UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

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OFFICE OF
ENFORCEMENT AND
COMPLIANCE ASSURANCE

MEMORANDUM

SUBJECT: Interim Guidance on the Non-Availability of Compliant Fuel Oil for the North American Emission Control Area

FROM: Phillip A. Brooks, Director PAB
Air Enforcement Division

TO: OECA Mobile Source Enforcement Personnel, U.S. EPA
Captain Paul Thomas, Director, Inspections & Compliance (COMDT CG-5PC) U.S. Coast Guard
Captain Kyle McAvoy, Chief, Commercial Vessel Compliance (COMDT CG-CVC) U.S. Coast Guard

Attached is interim guidance addressing how the U.S. government will implement fuel oil availability provisions for ship owners and operators unable to obtain fuel oil that meets the fuel oil sulfur standards applicable to ships operating in waters off of the coast of North America.

The guidance provides background information on the North American Emission Control Area fuel oil sulfur standards, explains how owners and operators of vessels can establish compliance with these requirements, and describes how an owner or operator of a vessel who cannot obtain compliant fuel oil can make a fuel oil non-availability claim.

The guidance will be posted on the Office of Enforcement and Compliance Assurance website at: http://www.epa.gov/compliance/civil/caa/caaenfprog.html.

If you have any questions about this guidance, please contact Meetu Kaul (202-564-5472) in the Air Enforcement Division.

cc: Margo Oge, Director, Office of Transportation and Air Quality, U.S. EPA

Interim Guidance on the Non-Availability of Compliant Fuel Oil for the North American Emission Control Area

June 26, 2012

Annex VI to the International Convention for the Prevention of Pollution from Ships (MARPOL) has been in effect in the United States since January 8, 2009. MARPOL Annex VI is implemented in the United States through the Act to Prevent Pollution from Ships (APPS). Under the authority of APPS, the U.S. Environmental Protection Agency (the EPA), in consultation with the United States Coast Guard, has promulgated regulations which incorporate by reference the full text of MARPOL Annex VI. See 40 C.F.R. § 1043.100(a)(1).

Compliance with the MARPOL Annex VI air emission standards, including the fuel oil sulfur standards, will significantly reduce emissions from foreign and domestic vessels that affect U.S. air quality and impact human health. The Annex VI standards, in conjunction with the U.S. Clean Air Act standards applicable to U.S. ships, are expected to reduce the annual emissions of nitrogen oxides (NO_x), sulfur oxides (SO_x), and particulate matter (PM) by 1.2 million, 1.3 million, and 143,000 tons, respectively, by 2030. Annually, these reductions are estimated to prevent between 12,000 and 30,000 PM-related premature deaths, between 210 and 920 ozone-related premature deaths, 1,400,000 work days lost, and 9,600,000 minor restricted-activity days.

Why is the United States government issuing this guidance?

Under Annex VI, the North American Emission Control Area (North American ECA) will become enforceable on August 1, 2012. Beginning on that day, the sulfur content of the fuel oil used onboard ships operating in this area may not exceed 1.00% m/m (10,000 ppm). Compliant fuel oil is expected to be available from fuel oil suppliers that serve vessels that will operate in the North American ECA. However, if a ship owner or operator is unable to obtain compliant fuel oil, this document clarifies how the United States government will implement the fuel oil availability provisions contained in Regulation 18 to Annex VI, as incorporated by reference in 40 C.F.R. § 1043.100(a)(1). *This guidance is based on information available to the United States government as of June, 2012. This guidance may be superseded at any time.*

What are the geographic boundaries of the North American ECA?

The specific geographic coordinates that comprise the North American ECA are listed in the Marine Environment Protection Committee Resolution MEPC.190(60). *Available at*

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http://www.imo.org/Publications/Documents/Supplements%20and%20CDs/English/IA664E.pdf.

What are the MARPOL Annex VI fuel oil sulfur standards?

The MARPOL Annex VI fuel oil sulfur standards are set out in Annex VI Regulation 14 and 40 C.F.R. § 1043.60(b). The maximum sulfur content of fuel oil used in the North American ECA, which becomes enforceable on August 1, 2012, will be limited as follows:

1.00% m/m (10,000 ppm) from August 1, 2012 to December 31, 2014
0.10% m/m (1,000 ppm) on and after January 1, 2015.

Which vessels are required to comply with the Annex VI ECA fuel oil sulfur standard while operating in the North American ECA?

With limited exceptions, including for certain "public vessels" (as defined in 40 C.F.R. § 1043.20), all vessels that operate in the North American ECA are required to be in compliance with the Annex VI ECA fuel oil sulfur standard. Note, most vessels under 400 gross tonnage are likely already in compliance with the standard as the majority of these vessels operate using solely distillate fuel oil that meets the Annex VI ECA fuel oil sulfur limit.

How do I comply with the Annex VI ECA fuel oil sulfur standards while operating in the North American ECA?

You are required to either use Annex VI ECA compliant fuel oil when operating within the designated North American ECA, or to install and use an equivalent method as approved and allowed under MARPOL Annex VI Regulation 4, and 40 C.F.R. § 1043.55 (e.g., exhaust gas cleaning device).

How do I demonstrate that the fuel oil used on my ship complies with the Annex VI ECA fuel oil sulfur standard while operating in the North American ECA?

You are required to maintain and, if requested, make available to the United States government, the following:

- Bunker delivery notes, for vessels 400 gross tonnage and above. S*ee* Annex VI Regulation 18.5 and 40 C.F.R. §§ 1043.70, 1043.100. While bunker delivery notes are not required for ships less than 400 gross tonnage, owners and operators of such ships may maintain appropriate fuel oil records that document the sulfur content of fuel oil used onboard to demonstrate compliance with the requirements;
- Representative fuel oil samples, taken at the time of fuel oil delivery. *See* Annex VI Regulation 18.8.1 and 40 C.F.R. §§ 1043.70, 1043.100;
- Written fuel oil changeover procedures, which show how and when the fuel oil changeover is to be done to ensure that only compliant fuel oil is burned within a designated ECA. *See* Annex VI Regulation 14.6 and 40 C.F.R. §§ 1043.70, 1043.100); and

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- The fuel oil changeover logbook that contains the volume of compliant fuel oil in each tank as well as the date, time, and position of the ship when any fuel oil changeover operation is completed prior to entry into or commenced after exit of a designated ECA. *See* Annex VI Regulation 14.6 and 40 C.F.R. §§ 1043.70, 1043.100.

These records may be inspected to determine if the fuel oil used onboard the ship while operating in the North American ECA meets the MARPOL Annex VI sulfur standard. In addition, the United States government may also verify compliance by any methods available to it including, but not limited to, sampling and analyzing fuel oil from a ship's fuel oil tanks and lines, and sampling and analyzing air emissions from a ship's plume.

The United States government may also require additional information on a case by case basis.

The United States government may also use any credible evidence to determine compliance.

If compliant fuel oil meeting the 1.00% m/m (10,000 ppm) sulfur standard is not available when I purchase fuel oil, what should I do?

First, and most importantly, fuel oil that complies with the 1.00% m/m (10,000 ppm) sulfur standard is expected to be available for ships that plan to operate in the North American ECA just as it has been available for ships operating in the North Sea and Baltic Sulfur Emission Control Areas since July 2010. The law requires that you use compliant fuel oil or equivalent methods when operating within the North American ECA. MARPOL Annex VI Regulation 18, as incorporated by reference in 40 C.F.R. § 1043.100, anticipates the possibility that despite your best efforts to obtain compliant fuel oil, you may be unable to do so, and the United States has the authority to take into account all relevant circumstances to determine the appropriate action to take, including not taking control measures. *Id.*

Best efforts to procure compliant fuel oil include, but are not limited to, investigating alternate sources of fuel oil prior to commencing your voyage or in route prior to entering the North American ECA. If, despite your best efforts, you are unable to procure compliant fuel oil prior to entering the North American ECA, <u>you must notify the United States</u> and your flag Administration. *See* Annex VI Regulation 18.2.4, as incorporated by reference in 40 C.F.R. 1043.100(a)(1).

In addition, if you want the United States government to consider your efforts in determining what action the government may take, you should provide the following information in the form of a Fuel Oil Non-Availability Report, as described below, that details your efforts to obtain compliant fuel oil. <u>*In order to minimize disruptions to commerce and avoid delays, you should submit this Fuel Oil Non-Availability Report as soon as you determine, or become aware, that you will be unable to procure and use compliant fuel oil in the North American ECA, but no later than 96 hours prior to entering the North American ECA*</u>.

The United States government will consider this information when it determines what action, if any, it will take when the ship enters the North American ECA using noncompliant fuel oil.

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Does making a best effort mean that I am required to deviate from my intended voyage to purchase compliant fuel oil for use in the North American ECA?

You must consider the availability of compliant fuel oil when planning your voyage and, if compliant fuel oil is not available where planned, you must attempt to locate alternative sources for such fuel oil. *See* Regulation 18.2.1.2 as incorporated by reference in 40 C.F.R. § 1043.100. Furthermore, you must attempt to obtain ECA-compliant fuel oil at each port on your intended voyage. The United States government expects a vessel operator to make any adjustments that can be made to fuel oil purchase protocols that would allow the purchase of complaint fuel oil prior to entering the North American ECA. However, you are not required to deviate from your intended voyage in order to purchase compliant fuel oil. *See* Regulation 18.2.2 as incorporated by reference in 40 C.F.R. § 1043.100.

Furthermore, the United States government does not consider having to change berth or anchor within a port in order to receive compliant fuel oil to be a deviation. The United States government expects a vessel operator to account for these logistical conditions and/or terminal/port policies when planning bunker delivery during a port call.

Additionally, once you have entered the North American ECA, the United States government expects that you will take on compliant fuel oil, if available, from a U.S. port-of-call prior to further transit in the North American ECA.

If marine distillate fuel is available where I bunker, does making a best effort mean I am required to use this fuel?

The EPA has clarified that while we expect distillate fuels of various grades to be used as blending agents to produce 1.00% m/m (10,000 ppm) sulfur fuel oil, we do not expect vessels to use a fuel oil with viscosity less than 11 centistokes in order to meet the 1.00% m/m (10,000 ppm) fuel sulfur standard. *See* http://www.epa.gov/otaq/oceanvessels.htm then select *Guidance and Publications*. Therefore, consistent with this clarification, prior to January 1, 2015, when the 0.10% m/m (1,000 ppm) sulfur standard begins, we will not give consideration to the availability of distillate fuel oil, other than as a blending agent, when we evaluate the circumstances described in a submitted Fuel Oil Non-Availability Report. Rather, we will only consider the availability of residual and residual fuel oil blends in determining what action, if any, to take.

If I am unable to purchase 1.00% m/m (10,000 ppm) compliant fuel oil, but through my best efforts I purchase the cleanest fuel oil possible, will any consideration be given to my efforts?

In evaluating the circumstances described in a submitted Fuel Oil Non-Availability Report, the United States government will give consideration to actions taken to minimize the amount of excess emissions such as purchase of the next cleanest fuel oil possible.

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The United States government does not consider the cost of compliant fuel oil to be a valid basis for claiming you were unable to purchase 1.00% m/m (10,000 ppm) fuel oil. Nor is the cost of compliant fuel oil a valid basis for claiming that such fuel oil was not available.

In evaluating my efforts to purchase residual fuel oil blends meeting the 1.00% m/m (10,000 ppm) fuel oil sulfur standard, will consideration be given to the unique operating requirements of my vessel?

Yes. However, the United States government expects that you have taken, and will continue to take, actions necessary to enable your ship to burn most commercially available residual fuel oil blends. If you have taken such actions, then, if you limit your search for the lowest sulfur marine residual fuel oil (HFO or IFO) to those fuel oils that meet the operating requirements of your engines, for example with respect to viscosity or other fuel oil parameters, we will consider an explanation of these operating requirements as detailed in the Fuel Oil Non-Availability Report described below. If you have submitted a Fuel Oil Non-Availability Report for a ship that identifies such operational constraints, you must also specify steps you have taken, or are taking, to resolve these operational constraints that will allow you to use all commercially available residual fuel oil blends. The United States government will take into account progress made toward resolving these technical difficulties when determining the action it will take.

The United States government also expects that vessel operators are vigorously preparing for the 0.10% m/m (1,000 ppm) MARPOL Annex VI ECA fuel oil sulfur standard that will become effective January 1, 2015, and that will likely necessitate the use of distillate fuel oil. We expect that vessel operators will be prepared to operate their vessels using fuel oil that meets the 0.10% m/m (1,000 ppm) sulfur standard as soon as that standard takes effect.

What should my Fuel Oil Non-Availability Report contain?

MARPOL Annex VI Regulation 18.2, as incorporated by reference in 40 C.F.R. § 1043.100, provides that a vessel not in compliance with the fuel oil sulfur standards will "(1) present a record of the actions taken to attempt to achieve compliance; and (2) provide evidence that it attempted to purchase compliant fuel oil 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 fuel oil and that despite best efforts to obtain compliant fuel oil, no such fuel oil was made available for purchase."

Consistent with these requirements, the following information should be included in the Fuel Oil Non-Availability Report:

- The vessel's name, flag, and IMO identification number or other relevant registration number;
- A copy (or description) of the ship's voyage plan in place at the time of entry into the North American ECA, including the vessel's port of origin and port of destination, and the name of the first U.S. port of arrival;

- When the vessel first received notice it would be conducting a voyage involving transit in the North American ECA, and the vessel's location when it first received such notice;
- The date and time the ship operator expects to enter and exit the North American ECA, as well as the projected days on which the ship's main propulsion engines will be in operation;
- The sulfur content of the fuel oil that will be used when entering and operating in the North American ECA;
- A description of the actions taken to attempt to achieve compliance prior to entering the North American ECA, including a description of all attempts that were made to locate alternative sources of compliant fuel oil, and a description of the reason why compliant fuel oil was not available (e.g., compliant fuel oil was not available at ports on "intended voyage;" fuel oil supply disruptions at port; etc. As mentioned above, the United States government does not consider the cost of compliant fuel oil to be a valid basis for claiming the non-availability of compliant fuel oil). Include names and addresses of the fuel oil suppliers contacted and the dates on which the contact was made;
- In cases of fuel oil supply disruption, the name of the port at which the vessel was scheduled to receive compliant fuel oil and the name of the fuel oil supplier that is now reporting the non-availability of compliant fuel oil;
- If applicable, identify and describe any operational constraints that prevented you from using available compliant fuel oil, for example with respect to viscosity or other fuel oil parameters. Specify steps you have taken, or are taking, to resolve these operational constraints that will allow you to use all commercially available residual fuel oil blends;
- The availability of compliant fuel oil at the first port-of-call in the United States, and your plans to obtain that fuel oil;
- If compliant fuel oil is not available at the first port-of-call in the United States, the lowest sulfur content of available fuel oil, or the lowest sulfur content of available fuel oil at the next port-of-call in the United States;
- If the vessel has operated in the North American ECA in the prior 12 months, provide the names of all U.S. ports visited, the dates of the port calls, and whether the vessel used compliant fuel oil;
- If the vessel or owner/operator has submitted a Fuel Oil Non-Availability Report to the United States government in the previous 12 months, identify the number of Fuel-Oil Non-Availability Reports previously submitted, and provide details on the dates and ports previously visited while using non-compliant fuel oil; and
- All relevant contact information, including the ship master, ship operator, legal agent in the United States, ship owner, and any related parent companies. Also include a designated corporate official who is authorized to answer additional questions relating to claims of fuel oil unavailability and his or her full contact information.

The United States government will consider the information submitted in a Fuel Oil Non-Availability Report to be reliable only if the report is signed by an authorized representative of your company and contains the following affirmation:

I certify under penalty of law that the statements and information made herein are, to the best of my knowledge and belief, true and complete. I am aware that there are significant penalties for knowingly submitting false statements and information, including the possibility of fines and imprisonment pursuant to 18 U.S.C. § 1001.

When should I file my Fuel Oil Non-Availability Report?

If you are making a claim regarding the non-availability of compliant fuel oil, you should submit your Fuel Oil Non-Availability Report to the United States government prior to entering the North American ECA. The report should be submitted as soon as you determine that you will be unable to procure and use compliant fuel oil upon entry into the North American ECA, but no later than 96 hours prior to entering the North American ECA.

Where do I send my Fuel Oil Non-Availability Report?

The United States government is currently in the process of implementing an electronic system to receive Fuel Oil Non-Availability Reports. Information on the electronic system, including the launch date of the system, will be announced on U.S. EPA's website at http://www.epa.gov/otaq/oceanvessels.htm, and on the United States Coast Guard's website at http://homeport.uscg.mil, then select *Domestic Vessels* then *Domestic Vessel General,* then select *MARPOL Annex VI.* You may also sign up for an e-mail notification of the launch of the electronic system, as well as future marine alerts, using U.S. EPA's EnviroFlash application at: https://enviroflash.epa.gov/enviroflashOTAQPublic/Subscriber.do?method=start.

Prior to the implementation of the electronic system, you may send your Fuel Oil Non-Availability Report to the following e-mail address: marine-eca@epa.gov.

You must also notify your flag administration if you cannot purchase compliant fuel oil. *See* Annex VI Regulation 18.2.4, as incorporated by reference in 40 C.F.R. § 1043.100. Additionally, the United States government is obligated to notify the IMO when a ship presents evidence of the non-availability of compliant fuel oil. *See* Annex VI Regulation 18.2.5, as incorporated by reference in 40 C.F.R. § 1043.100.

By filing a Fuel Oil Non-Availability Report, will my ship be deemed to be in compliance with the MARPOL Annex VI fuel oil sulfur standard that applies in the North American ECA?

No. The filing of a Fuel Oil Non-Availability Report does not mean your ship is deemed to be in compliance with MARPOL Annex VI. However, the United States government will take into account the information provided in your Fuel Oil Non-Availability Report, as well as all relevant circumstances, to determine the appropriate action to take, if any, in response to the MARPOL Annex VI fuel oil sulfur standard violation.

In considering what action to take, the United States government will also consider the following:

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- The sulfur content of the fuel oil that was used onboard the ship, and whether it was the lowest sulfur fuel oil available at the time of fuel oil purchase and/or available along the ship's intended voyage;
- Whether the ship obtained compliant fuel oil at its first port-of-call in the United States and used that fuel oil for the remainder of the voyage in the North American ECA;
- How many Fuel Oil Non-Availability Reports have been previously filed by the ship, the operating company, and the vessel owner;
- What actions have been taken to address any engine-related constraints with respect to using compliant fuel oil that is available on the specified route;
- Whether other vessels on similar voyages submitted Fuel Oil Non-Availability Reports; and
- any other relevant factors.

What other actions may be required?

Once you have entered the North American ECA, in order to avoid further violations of Annex VI fuel oil requirements, you must purchase compliant fuel oil, if available, from a U.S. port-of-call prior to further transit in the North American ECA. You must purchase a sufficient quantity of such compliant fuel oil that will allow the ship to complete its voyage in the North American ECA.

Furthermore, if the vessel master or owner/operator is on notice that the vessel will be returning to the North American ECA on a future voyage and does not expect to be able to obtain compliant fuel oil outside of the North American ECA prior to the ship's return to the North American ECA, we expect that the vessel will obtain a sufficient quantity of compliant fuel oil from the U.S. port-of-call that will allow the vessel to re-enter the North American ECA on the future voyage in compliance with the Annex VI fuel oil sulfur standards. Failure to do so will be a factor in any enforcement response decision regarding that future entry.

Furthermore, the United States government may require additional documentation and substantiation of fuel oil non-availability claims from owners or operators of ships that have submitted repeated or multiple Fuel Oil Non-Availability Reports. The United States government may also consider conducting more extensive inspections or exams of such ships while in port.

Where can I get additional information on the North American ECA and the fuel oil sulfur requirements?

More detailed information on the MARPOL Annex VI requirements, including the North American ECA and fuel oil sulfur requirements, is available on the U.S. EPA's website at http://www.epa.gov/otaq/oceanvessels.htm, or on the United States Coast Guard's website at http://homeport.uscg.mil, then select *Domestic Vessels* then *Domestic Vessel General,* then select *MARPOL Annex VI.*

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