the prevention of air pollution from shipping and the policy objective is to reduce airborne pollutants that are harmful to human health and the environment. As such the policy seeks reductions from the shipping industry, specifically from those ships that are considered to present the greatest risk both to people and the environment.</p> <p>2. We agree that as drafted the regulations did not reflect the directive.</p> <p>For 5(2)(d), at the end of the sentence after "as amended," insert "or" and delete "and", that is to comply the ship has to satisfy only one of the clauses under 5(2) so that paragraph 5(1) does not apply and not all five clauses.</p> <p>3. See answer to 6.7</p> <p>4. The MCA welcomes the constructive</p>

			<p>considering what is “sufficient” time for fuel changeover when a ship arrives at berth</p> <p>5. Operation issues of low sulphur fuel? Modern engines are designed to use higher viscosity and by implication high sulphur fuels during the start/stop cycles, changing over continuously to low sulphur may lead to additives in the lubricating oil being unused and this can, in some circumstances, lead to deposition on combustion space components.</p> <p>We haven't finalised what the cost implications but obviously there will be some albeit moderate. A greater cost will be the imposition of 1% & 0.1% max sulphur content due in 2010 & 2015 in SECA's</p> <p>We have no comment on penalties.</p> <p>Finally, we are certain that the MCA carried out a consultation with the correct stakeholders, its unfortunate that the consultation period wasn't longer</p>	<p>advice provided by CalMac on this matter. As stated in answer to 3.23 we plan to issue guidance on the matter, and will note Calmac's suggestions for that guidance.</p> <p>5. Noted</p> <p>5. Noted</p> <p>6. Noted</p> <p>7. Noted. See answers to 4.1 and 6.1</p>
10	A.P.Moller-Maersk	2 July 2009	<p>1. Sufficient time for fuel changeover could reasonably be set to approximately one hour. Ships at berth less than two hours are according to the directive excluded from the requirement of 0.1 % sulphur. Two changeover processes would thus equal this lower cut-off value of 2 hours for applicability.</p> <p>2. Agree that UK should adopt the increased limit in the definition of “short voyage” as in</p>	<p>1. The MCA welcomes the constructive advice provided by A.P.Moller-Maersk on this matter. As stated in answer to 3.23 we plan to issue guidance and will note A.P.Moller-Maersk's suggestions for that guidance.</p> <p>2. Noted</p>

		<p>accordance with commitments in international conventions.</p> <p>3. Consultation has been a transparent process with an open consultation easily accessible through MCA's website.</p> <p>4. The directive is already implemented in many EU member states and we operate our ships accordingly. However, the new requirements mean large boilers need to be modified in way of burner arrangements.</p> <p>5. Significant costs or benefits do not appear to have been overlooked</p> <p>6. Shipping is an international business and we operate in many countries ever day. We therefore believe that promulgation of general environmental regulations for shipping should be conducted through IMO. In October 2008 IMO adopted the revised MARPOL Annex VI which applies globally. The revised Annex is successful due to the fact that the changes represent the most stringent requirements existing worldwide. We therefore believe that the environmental goals may be achieved by international regulations.</p> <p>The legislation to be implemented in UK has been implemented in other EU member states. The ships are thus already operating in compliance with the directive. To enforce additional uni-lateral UK regulations as well would, in our point of view, be unnecessary and counter productive in ensuring compliance.</p> <p>With the reasons stated above we would therefore underline that option one, i.e. the</p>	<p>3. Noted</p> <p>4. Noted. See answer to 2.2.</p> <p>5. Noted</p> <p>6. Noted. See answer to 6.5.</p>
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			<p>already preferred option should be the most appropriate way forward.</p> <p>7. The directive doesn't go into details on what is to be defined as a community port. Nor do the proposed regulations make that definition. A clarification on what to define as a community port is relevant for the ships operation and planning. It should also clarify how and when UK ports have authority of an area which is geographically outside the port itself.</p> <p>8. The definition of ship at berth includes ships when they are hotelling. Hotelling is not defined in the directive or in any other documentation. EU member states have translated and implemented the word differently and to avoid confusion it is necessary to clearly define hotelling.</p>	<p>7. Whilst we agree that the directive does not provide a definition for "Community port" the UK is not able to provide such a definition as this would imply jurisdiction over other EU member states.</p> <p>8. Again we agree that no definition is provided, however, we consider the term 'hotelling' to be self-explanatory.</p>
11	Carnival UK	03 July 09 (N.B. submission dated after consultation deadline, however, MCA was notified before the deadline that a response would be forthcoming)	<p>1. Concern expressed regarding the 0.10% sulphur content of fuel requirement for ships at berth in EU ports. Recommend alignment with revision of MARPOL Annex VI.</p> <p>2. Impact assessment is inaccurate and should be up-dated to reflect 2010 cost figures.</p> <p>3. Increased costs could result in itinerary changes with subsequent loss of business and</p>	<p>1. The requirements under the directive are not aligned with revised MARPOL Annex VI, as the directive was adopted in 2005 and the revision of MARPOL Annex VI in 2008.</p> <p>2. The figures given reflect the costs and benefits as calculated in 2006 when the impact assessment was undertaken. Whilst we appreciate that there has been significant fluctuation in fuel prices since this date we consider the figures to remain broadly accurate in that the cost-benefit ratio is likely to have remained reasonably constant.</p> <p>3. Noted.</p>

			<p>jobs to ports.</p> <p>4. The non-availability of 0.10% S fuel may distort the market with some operators seeking to exploit routes where fuel is unavailable.</p> <p>5. Instead of having to carry three different grades of fuel oil, they are likely to carry only two which will increase costs further.</p> <p>6. Concerned that there maybe problems with the availability of facilities for fuel oil delivery</p> <p>7. Risk of explosion in boilers when using distillates.</p> <p>8. Support for the use of Market Based Instruments</p> <p>9. Identify a “short lead in to this legislation”.</p>	<p>4. Noted.</p> <p>5. Noted.</p> <p>6. Noted.</p> <p>7. See answer to 2.2</p> <p>8. Noted.</p> <p>9. The directive was published in August 2005 and so we consider the shipping industry to have had nearly 4 years notice of the requirement to use marine fuel with a sulphur content not exceeding 0.10% by mass whilst at berth.</p>
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