SUBMISSION COVER SHEET				
IMPORTANT: Check box if Confidential Treatment is requested Registered Entity Identifier Code (optional): 15-488				
	CRITEZR ATTEREZ 99)			
Organization: New York Mercantile Exchange, Inc. (
Filing as a:	SDR			
Please note - only ONE choice allowed. Filing Date (mm/dd/yy): 11/25/2015 Filing Description:	Amondments to Duadust Titles			
Contract Specifications, Listing Schedules and the Re				
Contract Months for Eleven (11) Gulf Coast Residual Fue	l Oil Futures and Options			
SPECIFY FILING TYPE				
Please note only ONE choice allowed per Submission.				
Organization Rules and Rule Amendments				
Certification	§ 40.6(a)			
Approval	§ 40.5(a)			
Notification	§ 40.6(d)			
Advance Notice of SIDCO Rule Change	§ 40.10(a)			
SIDCO Emergency Rule Change	§ 40.10(h)			
Rule Numbers:				
New Product Please note only ON	E product per Submission.			
Certification	§ 40.2(a)			
Certification Security Futures	§ 41.23(a)			
Certification Swap Class	§ 40.2(d)			
Approval	§ 40.3(a)			
Approval Security Futures	§ 41.23(b)			
Novel Derivative Product Notification	§ 40.12(a)			
Swap Submission	§ 39.5			
Official Product Name:				
Product Terms and Conditions (product related Rules and	d Rule Amendments)			
Certification	§ 40.6(a)			
Certification Made Available to Trade Determination	§ 40.6(a)			
Certification Security Futures	§ 41.24(a)			
Delisting (No Open Interest)	§ 40.6(a)			
Approval	§ 40.5(a)			
Approval Made Available to Trade Determination	§ 40.5(a)			
Approval Security Futures	§ 41.24(c)			
Approval Amendments to enumerated agricultural product	s § 40.4(a), § 40.5(a)			
"Non-Material Agricultural Rule Change"	§ 40.4(b)(5)			
Notification	§ 40.6(d)			
Official Name(s) of Product(s) Affected: See filing. Rule Numbers: See filing.				
Nuic Mumbers, see milig.				



November 25, 2015

VIA ELECTRONIC PORTAL

Mr. Christopher J. Kirkpatrick
Office of the Secretariat
Commodity Futures Trading Commission
Three Lafayette Centre
1155 21st Street, N.W.
Washington, DC 20581

RE: CFTC Regulation 40.6(a) Certification. Amendments to Product Titles, Contract Specifications, Listing Schedules and the Resumption of Listing Additional Contract Months for Eleven (11) Gulf Coast Residual Fuel Oil Futures and Option Contracts.

NYMEX Submission No. 15-488

Dear Mr. Kirkpatrick:

New York Mercantile Exchange, Inc. ("NYMEX" or "Exchange") is notifying the Commodity Futures Trading Commission ("CFTC" or "Commission") that it is self-certifying amendments to the product titles, contract specifications, listing schedules, and resuming the listing of additional contract months for eleven (11) Gulf Coast residual fuel oil futures and option contracts (the "Contracts") as described in Table 1 below, effective on Sunday, December 13, 2015 for trade date Monday, December 14, 2015.

On October 6, 2015, Platts announced that it would update the specifications of its USGC 3% Residual Fuel oil assessment to reflect RMG 380 3.5%S quality fuel oil, as per ISO 8217 specifications and rename the assessment as "USGC HSFO", with effect commencing on January 3, 2017. Since the Exchange references the Platts USGC 3% Residual Fuel oil assessment for settling the Contracts, NYMEX seeks to implement conforming amendments to the Contracts to maintain orderly trading. As a result, the Exchange is amending the names and specifications of the Contracts for all contract months commencing with the January 2017 contract month and beyond to coincide with the underlying changes in the physical market price assessments published by Platts.

Pursuant to NYMEX Submission No. 15-460 dated October 23, 2015, NYMEX previously suspended the listing schedule of seven (7) of the aforementioned Contracts, effective on November 9, 2015. Also effective on Sunday, December 13, 2015 for trade date Monday, December 14, 2015, the Exchange will resume generating contract months with a new listing schedule and rules as described in Table 1 below. The Contracts are financially settled and reference the Platts assessment of "US Gulf Coast 3%S Residual Fuel Oil." The NYMEX amendments are further described in the Special Executive Report (SER) dated November 5, 2015 (see Appendix A attached).

Table 1. Amendments to Product Titles and Listing Rules of the Contracts

Commodity Code (Clearing /Globex)	NYMEX Rule Chapter	Existing Product Title	New Product Title (effective December 11, 2015 for January- 2017 contract month and beyond)	Suspended Listing Rule (effective November 6, 2015 and per CFTC Submission 15- 460)	New Listing Rule (effective December 11, 2015) ¹
MF/MFB	612	Gulf Coast No. 6 Fuel Oil 3.0% (Platts) Futures	Gulf Coast HSFO (Platts) Futures	All consecutive months through and including December 2018	52 consecutive months
GFC/GFC	218	Gulf Coast No. 6 Fuel Oil (Platts) Crack Spread BALMO Futures	ulf Coast No. 6 uel Oil (Platts) rack Spread Gulf Coast HSFO (Platts) Crack bu		No change
NFG/NFG	219	NY 1% Fuel Oil (Platts) vs. Gulf Coast 3% Fuel Oil (Platts) BALMO Futures	NY 1% Fuel Oil (Platts) vs. Gulf Coast HSFO (Platts) BALMO Futures	One month and the following month for 10 business days prior to the start of the contract month	No change
GCU/GCU	425	Gulf Coast No. 6 Fuel Oil 3.0% (Platts) vs. European 3.5% Fuel Oil Barges FOB Rdam (Platts) Futures	Gulf Coast HSFO (Platts) vs. European 3.5% Fuel Oil Barges FOB Rdam (Platts) Futures	All consecutive months through and including December 2017	36 consecutive months
VZ/AVZ	503	Gulf Coast 3.0% Fuel Oil (Platts) BALMO Futures	Gulf Coast HSFO (Platts) BALMO Futures	One month and the following month for 10 business days prior to the start of the contract month	No change
VR/VR	543	NY 1% Fuel Oil (Platts) vs. Gulf Coast 3% Fuel Oil (Platts) Futures	NY 1% Fuel Oil (Platts) vs. Gulf Coast HSFO (Platts) Futures	All consecutive months through and including December 2016	36 consecutive months
FG/AFG	604	Gulf Coast No. 6 Fuel Oil 3.0% (Platts) Average Price Options	Gulf Coast HSFO (Platts) Average Price Options	All consecutive months through and including December 2016	52 consecutive months on CME ClearPort and NYMEX Trading Floor, 12 consecutive

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¹ All trading and clearing venues unless otherwise specified

					months on CME Globex
MG/MGH	613	Gulf Coast No. 6 Fuel Oil (Platts) Crack Spread Futures	Gulf Coast HSFO (Platts) Crack Spread Futures	All consecutive months through and including December 2017	36 consecutive months
GCB/GCB	1063	Gulf Coast No. 6 Fuel Oil 3.0% (Platts) vs. European 3.5% Fuel Oil Barges FOB Rdam (Platts) BALMO Futures	Gulf Coast HSFO (Platts) vs. European 3.5% Fuel Oil Barges FOB Rdam (Platts) BALMO Futures	One month and the following month for 10 business days prior to the start of the contract month	No change
FOC/FOC	1086	NY 3.0% Fuel Oil (Platts) vs. Gulf Coast No. 6 Fuel Oil 3.0% (Platts) Futures	NY 3.0% Fuel Oil (Platts) vs. Gulf Coast HSFO (Platts) Futures	All consecutive month through and including December 2016	36 consecutive months
GCI/GCI	1098	Gulf Coast No.6 Fuel Oil 3.0% (Platts) Brent Crack Spread Futures	Gulf Coast HSFO (Platts) Brent Crack Spread Futures	All consecutive months through and including December 2016	36 consecutive months

Also effective on Sunday, December 13, 2015 for trade date Monday, December 14, 2015, and in addition to aforementioned amendments, the Exchange will also make various changes to the Rule Chapter languages for the Contracts as summarized in Table 2 below. For the ten (10) futures contracts, amendments to certain Disclaimer and Prices and Fluctuations rules are administrative corrections and the changes to Floating Price rules are being implemented to refer to the correct Platts index title. For the one option contract, amendments to Expiration, Trading Unit, Strike Prices and Price Fluctuation Limits are implemented to refer to the correct NYMEX product and Platts index titles while the Disclaimer and Hours of Trading amendments are implemented for administrative corrections

Table 2. Additional Amendments to Contracts

NYMEX Rule Chapter	Product Title	Rule Chapter Sections Amended
218	Gulf Coast No. 6 Fuel Oil (Platts) Crack Spread BALMO Futures	Floating Price
219	NY 1% Fuel Oil (Platts) vs. Gulf Coast 3% Fuel Oil (Platts) BALMO Futures	Floating Price
425	Gulf Coast No. 6 Fuel Oil 3.0% (Platts) vs. European 3.5% Fuel Oil Barges FOB Rdam (Platts) Futures	Floating Price
503	Gulf Coast 3.0% Fuel Oil (Platts) BALMO Futures	Floating Price
543	NY 1% Fuel Oil (Platts) vs. Gulf Coast 3% Fuel Oil (Platts) Futures	Floating Price, Prices and Fluctuations
604	Gulf Coast No. 6 Fuel Oil 3.0% (Platts) Average Price Options	Expiration, Trading Unit, Hours of Trading, Strike Prices, Price Fluctuation Limits, Disclaimer
612	Gulf Coast No. 6 Fuel Oil 3.0% (Platts) Futures	Floating Price, Disclaimer

613	Gulf Coast No. 6 Fuel Oil (Platts) Crack Spread Futures	Floating Price, Disclaimer
1063	Gulf Coast No. 6 Fuel Oil 3.0% (Platts) vs. European 3.5% Fuel Oil Barges FOB Rdam (Platts) BALMO Futures	Floating Price
1086	NY 3.0% Fuel Oil (Platts) vs. Gulf Coast No. 6 Fuel Oil 3.0% (Platts) Futures	Floating Price
1098	Gulf Coast No.6 Fuel Oil 3.0% (Platts) Brent Crack Spread Futures	Floating Price

In an effort to build a consensus around the action resulting from Platts' changes to the underlying physical market, the Exchange conducted an outreach to its market participants over a three-month time period. During this consultation process with its stakeholders, including customers and industry associations, no substantive opposing views were expressed to the Exchange regarding the proposal.

The Exchange has reviewed the designated contract market core principles ("Core Principles") as set forth in the Act and has identified that this action has bearing on the following Core Principles:

- <u>Prevention of Market Disruption</u>: The Exchange is implementing the amendments to the Contracts to maintain orderly trading.
- <u>Availability of General Information</u>: The Exchange has published an SER (see Appendix A attached)
 to provide notice to the marketplace of the amendments to the Contracts. In addition to
 disseminating the SER via email to all market participants, the SER was posted on the CME Group
 website.

Pursuant to Section 5c(c) of the CEA and CFTC Regulation 40.6(a), the Exchange hereby certifies that the aforementioned amendments to the Contracts comply with the Act, including regulations under the Act. As previously noted, there were no substantive opposing views to this proposal.

The Exchange certifies that this submission has been concurrently posted on the Exchange's website at http://www.cmegroup.com/market-regulation/rule-filings.html.

Should you have any questions concerning the above, please contact the undersigned at (212) 299-2200 or via e-mail at CMEGSubmissionInquiry@cmegroup.com.

Sincerely,

/s/Christopher Bowen
Managing Director and Chief Regulatory Counsel

Attachments: Appendix A: NYMEX Special Executive Report 7509 dated November 5, 2015

Appendix B: Rule Chapters

Appendix C: Cash Market Overview and Analysis of Deliverable Supply

Appendix A



Special Executive Report

DATE: November 5, 2015

SER#: 7509

SUBJECT: Amendments to Product Titles, Contract Specifications, Listing Schedules and the

Resumption of Listing Additional Contract Months for Eleven (11) Gulf Coast Residual

Fuel Oil Futures and Option Contracts

Background

On October 6, 2015 Platts announced that it would update the specifications of its USGC 3% Residual Fuel oil assessment to reflect RMG 380 3.5%S quality fuel oil, as per ISO 8217 specifications and rename the assessment as "USGC HSFO", with effect commencing on January 3, 2017². Once implemented, the USGC HSFO assessment will reflect residual fuel oil intended for end-use by the bunker sector to meet maritime fuel demands. Also on October 6, 2015, Platts recommended a one-time differential of \$1.45/barrel that may be used in amending all outstanding derivatives positions beyond and including the January-2017 contract month that will settle against the old Platts specifications for USGC HSFO³. The \$1.45/b premium reflects the price difference between the Platts FO RMG 380 USGC Waterborne (Platts Code: PUBDM00) assessment and the US Gulf Coast 3%S Fuel Oil (Platts Code: PUAFZ00) from 2010 to 2015.

In response to the aforementioned amendments announced by Platts, New York Mercantile Exchange ("NYMEX" or "Exchange"), removed all previously-listed contract months without open interest beyond December-2016 in its Platts-related USGC 3% fuel oil product slate listed in Table 1. below (see SER 7496⁴ dated October 23, 2015). In addition, effective Sunday, November 8, 2015 for trade date Monday, November 9, 2015, and pending all relevant CFTC regulatory review periods, the Exchange will suspend listing new contract months in the affected products.

Table 1.

² http://www.platts.com/subscriber-notes-details/10312303

http://www.platts.com/subscriber-notes-details/10312310

⁴ http://www.cmegroup.com/tools-information/lookups/advisories/ser/SER-7496.html

Commodity Code (Clearing/CME Globex)	Contract Title	NYMEX Rulebook Chapter
MF/MFB	Gulf Coast No. 6 Fuel Oil 3.0% (Platts) Futures	612
GCU/GCU	Gulf Coast No. 6 Fuel Oil 3.0% (Platts) vs. European 3.5% Fuel Oil Barges FOB Rdam (Platts) Futures	425
VR/VR	NY 1% Fuel Oil (Platts) vs. Gulf Coast 3% Fuel Oil (Platts) Futures	543
FG/AFG	Gulf Coast No. 6 Fuel Oil 3.0% (Platts) Average Price Options	604
MG/MGH	Gulf Coast No. 6 Fuel Oil (Platts) Crack Spread Futures	613
FOC/FOC	NY 3.0% Fuel Oil (Platts) vs. Gulf Coast No. 6 Fuel Oil 3.0% (Platts) Futures	1086
GCI/GCI	Gulf Coast No.6 Fuel Oil 3.0% (Platts) Brent Crack Spread Futures	1098

Proposal

Since the Exchange references the Platts USGC 3% Residual Fuel oil assessment for settling eleven (11) related futures and option contracts, NYMEX intends to implement conforming amendments to the contracts. Effective Sunday, December 13, 2015 for trade date Monday, December 14, 2015, and pending all relevant CFTC regulatory review periods, the Exchange will amend the names and specifications of its Platts-related Gulf Coast 3% residual fuel oil product slate consisting of ten (10) futures contracts and one (1) option contract (the "Contracts") for all expiration months commencing with the January-2017 contract month and beyond to coincide with the underlying changes in the physical market price assessments. At the same time, the Exchange also will amend the listing cycle rules of the Contracts. Also effective Sunday, December 13, 2015 for trade date Monday, December 14, 2015, the Exchange will resume generating contract months with a new listing schedule as described in Table 2⁵. The Contracts are financially settled and reference the Platts assessment of "US Gulf Coast 3%S Residual Fuel Oil."

Table 2.

Commodity Code (Clearing /Globex)	NYMEX Rule Chapter	Existing Product Title	New Product Title (effective December 11, 2015 for January- 2017 contract month and beyond)	Suspended Listing Rule (effective November 6, 2015 and per CFTC Submission 15- 460)	New Listing Rule (effective December 11, 2015) ⁶
MF/MFB	612	Gulf Coast No. 6	Gulf Coast HSFO	All consecutive	52 consecutive

⁵ http://www.cmegroup.com/tools-information/lookups/advisories/ser/SER-7496.html#pageNumber=1
⁶ All trading and clearing venues unless otherwise specified

		Fuel Oil 3.0% (Platts) Futures	(Platts) Futures	months through and including December 2018	months
GFC/GFC	218	Gulf Coast No. 6 Fuel Oil (Platts) Crack Spread BALMO Futures	Gulf Coast HSFO (Platts) Crack Spread BALMO Futures	One month and the following month for 10 business days prior to the start of the contract month	No change
NFG/NFG	219	NY 1% Fuel Oil (Platts) vs. Gulf Coast 3% Fuel Oil (Platts) BALMO Futures	NY 1% Fuel Oil (Platts) vs. Gulf Coast HSFO (Platts) BALMO Futures	One month and the following month for 10 business days prior to the start of the contract month	No change
GCU/GCU	425	Gulf Coast No. 6 Fuel Oil 3.0% (Platts) vs. European 3.5% Fuel Oil Barges FOB Rdam (Platts) Futures	Gulf Coast HSFO (Platts) vs. European 3.5% Fuel Oil Barges FOB Rdam (Platts) Futures	All consecutive months through and including December 2017	36 consecutive months
VZ/AVZ	503	Gulf Coast 3.0% Fuel Oil (Platts) BALMO Futures	Gulf Coast HSFO (Platts) BALMO Futures	One month and the following month for 10 business days prior to the start of the contract month	No change
VR/VR	543	NY 1% Fuel Oil (Platts) vs. Gulf Coast 3% Fuel Oil (Platts) Futures	NY 1% Fuel Oil (Platts) vs. Gulf Coast HSFO (Platts) Futures	All consecutive months through and including December 2016	36 consecutive months
FG/AFG	604	Gulf Coast No. 6 Fuel Oil 3.0% (Platts) Average Price Options	Gulf Coast HSFO (Platts) Average Price Options	All consecutive months through and including December 2016	52 consecutive months on CME ClearPort and NYMEX Trading Floor, 12 consecutive months on CME Globex
MG/MGH	613	Gulf Coast No. 6 Fuel Oil (Platts) Crack Spread Futures	Gulf Coast HSFO (Platts) Crack Spread Futures	All consecutive months through and including December 2017	36 consecutive months
GCB/GCB	1063	Gulf Coast No. 6 Fuel Oil 3.0% (Platts) vs. European 3.5% Fuel Oil Barges FOB Rdam (Platts) BALMO Futures	Gulf Coast HSFO (Platts) vs. European 3.5% Fuel Oil Barges FOB Rdam (Platts) BALMO Futures	One month and the following month for 10 business days prior to the start of the contract month	No change
FOC/FOC	1086	NY 3.0% Fuel Oil	NY 3.0% Fuel Oil	All consecutive	36 consecutive

		(Platts) vs. Gulf Coast No. 6 Fuel Oil 3.0% (Platts) Futures	(Platts) vs. Gulf Coast HSFO (Platts) Futures	month through and including December 2016	months
GCI/GCI	1098	Gulf Coast No.6 Fuel Oil 3.0% (Platts) Brent Crack Spread Futures	Gulf Coast HSFO (Platts) Brent Crack Spread Futures	All consecutive months through and including December 2016	36 consecutive months

Appendix A to this Special Executive Report lists the NYMEX Gulf Coast No.6 3%S contracts with open interest commencing with the January-2017 contract month and beyond that will be affected by the specification change in the underlying physical market assessment published by Platts. Consequent to the change in the maximum sulfur content in the underlying market commencing with the January-2017 contract month and beyond, the Exchange will revise the Contracts' reference price and valuation pursuant to the criterion outlined in Appendix A.

Please refer questions on this subject to:

Business Line Management

Russell Karas russell.karas@cmegroup.com 212.299.2365

Clearing

Ryan Hanley <u>ryan.hanley@cmegroup.com</u> 312.454.8344

Research and Product Development

Funda Saygin <u>funda.saygin@cmegroup.com</u> 212.299.2338

APPENDIX A

Contract Valuation and Clearing House Cash Adjustment Process

New York Mercantile Exchange, Inc. ("NYMEX" or "Exchange") has been advised that Platts has confirmed changes to the specifications of its US Gulf Coast 3%S Residual Fuel Oil assessment. Accordingly, starting January 3, 2017, the new corresponding assessment will be renamed as "USGC HSFO" and will represent a sulfur specification of up to 3.5%S (a change of 0.5 percentage points). This amendment will result in a change to the valuation of positions held at the Exchange in contract months commencing with the January-2017 contract month and beyond. Table 3. provides a list of NYMEX contracts that have open interest in the January-2017 contract month and beyond and which reference the Platts assessment of US Gulf Coast 3%S

Residual Fuel Oil. Consequently (and pending all relevant CFTC regulatory review periods), the products in Table 3. will have valuation revisions resulting from the increase in the sulfur content of the underlying physical market assessment published by Platts.

Table 3.

Commodity Clearing /Globex Code	NYMEX Rule Chapter	Product Title
MF/MFB	612	Gulf Coast No. 6 Fuel Oil 3.0% (Platts) Futures
GCU/GCU	425	Gulf Coast No. 6 Fuel Oil 3.0% (Platts) vs. European 3.5% Fuel Oil Barges FOB Rdam (Platts) Futures
MG/MGH	613	Gulf Coast No. 6 Fuel Oil (Platts) Crack Spread Futures

On October 6, 2015, Platts recommended a one-time differential of \$1.45/barrel that may be used in amending all outstanding derivatives positions commencing with the January-2017 contract month and beyond that will settle against the old Platts specifications for USGC HSFO⁷. The differential is based on an extensive analysis of the premium between the FO RMG 380 USGC Waterborne (Platts Code: PUBDM00) and US Gulf Coast 3%S Fuel Oil (Platts Code: PUAFZ00) assessments from 2010 to 2015. The Exchange conducted an extensive industry outreach and its own independent analysis of the data and vetted the Platts-recommended \$1.45/b differential between the two different levels of sulfur content in the fuel oil market. The Exchange concluded that the five-year historical price premium between the FO RMG 380 USGC Waterborne and US Gulf Coast 3%S Fuel Oil valued at \$1.45/b represents an accurate value of the specification differences. Therefore, NYMEX will amend the reference price and valuation of all the related futures and option contracts in Table 3. commencing with the January-2017 contract month and beyond.

The Exchange will determine the impact on contract valuation effective for trade date Monday, December 14, 2015, based on pricing assessments made at the close of business on Friday, December 11, 2015. On that date, the end-of-the-day settlement prices for the three contracts listed in the table will reflect the old specification, that is, the Platts US Gulf Coast 3%S Fuel Oil. Following settlement, the Exchange will recalculate the prices of the contracts beyond December-2016 using the \$1.45/b premium to reflect the effect of the specification change. The Clearing House will also calculate the cash adjustments resulting from the contract value change. Accordingly, holders of long positions will be required to make additional payments to the Clearing House in order to neutralize the economic impact of the contracts' higher value. Holders of short positions will be required to take additional payments from the Clearing House in order to neutralize the economic impact of the contracts' lower value. These additional payments or the cash adjustment will be processed on Monday, December 14, 2015 at approximately 11:00 a.m. ET (10:00 a.m. CT) and intra-day prices on that day will represent the new Platts specification.

⁷ http://www.platts.com/subscriber-notes-details/10312310

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Appendix B

NYMEX Rulebook Amendments

(Additions are shown in **bold underline**, deletions are shown in strikethrough)

Chapter 1098

Gulf Coast No.6 Fuel Oil 3.0% (Platts) Brent Crack Spread Futures (For all contracts prior to January-2017)

<u>Gulf Coast HSFO (Platts) Brent Crack Spread Futures</u>
(For all contracts commencing with January-2017 and beyond)

1098.01. SCOPE

The provisions of these rules shall apply to all contracts bought or sold on the Exchange for cash settlement based on the Floating Price.

1098.02. FLOATING PRICE

(FOR ALL CONTRACT MONTHS PRIOR TO JANUARY 2017)

- (A) The Floating Price for each contract month is equal to the arithmetic average of the high and low quotations from Platts Oilgram Price Report for Gulf Coast No. 6 3.0%S (Waterborne) Fuel Oil minus the arithmetic average of the Brent Crude Oil (ICE) Futures 1st nearby contract settlement prices, except as set forth in Section (B) below, for each business day that it is determined during the contract month (using non-common pricing).
- (B) The settlement price of the 1st nearby contract month will be used except on the last day of trading for the expiring Brent Crude Oil Futures contract when the settlement price of the 2nd nearby Brent Crude Oil Futures contract will be used.

1098.02. FLOATING PRICE

(FOR ALL CONTRACT MONTHS COMMENTING WITH JANUARY 2017 AND BEYOND)

(A) The Floating Price for each contract month is equal to the arithmetic average of the high and low quotations from Platts Oilgram Price Report for Gulf Coast HSFO minus the arithmetic average of the Brent Crude Oil (ICE) Futures 1st nearby contract settlement prices, except as set forth in Section (B) below, for each business day that it is determined during the contract month (using non-common pricing).

(B) The settlement price of the 1st nearby contract month will be used except on the last day of trading for the expiring Brent Crude Oil Futures contract when the settlement price of the 2nd nearby Brent Crude Oil Futures contract will be used.

1098.03. CONTRACT QUANTITY AND VALUE

The contract quantity shall be 1,000 U.S. barrels. Each contract shall be valued as the contract quantity (1,000) multiplied by the settlement price.

1098.04. CONTRACT MONTHS

Trading shall be conducted in contracts in such months as shall be determined by the Exchange.

1098.05. PRICES AND FLUCTUATIONS

Prices shall be quoted in U.S. dollars and cents per barrel. The minimum price fluctuation shall be \$0.001 per barrel. There shall be no maximum price fluctuation.

1098.06. TERMINATION OF TRADING

Trading shall cease on the last business day of the contract month.

1098.07. FINAL SETTLEMENT

Delivery under the contract shall be by cash settlement. Final settlement, following termination of trading for a contract month, will be based on the Floating Price. The final settlement price will be the Floating Price calculated for each contract month.

1098.08. EXCHANGE FOR RELATED POSITIONS

Any Exchange for Related Position (EFRP) transaction shall be governed by the provisions of Exchange Rule 538.

1098.09. DISCLAIMER

NEITHER NEW YORK MERCANTILE EXCHANGE, INC. ("NYMEX,") ITS AFFILIATES NOR PLATTS, A DIVISION OF THE MCGRAW-HILL COMPANIES, INC. ("PLATTS") GUARANTEES THE ACCURACY AND/OR COMPLETENESS OF THE INDEX FROM THE PLATTS OILGRAM PRICE REPORT OR ANY OF THE DATA INCLUDED THEREIN. NYMEX, ITS AFFILIATES AND PLATTS MAKE NO WARRANTIES, EXPRESS OR IMPLIED, AS TO THE RESULTS TO BE OBTAINED BY ANY PERSON OR ENTITY FROM USE OF THE INDEX FROM THE PLATTS OILGRAM PRICE REPORT, TRADING BASED ON THE INDEX FROM THE PLATTS OILGRAM PRICE REPORT, OR ANY DATA INCLUDED THEREIN IN CONNECTION WITH THE TRADING OF THE CONTRACTS, OR, FOR ANY OTHER USE. NYMEX, ITS AFFILIATES AND PLATTS MAKE NO WARRANTIES, EXPRESS OR IMPLIED, AND HEREBY DISCLAIM ALL WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE WITH RESPECT TO THE INDEX FROM THE PLATTS OILGRAM PRICE REPORT OR ANY DATA INCLUDED THEREIN. WITHOUT LIMITING ANY OF THE FOREGOING, IN NO EVENT SHALL NYMEX, ITS AFFILIATES OR PLATTS HAVE ANY LIABILITY FOR ANY LOST PROFITS OR INDIRECT, PUNITIVE, SPECIAL OR CONSEQUENTIAL DAMAGES (INCLUDING LOST PROFITS), EVEN IF NOTIFIED OF THE POSSIBILITY OF SUCH DAMAGE.

"Platts," is a trademark of The McGraw-Hill Companies, Inc. and has been licensed for use by New York Mercantile Exchange, Inc. Platts does not sponsor, endorse, sell or promote the NYMEX contract and Platts makes no recommendations concerning the advisability of investing in the NYMEX contract.

Chapter 1086

NY 3.0% Fuel Oil (Platts) vs. Gulf Coast No. 6 Fuel Oil 3.0% (Platts) Futures (For all contracts prior to January-2017)

NY 3.0% Fuel Oil (Platts) vs. Gulf Coast HSFO (Platts) Futures (For all contracts commencing with January-2017 and beyond)

1086.01. SCOPE

The provisions of these rules shall apply to all contracts bought or sold on the Exchange for cash settlement based on the Floating Price.

1086.02. FLOATING PRICE

(FOR ALL CONTRACT MONTH PRIOR TO JANUARY 2017)

The Floating Price for each contract month is equal to the arithmetic average of the high and low quotations from Platts Oilgram Price Report for New York No. 6 3.0%S Max Fuel Oil (Waterborne Cargo) minus the high and low quotations from Platts Oilgram Price Report for Gulf Coast No. 6 3.0%S (Waterborne) Fuel Oil price assessment for each business day that both are determined during the contract month.

1086.02. FLOATING PRICE

(FOR ALL CONTRACT MONTHS COMMENCING WITH JANUARY 2017 AND BEYOND)

The Floating Price for each contract month is equal to the arithmetic average of the high and low quotations from Platts Oilgram Price Report for New York No. 6 3.0%S Max Fuel Oil (Waterborne Cargo) minus the high and low quotations from Platts Oilgram Price Report for

<u>Gulf Coast HSFO price assessment for each business day that both are determined during the contract month.</u>

1086.03. CONTRACT QUANTITY AND VALUE

The contract quantity shall be 1,000 U.S. barrels. Each contract shall be valued as the contract quantity (1,000) multiplied by the settlement price.

1086.04. CONTRACT MONTHS

Trading shall be conducted in contracts in such months as shall be determined by the Exchange.

1086.05. PRICES AND FLUCTUATIONS

Prices shall be quoted in U.S. dollars and cents per barrel. The minimum price fluctuation shall be \$0.001 per barrel. There shall be no maximum price fluctuation.

1086.06. TERMINATION OF TRADING

Trading shall cease on the last business day of the contract month.

1086.07. FINAL SETTLEMENT

Delivery under the contract shall be by cash settlement. Final settlement, following termination of trading for a contract month, will be based on the Floating Price. The final settlement price will be the Floating Price calculated for each contract month.

1086.08. EXCHANGE FOR RELATED POSITIONS

Any Exchange for Related Position (EFRP) transaction shall be governed by the provisions of Exchange Rule 538.

1086.09. DISCLAIMER

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Chapter 1063

Gulf Coast No. 6 Fuel Oil 3.0% (Platts) vs. European 3.5% Fuel Oil Barges FOB Rdam (Platts) BALMO Futures (For all contracts prior to January-2017)

Gulf Coast HSFO (Platts) vs. European 3.5% Fuel Oil Barges FOB Rdam (Platts) BALMO Futures (For all contracts commencing with January-2017 and beyond)

1063.01. SCOPE

The provisions of these rules shall apply to all contracts bought or sold on the Exchange for cash settlement based on the Floating Price.

1063.02. FLOATING PRICE

(FOR ALL CONTRACT MONTH PRIOR TO JANUARY 2017)

The Floating Price for each contract month is equal to the balance-of-month arithmetic average of the mid-point of the high and low quotations from Platts Oilgram Price Report for Gulf Coast No. 6 3.0%S (Waterborne) Fuel Oil minus the high and low quotations from Platts European Marketscan for 3.5% Fuel Oil under the heading "Barges FOB Rotterdam" price assessment starting from the selected start date through the end of the contract month, inclusively (using non-common pricing).

1063.02. FLOATING PRICE

(FOR ALL CONTRACT MONTHS COMMENCING WITH JANUARY 2017 AND BEYOND)

The Floating Price for each contract month is equal to the balance-of-month arithmetic average of the mid-point of the high and low quotations from Platts Oilgram Price Report for Gulf Coast HSFO minus the high and low quotations from Platts European Marketscan for 3.5% Fuel Oil under the heading "Barges FOB Rotterdam" price assessment starting from the selected start date through the end of the contract month, inclusively (using non-common pricing).

1063.03. CONTRACT QUANTITY AND VALUE

The contract quantity shall be 1,000 U.S. barrels. Each contract shall be valued as the contract quantity (1,000) multiplied by the settlement price.

For purposes of determining the Floating Price, the Platts Fuel Oil assessment price will be converted each day to U.S. dollars and cents per barrel, rounded to the nearest cent. The conversion factor will be 6.35 barrels per metric ton.

1063.04. CONTRACT MONTHS

Trading shall be conducted in contracts in such months as shall be determined by the Exchange.

1063.05. PRICES AND FLUCTUATIONS

Prices shall be quoted in U.S. dollars and cents per barrel. The minimum price fluctuation shall be \$0.001 per barrel. There shall be no maximum price fluctuation.

1063.06. TERMINATION OF TRADING

Trading shall cease on the last business day of the contract month.

1063.07. FINAL SETTLEMENT

Delivery under the contract shall be by cash settlement. Final settlement, following termination of trading for a contract month, will be based on the Floating Price. The final settlement price will be the Floating Price calculated for each contract month.

1063.08. EXCHANGE FOR RELATED POSITIONS

Any Exchange for Related Position (EFRP) transaction shall be governed by the provisions of Exchange Rule 538.

1063.09. DISCLAIMER

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Chapter 613

Gulf Coast No. 6 Fuel Oil (Platts) Crack Spread Futures (For all contracts prior to January-2017)

Gulf Coast HSFO (Platts) Crack Spread Futures (For all contracts commencing with January-2017 and beyond)

613.01. SCOPE

The provisions of these rules shall apply to all contracts bought or sold on the Exchange for cash settlement based on the Floating Price.

613.02. FLOATING PRICE

(FOR ALL CONTRACT MONTHS PRIOR TO JANUARY 2017)

The Floating Price for each contract month is equal to the arithmetic average of the mid-point between the high and low quotations from Platts Oilgram Price Report for Gulf Coast No. 6 3.0%S (Waterborne) Fuel Oil minus the settlement price for NYMEX Light Sweet Crude Oil Futures first nearby contract month for each business day that both are determined during the contract month.

613.02. FLOATING PRICE

(FOR ALL CONTRACT MONTHS COMMENTING WITH JANUARY 2017 AND BEYOND)

The Floating Price for each contract month is equal to the arithmetic average of the mid-point between the high and low quotations from Platts Oilgram Price Report for Gulf Coast HSFO minus the settlement price for NYMEX Light Sweet Crude Oil Futures first nearby contract month for each business day that both are determined during the contract month.

613.03. CONTRACT QUANTITY AND VALUE

The contract quantity shall be 1,000 U.S. barrels. Each contract shall be valued as the contract quantity (1,000) multiplied by the settlement price.

613.04. CONTRACT MONTHS

Trading shall be conducted in contracts in such months as shall be determined by the Board of Directors.

613.05. PRICES AND FLUCTUATIONS

Prices shall be quoted in U.S. dollars and cents per barrel. The minimum price fluctuation shall be \$0.01 per barrel. There shall be no maximum price fluctuation.

613.06. TERMINATION OF TRADING

Trading shall cease on the last business day of the contract month.

613.07. FINAL SETTLEMENT

Delivery under the contract shall be by cash settlement. Final settlement, following termination of trading for a contract month, will be based on the Floating Price. The final settlement price will be the Floating Price calculated for each contract month.

613.08. **RESERVED**

613.19. DISCLAIMER

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Chapter 612

Gulf Coast No. 6 Fuel Oil 3.0% (Platts) Futures (For all contracts prior to January-2017)

Gulf Coast HSFO (Platts) Futures (For all contracts commencing with January-2017 and beyond)

612.01. SCOPE

The provisions of these rules shall apply to all contracts bought or sold on the Exchange for cash settlement based on the Floating Price.

612.02. FLOATING PRICE

(FOR ALL CONTRACT MONTHS PRIOR TO JANUARY 2017)

The Floating Price for each contract month is equal to the arithmetic average of the high and low quotations from Platts Oilgram Price Report for Gulf Coast No. 6 3.0%S (Waterborne) Fuel Oil for each business day that it is determined during the contract month.

612.02. FLOATING PRICE

(FOR ALL CONTRACT MONTHS COMMENCING WITH JANUARY 2017 AND BEYOND)

The Floating Price for each contract month is equal to the arithmetic average of the high and low quotations from Platts Oilgram Price Report for Gulf Coast HSFO for each business day that it is determined during the contract month.

612.03. CONTRACT QUANTITY AND VALUE

The contract quantity shall be 1,000 U.S. barrels. Each contract shall be valued as the contract quantity (1,000) multiplied by the settlement price.

612.04. CONTRACT MONTHS

Trading shall be conducted in contracts in such months as shall be determined by the Board of Directors.

612.05. PRICES AND FLUCTUATIONS

Prices shall be quoted in U.S. dollars and cents per barrel. The minimum price fluctuation shall be \$0.01 per barrel. There shall be no maximum price fluctuation.

612.06. TERMINATION OF TRADING

Trading shall cease on the last business day of the contract month.

612.07. FINAL SETTLEMENT

Delivery under the contract shall be by cash settlement. Final settlement, following termination of trading for a contract month, will be based on the Floating Price. The final settlement price will be the Floating Price calculated for each contract month.

612.08. RESERVED

612.09. DISCLAIMER

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Chapter 218

Gulf Coast No. 6 Fuel Oil (Platts) Crack Spread BALMO Futures (For all contracts prior to January-2017)

<u>Gulf Coast HSFO (Platts) Crack Spread BALMO Futures</u> (For all contracts commencing with January-2017 and beyond)

218.01. SCOPE

The provisions of these rules shall apply to all contracts bought or sold on the Exchange for cash settlement based on the Floating Price.

218.02. FLOATING PRICE

(FOR ALL CONTRACT MONTHS PRIOR TO JANUARY 2017)

The Floating Price for each contract month is equal to the balance-of-month arithmetic average of the mid-point between the high and low quotations from Platts Oilgram Price Report for Gulf Coast No. 6 3.0%S (Waterborne) Fuel Oil minus the NYMEX Light Sweet Crude Oil Futures first nearby contract month settlement price starting from the selected start date through the end of the contract month, inclusive.

218.02. FLOATING PRICE

(FOR ALL CONTRACT MONTHS COMMENCING WITH JANUARY 2017 AND BEYOND)

The Floating Price for each contract month is equal to the balance-of-month arithmetic average of the mid-point between the high and low quotations from Platts Oilgram Price Report for Gulf Coast HSFO minus the NYMEX Light Sweet Crude Oil Futures first nearby contract month settlement price starting from the selected start date through the end of the contract month, inclusive.

218.03. CONTRACT QUANTITY AND VALUE

The contract quantity shall be 1,000 U.S. barrels. Each contract shall be valued as the contract quantity (1,000) multiplied by the settlement price.

218.04. CONTRACT MONTHS

Trading shall be conducted in contracts in such months as shall be determined by the Exchange.

218.05. PRICES AND FLUCTUATIONS

Prices shall be quoted in U.S. dollars and cents per barrel. The minimum price fluctuation shall be \$0.001 per barrel. There shall be no maximum price fluctuation.

218.06. TERMINATION OF TRADING

Trading shall cease on the last business day of the contract month.

218.07. FINAL SETTLEMENT

Delivery under the contract shall be by cash settlement. Final settlement, following termination of trading for a contract month, will be based on the Floating Price. The final settlement price will be the Floating Price calculated for each contract month.

218.08. EXCHANGE FOR RELATED POSITIONS

Any Exchange for Related Position (EFRP) transaction shall be governed by the provisions of Exchange Rule 538.

218.09. DISCLAIMER

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Chapter 219

NY 1% Fuel Oil (Platts) vs. Gulf Coast 3% Fuel Oil (Platts) BALMO Futures (For all contracts prior to January-2017)

NY 1% Fuel Oil (Platts) vs. Gulf Coast HSFO (Platts) BALMO Futures (For all contracts commencing with January-2017 and beyond)

219.01. SCOPE

The provisions of these rules shall apply to all contracts bought or sold on the Exchange for cash settlement based on the Floating Price.

219.02. FLOATING PRICE

(FOR ALL CONTRACT MONTHS PRIOR TO JANUARY 2017)

The Floating Price for each contract month is equal to the balance-of-month arithmetic average of the mid-point between the high and low quotations from Platts Oilgram Price Report for New York No. 6 1%S Max Fuel Oil (Cargo) minus the mid-point of the high and low quotations from Platts Oilgram Price Report for Gulf Coast No. 6 3.0%S Fuel Oil (Waterborne) starting from the selected start date through the end of the contract month, inclusive.

219.02. FLOATING PRICE

(FOR ALL CONTRACT MONTHS COMMENCING WITH JANUARY 2017 AND BEYOND)

The Floating Price for each contract month is equal to the balance-of-month arithmetic average of the mid-point between the high and low quotations from Platts Oilgram Price Report for New York No. 6 1%S Max Fuel Oil (Cargo) minus the mid-point of the high and low quotations from Platts Oilgram Price Report for Gulf Coast HSFO starting from the selected start date through the end of the contract month, inclusive.

219.03. CONTRACT QUANTITY AND VALUE

The contract quantity shall be 1,000 U.S. barrels. Each contract shall be valued as the contract quantity (1,000) multiplied by the settlement price.

219.04. CONTRACT MONTHS

Trading shall be conducted in contracts in such months as shall be determined by the Exchange.

219.05. PRICES AND FLUCTUATIONS

Prices shall be quoted in U.S. dollars and cents per barrel. The minimum price fluctuation shall be \$0.001 per barrel. There shall be no maximum price fluctuation.

219.06. TERMINATION OF TRADING

Trading shall cease on the last business day of the contract month.

219.07. FINAL SETTLEMENT

Delivery under the contract shall be by cash settlement. Final settlement, following termination of trading for a contract month, will be based on the Floating Price. The final settlement price will be the Floating Price calculated for each contract month.

219.08. EXCHANGE FOR RELATED POSITIONS

Any Exchange for Related Position (EFRP) transaction shall be governed by the provisions of Exchange Rule 538.

219.09. DISCLAIMER

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Chapter 425

Gulf Coast No. 6 Fuel Oil 3.0% (Platts) vs. European 3.5% Fuel Oil Barges FOB Rdam (Platts) Futures (For all contracts prior to January-2017)

Gulf Coast HSFO (Platts) vs. European 3.5% Fuel Oil Barges FOB Rdam (Platts) Futures (For all contracts commencing with January-2017 and beyond)

425.01. SCOPE

The provisions of these rules shall apply to all contracts bought or sold on the Exchange for cash settlement based on the Floating Price.

425.02. FLOATING PRICE

(FOR ALL CONTRACT MONTHR PRIOR TO JANUARY 2017)

The Floating Price for each contract month is equal to the arithmetic average of the high and low quotations from Platts Oilgram Price Report for Gulf Coast No. 6 3.0%S (Waterborne) Fuel Oil-minus the high and low quotations from Platts European Marketscan for 3.5% Fuel Oil under the heading "Barges FOB Rotterdam" assessment price for each business day during the contract month (using non-common pricing).

425.02. FLOATING PRICE

(FOR ALL CONTRACT MONTHS COMMENCING WITH JANUARY 2017 AND BEYOND)

The Floating Price for each contract month is equal to the arithmetic average of the high and low quotations from Platts Oilgram Price Report for Gulf Coast HSFO minus the high and low quotations from Platts European Marketscan for 3.5% Fuel Oil under the heading "Barges FOB Rotterdam" assessment price for each business day during the contract month (using non-common pricing).

425.03. CONTRACT QUANTITY AND VALUE

The contract quantity shall be 1,000 U.S. barrels. Each contract shall be valued as the contract quantity (1,000) multiplied by the settlement price.

For purposes of determining the Floating Price, the Platts Fuel Oil assessment price will be converted each day to U.S. dollars and cents per barrel, rounded to the nearest cent. The conversion factor will be 6.35 barrels per metric ton.

425.04. CONTRACT MONTHS

Trading shall be conducted in contracts in such months as shall be determined by the Exchange.

425.05. PRICES AND FLUCTUATIONS

Prices shall be quoted in U.S. dollars and cents per barrel. The minimum price fluctuation shall be \$0.001 per barrel. There shall be no maximum price fluctuation.

425.06. TERMINATION OF TRADING

Trading shall cease on the last business day of the contract month.

425.07. FINAL SETTLEMENT

Delivery under the contract shall be by cash settlement. Final settlement, following termination of trading for a contract month, will be based on the Floating Price. The final settlement price will be the Floating Price calculated for each contract month.

425.08. EXCHANGE FOR RELATED POSITIONS

Any Exchange for Related Position (EFRP) transaction shall be governed by the provisions of Exchange Rule 538.

425.09. DISCLAIMER

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Chapter 503

Gulf Coast 3.0% Fuel Oil (Platts) BALMO Futures (For all contracts prior to January-2017)

<u>Gulf Coast HSFO (Platts) BALMO Futures</u> (For all contracts commencing with January-2017 and beyond)

503.01 SCOPE

The provisions of these rules shall apply to all contracts bought or sold on the Exchange for cash settlement based on the Floating Price.

503.02 FLOATING PRICE

(FOR ALL CONTRACT MONTHS PRIOR TO JANUARY 2017)

The Floating Price for each contract month is equal to the balance-of-month arithmetic average of the mid-point of the high and low quotations from Platts Oilgram Price Report for Gulf Coast No. 6 3.0%S (Waterborne) Fuel Oil starting from the selected start date through the end of the contract month, inclusive.

503.02 FLOATING PRICE

(FOR ALL CONTRACT MONTHS COMMENCING WITH JANUARY 2017 AND BEYOND)

The Floating Price for each contract month is equal to the balance-of-month arithmetic average of the mid-point of the high and low quotations from Platts Oilgram Price Report for Gulf Coast HSFO starting from the selected start date through the end of the contract month, inclusive.

503.04 CONTRACT MONTHS

Trading shall be conducted in the current month. The next contract month shall be listed ten business days prior to the start of the month.

503.05 PRICES AND FLUCTUATIONS

Prices shall be quoted in U.S. dollars and cents per barrel. The minimum price fluctuation shall be \$0.001 per barrel. There shall be no maximum price fluctuation.

503.06 TERMINATION OF TRADING

Trading shall cease on the last business day of the contract month.

503.07 FINAL SETTLEMENT

Delivery under the contract shall be by cash settlement. Final settlement, following termination of trading for a contract month, will be based on the Floating Price. The final settlement price will be the Floating Price calculated for each contract month.

503.08 RESERVED

503.09 DISCLAIMER

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Chapter 604

Gulf Coast No. 6 Fuel Oil 3.0% (Platts) Average Price Option (For all contracts prior to January-2017)

Gulf Coast HSFO (Platts) Average Price Option
(For all contracts commencing with January-2017 and beyond)

604.01 EXPIRATION

(FOR ALL CONTRACT MONTHS PRIOR TO JANUARY 2017)

A Gulf Coast No. 6 Fuel Oil 3.0% (Platts) Average Price Option contract shall expire on the last business day of the contract month.

604.01 EXPIRATION

(FOR ALL CONTRACT MONTHS COMMENCING WITH JANUARY 2017 AND BEYOND)

A Gulf Coast HSFO (Platts) Average Price Option contract shall expire on the last business day of the contract month. Gulf Coast HSFO (Platts) Average Price Option contract is a financially settled European-style option. The option cannot be exercised prior to expiration.

604.03 TRADING UNIT

(FOR ALL CONTRACT MONTHS PRIOR TO JANUARY 2017)

On expiration of a call option, the option will be financially settled by subtracting the strike price from the underlying settlement price of the Gulf Coast No. 6 Fuel Oil 3.0% (Platts) Swap Futures contract times 1,000 barrels, or zero, whichever is greater. On expiration of a put option, the option will be financially settled by subtracting the underlying settlement price of the Gulf Coast No. 6 Fuel Oil 3.0% (Platts) Swap Futures contract from the strike price times 1,000 barrels, or zero, whichever is greater.

604.03 TRADING UNIT

(FOR ALL CONTRACT MONTHS COMMENCING WITH JANUARY 2017 AND BEYOND)

On expiration of a call option, the option will be financially settled by subtracting the strike price from the underlying settlement price of the Gulf Coast HSFO (Platts) Swap Futures contract times 1,000 barrels, or zero, whichever is greater. On expiration of a put option, the option will be financially settled by subtracting the underlying settlement price of the Gulf Coast HSFO (Platts) Futures contract from the strike price times 1,000 barrels, or zero, whichever is greater.

604.04 HOURS OF TRADING

The option contract is available for open outcry trading on the Exchange trading floor between 9:00 a.m. and 2:30 p.m. (New York Prevailing time) Monday through Friday, except on Exchange Holidays. The option contract is available for clearing through CME ClearPort® from 6:00 p.m. Sundays through 5:15 p.m. Fridays (New York Prevailing time), with a 45 minute break each day between 5:15 p.m. and 6:00 p.m., except on Exchange Holidays. The hours of trading for this contract shall be determined by the Exchange.

604.05 STRIKE PRICES

(FOR ALL CONTRACT MONTHS PRIOR TO JANUARY 2017)

Trading shall be conducted for options with strike prices in increments as set forth below.

- (A) On the first business day of trading in an option contract month, trading shall be at the following strike prices: (i) the previous day's settlement price for the underlying Gulf Coast No. 6 Fuel Oil 3.0% (Platts) Swap Futures contract rounded off to the nearest five-cent increment, unless such settlement price is precisely midway between two five-cent increments in which case it shall be rounded off to the lower five-cent increment; (ii) the twenty strike prices which are twenty five-cent increments higher than the strike price described in section (i) of this Rule 604.05(A); and (iii) the twenty strike prices which are twenty five-cent increments lower than the strike price described in section (i) of this Rule 604.05(A).
- (B) Thereafter, on any business day prior to the expiration of the option, new strike prices for both puts and calls will be added, such that at all times there will be at least twenty five-cent increment strike prices above and below the at-the-money strike price available for trading in all option contract months. The at-the-money strike price will be determined in accordance with the procedures set forth in Subsection (A) of this Rule 604.05.
- (C) Notwithstanding the provisions of subsections (A) and (B) of this Rule, if the Exchange determines that trading in financially settled Gulf Coast No. 6 Fuel Oil 3.0% (Platts) Average Price Option contract will be facilitated thereby, the Exchange may, by resolution, change the increments between strike prices, the number of strike prices which shall be traded on the first day in any new option contract month, the number of new strike prices which will be introduced on each business day or the period preceding the expiration of a Gulf Coast No. 6 Fuel Oil 3.0% (Platts) Average Price Option contract in which no new strike prices may be introduced.

604.05 STRIKE PRICES

(FOR ALL CONTRACT MONTHS COMMENCING WITH JANUARY 2017 AND BEYOND)

Trading shall be conducted for options with strike prices in increments as set forth below.

(A) On the first business day of trading in an option contract month, trading shall be at the following strike prices: (i) the previous day's settlement price for the underlying Gulf Coast HSFO (Platts) Futures contract rounded off to the nearest five-cent increment, unless such settlement price is precisely midway between two five-cent increments in which case it shall be rounded off to the lower five-cent increment; (ii) the twenty strike prices which are twenty five-cent increments higher than the strike price described in section (i) of this Rule 604.05(A); and (iii) the twenty strike prices which are twenty five-cent increments lower than the strike price described in section (i) of this Rule 604.05(A).

(B) Thereafter, on any business day prior to the expiration of the option, new strike prices for both puts and calls will be added, such that at all times there will be at least twenty five-cent increment strike prices above and below the at-the-money strike price available for trading in all option

contract months. The at-the-money strike price will be determined in accordance with the procedures set forth in Subsection (A) of this Rule 604.05.

(C) Notwithstanding the provisions of subsections (A) and (B) of this Rule, if the Exchange determines that trading in financially settled Gulf Coast HSFO (Platts) Average Price Option contract will be facilitated thereby, the Exchange may, by resolution, change the increments between strike prices, the number of strike prices which shall be traded on the first day in any new option contract month, the number of new strike prices which will be introduced on each business day or the period preceding the expiration of a Gulf Coast HSFO (Platts) Average Price Option contract in which no new strike prices may be introduced.

604.06 TRADING MONTHS

Trading shall be conducted in the months determined by the Exchange. Trading shall commence on the day fixed by resolution of the Exchange.

604.07 PRICES

Prices shall be quoted in dollars and cents per barrel. The minimum price fluctuation shall be \$0.01 per barrel. A cabinet trade may occur at the price of \$0.001 per barrel or \$1.00, however, if it results in the liquidation of positions of both parties to the trade.

604.08 ABSENCE OF PRICE FLUCTUATION LIMITATIONS

(FOR ALL CONTRACT MONTHS PRIOR TO JANUARY 2017)

Trading in Gulf Coast No. 6 Fuel Oil 3.0% (Platts) Average Price Option contract shall not be subject to price fluctuation limitations.

604.08 ABSENCE OF PRICE FLUCTUATION LIMITATIONS

(FOR ALL CONTRACT MONTHS COMMENCING WITH JANUARY 2017 AND BEYOND)

<u>Trading in Gulf Coast HSFO (Platts) Average Price Option contract shall not be subject to price fluctuation limitations.</u>

604.08 DISCLAIMER

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Chapter 543

NY 1% Fuel Oil (Platts) vs. Gulf Coast 3% Fuel Oil (Platts) Futures (For all contracts prior to January-2017)

NY 1% Fuel Oil (Platts) vs. Gulf Coast HSFO (Platts) Futures (For all contracts commencing with January-2017 and beyond)

543.01 SCOPE

The provisions of these rules shall apply to all contracts bought or sold on the Exchange for cash settlement based on the Floating Price.

543.02 FLOATING PRICE

(For all contracts prior to January-2017)

The Floating Price for each contract month is equal to the arithmetic average of the midpoint of the high and low quotations from Platts Oilgram Price Report for New York No. 6 1%S Max Fuel Oil (Cargo) minus the mid-point of the high and low quotations from Platts Oilgram Price Report for Gulf Coast No. 6 3.0%S Fuel Oil (Waterborne) for each business day that both are determined during the contract month.

543.02 FLOATING PRICE

(FOR ALL CONTRACT MONTHS COMMENCING WITH JANUARY 2017 AND BEYOND)

The Floating Price for each contract month is equal to the arithmetic average of the midpoint of the high and low quotations from Platts Oilgram Price Report for New York No. 6 1%S Max Fuel Oil (Cargo) minus the mid-point of the high and low quotations from Platts Oilgram Price Report for Gulf Coast HSFO for each business day that both are determined during the contract month.

543.04 CONTRACT MONTHS

Trading shall be conducted in contracts in such months as shall be determined by the Board of Directors.

543.05 PRICES AND FLUCTUATIONS

Prices shall be quoted in U.S. dollars and cents per <u>barrelmetric ton</u>. The minimum price fluctuation shall be \$0.001 per <u>barrelmetric ton</u>. There shall be no maximum price fluctuation.

543.06 TERMINATION OF TRADING

Trading shall cease on the last business day of the contract month.

543.07 FINAL SETTLEMENT

Delivery under the contract shall be by cash settlement. Final settlement, following termination of trading for a contract month, will be based on the Floating Price. The final settlement price will be the Floating Price calculated for each contract month.

543.08 EXCHANGE OF FUTURES FOR, OR IN CONNECTION WITH PRODUCT AND EXCHANGE OF FUTURES FOR, OR IN CONNECTION WITH SWAP TRANSACTIONS

Any Exchange of Futures for, or in Connection with, Product (EFP) or Exchange of Futures for, or in Connection with, Swap Transactions (EFS) shall be governed by the provisions of Rules 538 and 538A, respectively.

543.09 DISCLAIMER

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PROFITS OR INDIRECT, PUNITIVE, SPECIAL OR CONSEQUENTIAL DAMAGES (INCLUDING LOST PROFITS), EVEN IF NOTIFIED OF THE POSSIBILITY OF SUCH DAMAGES.

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Appendix C

Cash Market Overview and Analysis of Deliverable Supply

Exchange staff conducted a review of the underlying cash market and deliverable supply of US Gulf Coast High Sulfur Fuel Oil ("USGC HSFO"). In estimating deliverable supply for the contracts and relying on the Commodity Futures Trading Commission ("CFTC" or "Commission") long-standing precedent, the key component of estimated deliverable supply is the portion of typical production and supply stocks that could reasonably be considered to be reliably available for delivery. Most recently, the Commission stated in its final position limit rulemaking that:

[t]he term "deliverable supply" generally means the quantity of the commodity meeting a derivative contract's delivery specifications that can reasonably be expected to be readily available to short traders and saleable by long traders at its market value in normal cash marketing channels at the derivative contract's delivery points during the specified delivery period, barring abnormal movement in interstate commerce.

For the Gulf Coast HSFO (Platts) Futures contract (Rule 612), the Exchange has set a conservative speculative limit at 1,000 contracts (equivalent to one million barrels), which is approximately 16% of the monthly deliverable supply that is estimated at 207,190 b/d (or 6.22 million barrels per month). This is based on production, net imports, net receipts and stocks data (a full breakdown can be seen in the analysis of deliverable supply). The table below outlines the limits proposed for the core Gulf Coast HSFO Futures contract as well as those with legs that aggregate into the Gulf Coast HSFO (Platts) Futures contract position limits:

Rule Chapter	Clearing/Globex Code	New Contract Name (January- 2017 and Beyond)	Spot-Month Aggregate Into Futures Equivalent Leg (1)	Spot-Month Aggregate Into Futures Equivalent Leg (2)	Initial Spot- Month Limit (In Net Futures Equivalents) Leg (1) / Leg (2)
612	MF/MFB	Gulf Coast HSFO (Platts) Futures	MF		1000
218	GFC/GFC	Gulf Coast HSFO (Platts) Crack Spread BALMO Futures	MF	26	1,000/3,000
219	NFG/NFG	NY 1% Fuel Oil (Platts) vs. Gulf Coast HSFO (Platts) BALMO Futures	MM	MF	1,000/1,000
425	GCU/GCU	Gulf Coast HSFO (Platts) vs. European 3.5% Fuel Oil Barges FOB Rdam (Platts)	MF	UV	1,000/500

		Futures			
503	VZ/AVZ	Gulf Coast HSFO (Platts) BALMO Futures	MF		1000
543	VR/VR	NY 1% Fuel Oil (Platts) vs. Gulf Coast HSFO (Platts) Futures	MM	MF	1,000/1,000
604	FG/AFG	Gulf Coast HSFO (Platts) Average Price Options	MF		1000
613	MG/MGH	Gulf Coast HSFO (Platts) Crack Spread Futures	MF	26	1,000/3,000
1063	GCB/GCB	Gulf Coast HSFO (Platts) vs. European 3.5% Fuel Oil Barges FOB Rdam (Platts) BALMO Futures	MF	UV	1,000/500
1086	FOC/FOC	NY 3.0% Fuel Oil (Platts) vs. Gulf Coast HSFO (Platts) Futures	H1	MF	300/1,000
1098	GCI/GCI	Gulf Coast HSFO (Platts) Brent Crack Spread Futures	MF	ВВ	1,000/4,000

Data Sources

The US Energy Information Administration (EIA) collects, analyzes, and disseminates independent and impartial energy information to promote sound policymaking, efficient markets, and public understanding of energy and its interaction with the economy and the environment. The Exchange determined to base its analysis of deliverable supply of Gulf Coast HSFO on production, net imports, net receipts and stocks data provided publicly by the EIA. The final settlement price for Gulf Coast HSFO (Platts) Futures and its associated contracts is based on the assessment of the respective underlying physical markets as assessed and published by Platts, a division of McGraw-Hill Financial ("Platts"). Platts is a leading global provider of energy, petrochemicals, metals and agriculture information, and a premier source of benchmark price assessments for those commodity markets. Since 1909, Platts has provided information and insights that help customers make sound trading and business decisions and enable the markets to perform with greater transparency and efficiency. Platts assessment methodologies are available on Platts' website. The Exchange also consulted with sources to acquire business intelligence. These sources are well-established and reputable market participants that the Exchange has had a longstanding relationship with.

Terminology

Fuel oil is any liquid fuel burned in a furnace or boiler for the generation of heat or power. In the United States there are six grades of fuel oil, numbered 1 through 6. The lower the number, the lighter the fuel is, with a lower boiling point, viscosity and energy content per gallon. No. 1 through No. 4 fuel oil grades are considered to be distillate fuels, while No. 5 and No. 6 fuel oils, also referred to as heavy fuel oil ("HFO") and residual fuel oil ("RFO"), are the heavier oil that remains after the distillate fuel oils are distilled away in refineries. The largest market for the heavy, No. 6 RFO is bunker fuel, where the material fuels large, sea-going vessels. This market sees upwards of a 250 million metric ton demand a year, globally. RFO is also used for the production of electric power ("utility-grade RFO"), space heating and various industrial purposes. Since No. 6 RFO is the most common form of vessel fuel, the term "bunker fuel" or "bunker-grade RFO" is often used as a synonym for the No. 6 RFO.

In the maritime field, another type of classification is used for fuel oils. Unlike in the utility sector, where sulfur content categorizes different types of residual fuel oils, in the marine sector, residual fuels tend to also be standardized by their maximum viscosity. For instance, IFO 380 is an intermediate fuel oil with a maximum viscosity of 380 centistokes (cst) and up to 3.5% Sulfur. These fuel oils are blended with blending components or cutter stocks to achieve internationally-accepted product specifications provided by the international standard, ISO 8217 that defines the requirements for fuel grades for use in marine diesel engines. Accordingly, marine fuel grades carry three letters: the first "D" or "R" specifies "distillate fuel" vs. "residual fuel." The second "M" signifies "marine fuel" use. The third letter designates the individual grade. Residual marine (RM) fuels have 15 grades depicted by letters A through H, K, and L. For example, RMG 380 stands for "residual marine fuel G at a maximum viscosity of 380 cst9. For the purposes of this analysis, the term HSFO will be used to refer to RFO, HFO, IFO 380 and RMG 380 cst (all with a maximum sulfur content of 3.5%), which are used interchangeably in the industry. The sulfur content of a residual fuel oil depends on the crude oil origin and the refining process. In varying forms and concentrations, sulfur occurs in all crude oils. When the crude is distilled, sulfur derivatives tend to concentrate in the heavier fractions, leaving the lighter fractions with relatively low sulfur contents. As of 2008 the revised Annex VI of the International Maritime Organization through the International Convention of Pollution from Ships (MARPOL, or Marine Pollution) Rule No. 73/78 requires the sulfur content of any fuel used on board ships not to exceed 3.5% on and after January 2012, and 0.5% on and after January 2020 or 2025 depending on the outcome of a review to be completed by 2018.

⁸ http://www.platts.com/price-assessments/oil/fuel-oil

http://www3.epa.gov/nonroad/marine/ci/420r08021.pdf

Platts HSFO Assessments and Methodology

On October 6, 2015¹⁰, following a review and formal proposal, Platts announced that it will update the specifications reflected in its benchmark US Gulf Coast 3%S Residual Fuel Oil assessment to reflect RMG 380 3.5%S quality fuel oil, as per ISO 8217 specifications, with effect from January 3, 2017. At the same time, Platts will rename the assessment as "USGC HSFO" and standardize its name across all publications. The name change will also take effect January 3, 2017. These changes follow a review of the existing specifications announced May 27, 2015, and a formal proposal announced July 14, 2015¹¹. Once implemented, the USGC HSFO assessment will reflect residual fuel oil intended for end-use by the bunker sector to meet maritime fuel demands. According to Platts, the goal of the update is to bring the specifications reflected in the assessment more closely into line with the current primary end-use for fuel oil, which is to meet bunker fuel demand by the maritime sector. This move would also align the Platts Gulf Coast HSFO assessment with similar assessments in other major fuel oil trading hubs, such as Amsterdam-Rotterdam-Antwerp and Singapore. Platts' old Gulf Coast HSFO specifications reflect the needs of blenders looking to supply both demand for bunker fuel as well electric utility demand, particularly in the Mexican electricity sector. Mexico has been reducing its consumption of fuel oil for power generation and is now a net exporter of the product. Utility demand for fuel oil has fallen significantly in general, reducing the need for a spec to meet both potential fuel oil uses.

Platts Gulf Coast HSFO assessments generally conform to that for RMG 380 and IFO 380, and reflect the ISO 8217 standard for petroleum products. The specifications include the following parameters:

Sulfur Max	3.5%
Gravity Min	11.2 API
Viscosity Max	380 cst at 50°C
Vanadium Max	300 ppm
Al+Si Max	80 ppm
Flash Point Min	60°C
Pour Point Max	30°C
Water Max	0.5%
Ash Max	0.1%

Platts Gulf Coast HSFO assessments reflect fuel loading basis FOB Houston or New Orleans. Depending on relative liquidity between Houston and New Orleans, Platts will lean its US Gulf Coast residual fuel oil assessments to the more liquid of the two ports. If a buyer elects to bid for a specific terminal, that bid would be

normalized to FOB Houston. As these are FOB assessments, the standard is for the seller to name the loading terminal, while buyer will nominate the loading dates, pending terminal acceptance.

The Platts HSFO assessments reflect barges loading seven to 15 days forward from date of publication, with a minimum barge size of 45,000 barrels and a measurement unit of US Dollars per barrel.

Platts subscriber note - http://www.platts.com/subscriber-notes-details/10312303

¹¹ Platts subscriber note - http://www.platts.com/subscriber-notes-details/21789240

Platts' methodologies are designed to produce price assessments that are representative of market value, and of the particular markets to which they relate. Methodology documents describe the specifications for various products reflected by Platts' assessments and indexes, the processes and standards Platts adheres to in collecting data, and the methods by which Platts arrives at final assessment values for publication. The methodology for Platts' USGC HSFO assessment is publicly available at:

http://www.platts.com/IM.Platts.Content/MethodologyReferences/MethodologySpecs/Americas-refined-oil-products-methodology.pdf

Platts discloses publicly the days of publication for its price assessments and indexes, and the times during each trading day in which Platts considers transactions in determining its assessments and index levels. This schedule of publication is available on Platts' website, at the following link: http://www.platts.com/HolidayHome

Ensuring that data used in Platts assessments is of high quality is crucial to maintaining the integrity of Platts' various price assessment processes. Platts' aim is to determine the full circumstances surrounding all reported transactional data, including details of quality, specifications, order sizes, dimensions, lead times and any locational and loading/delivery information. The company encourages entities that submit any market data for consideration in its assessment processes to submit all market data that they have which may be relevant to the assessment being made. Platts uses that information to determine a typical and repeatable market level for the product being assessed. Platts routinely, and as part of standard editorial practice, reviews the companies participating in its price assessment processes. These reviews ensure the suitability of data and information that are used to formulate Platts' end-of-day price assessments. These reviews are conducted on a regular basis, and may take into consideration an array of issues including, but not limited to, adherence to editorial guidelines, operational and logistical issues, as well as counterparty acceptance.

Platts accepts information provided for publication in real-time across a wide variety of media. The following reporting methods are accepted by Platts' editorial staff: Instant Messaging software, Platts eWindow software, telephone, E-mail and Fax. Platts accepts any reasonable method of delivery/communication for bids, offers and transactions. Platts editors typically communicate with trading companies through phone, eWindow or online instant messaging systems.

Platts assesses the value of oil globally using its Market on Close (MOC) assessment process. The MOC assessment process establishes core standards for how data is collected and published, how data is prioritized by value, and ultimately how data is analyzed in the course of completing Platts assessments. Under Platts MOC guidelines for collecting and publishing data, Platts publishes market information including but not limited to firm bids and offers from named companies, expressions of interest to trade and confirmed trades that are received from market participants throughout the day. This information is published in real-time, as it is received, on Platts' information service, Platts Global Alert. Platts publishes all information received so that it can be fully tested by the

market at large. Information collected and published includes the identities of buyers and sellers, confirmed prices, volumes, location, and stated trading terms.

Through the MOC assessment process, Platts seeks to establish and publish the value of markets that prevail at the close of the assessment process itself. Platts has aligned the timestamps reflected in its assessments with what typically is a period of high activity in the markets that Platts observes. The typical period of high activity in oil markets tends to be in the afternoon in every major trading location around the world. Platts believes that aligning its price assessments to typical periods of greater market activity and liquidity provides a robust basis upon which to derive a reliable assessment of market value.

Platts assessments are designed to reflect repeatable market value at the close of the assessment process. Platts tracks market price evolution during the entire day, and publishes a wide range of data relating to market value as it does so. All data that has been published through the day is analyzed during the assessment process. Towards the close of the day, Platts focuses its assessment process to publish named firm bids and offers, expressions of interest to trade and confirmed trades, with all relevant details. This transparent data is prioritized in the assessment process, because it is available to the entire market for testing.

In order to ensure that all firm bids and firm offers that still stand at the close of the assessment process have been fully tested in the market at large, Platts has established clearly defined time cut-offs that apply when publishing firm bids and firm offers in the MOC process. Time cut-offs for the submission and subsequent publication of new bids and offers are applied so that MOC participants cannot bid or offer late in the process, and to ensure that every bid and offer published by Platts is logistically executable. The purpose of the time cut-offs is primarily to ensure logistical executability and standards of incrementability and repeatability to ensure orderly price discovery. Detailed guidelines on MOC timings can be found at:

http://www.platts.com/IM.Platts.Content/MethodologyReferences/MethodologySpecs/timingincrementguidelines.pdf

When determining a final market assessment, Platts gives the greatest priority to fully verifiable and transparent market information. A firm bid or offer that has been published by Platts in accord with its data publishing standards, and which still stands open to the marketplace at the close of the assessment process, will establish clear parameters for Platts' final published assessments. Platts will typically assess market value somewhere between the best bid, and best offer, open to the market at the close of the MOC process. Platts does not specify a minimum amount of transaction data, or a transaction data threshold, for the publication of its price assessments. Physical commodity markets vary in liquidity. Any particular market analyzed on its own will typically demonstrate rising and falling levels of transactional activity through time. Platts seeks to receive market information from as broad a cross section of the market as possible. If a very limited number of market makers are active in the market, or if a limited number submit data that constitutes a significant proportion of the total data upon which the assessment is based, Platts will continue to seek fully transparent and verifiable data from the market at large and to apply Platts methodology principles of transparency and time sensitivity.

When no bid, offer or transaction data exists, Platts may consider other verifiable data reported and published through the day, including fully and partially confirmed trades, notional trading values and other market information as provided for publication. Under such circumstances, Platts may also be able to observe direct market activity or the effect of commonly traded commodities on illiquid markets via spread differentials or via blending and shipping economics. Platts also analyzes the relationships between different products, and factors these relationships into assessments for markets where transactional data falls to low levels.

All Platts market reporters are trained to analyze the data they receive and to question sources to establish the fullest set of information possible around price data. Reporters are trained to seek a wide variety of information to test reported transactional activity, including the specific price agreed, the counterparty to the trade, the point of origin and destination for delivery of the commodity, the size of the transaction, any physical quality commitments agreed as part of the trade, the terms and conditions of a trade and when a trade was agreed.

Platts applies a survey assessment methodology where market conditions do not support an MOC assessment environment. In such environments, Platts collects as much data as possible, including bids, offers, interest to trade, transactions that have been previously concluded, and indications of value from participants in the market. Platts seeks to collect, confirm and analyze as much information as possible in survey markets, and encourages market participants to provide all relevant information. Platts publishes credible information collected that meets its methodological standards, typically through real-time information services and with as much transparency as possible. This information is considered when determining and completing a final assessment. Survey and MOC environments are linked. Survey assessment environments are a common ground for future MOC assessment environments, and Platts regularly reviews its survey environments to determine which may be suited to an MOC approach. Similarly, MOC environments are underpinned by data collected by surveying sources throughout the day.

HSFO Demand

The demand-side landscape for residual fuel has changed over the course of the past few decades, particularly in the electric power sector. From 2000 to 2005, natural gas and oil prices tracked closely. Since 2006 and especially after 2008, the prices of these two fuels decoupled, as rapidly increasing supply from shale formations drove natural gas prices down. As a result, the power sector began relying more on natural gas and less on residual fuel, except in circumstances where spot natural gas prices soared due to weather-related constraints. Other exceptions include Hawaii, which relies on residual fuel for much of its power generation (71% in October, 2015¹²). To a lesser degree, Alaska and

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¹² http://www.eia.gov/state/print.cfm?sid=hi

Florida use residual fuel, and in-city generators in New York City must use a minimum of residual fuel to meet reliability requirements¹³.

The decline in residual fuel oil usage excluding its use as a bunker fuel is over 50% globally. Among OECD countries, the decline is nearly 70% from 1986 through 2010: among the non-OECD nations, the decline is over 37%. Only the use of residual fuel oil as a bunker fuel has increased over this period. Bunkering increased from just 9.3% of global residual fuel oil consumption in 1986 to over 35% in 2010 according to the EIA^{14,15}.

HSFO Supply

HSFO literally comes from the bottom of the barrel, resembling tar or asphalt, and must be stored in heated tanks kept at approximately 100°F to keep it liquid so that it can be pumped into the burner of a boiler¹⁶. The supply chain for residual and marine fuels industry begins with integrated petroleum refineries, where bottoms from atmospheric and vacuum distillation unit operations are combined to form the bulk of residual fuel stocks. The dominant producers of marine fuels are divisions of the major oil companies. Most of the worldwide bunker fuel volume is sold to firms that operate bunkering facilities around the world, although some of the major petroleum refiners also contract for and deliver marine fuels. These large refiners purchase blended stocks from the producers and also blend, transport, and store some product themselves. The final stage of the marine fuel supply chain is the bunkering itself, which can either be done while the ship is docked or directly from bunker barges while the ship is anchored. There are hundreds of bunkering ports around the world and thousands of firms that provide the actual bunkering service 17.

Logistics and transport cost factors influence the location of bunker ports. In addition to being located close to supply sources (petroleum refineries) and consumers of transported goods (major population centers), bunkering ports are often strategically located along high-density shipping lanes. The largest port of this type is in Singapore Panama and Gibraltar are other examples of strategically located facilities. In North America, the largest facilities follow the general pattern suggested by location theory; Los Angeles, San Francisco, New York, Philadelphia, Houston, and New Orleans are close to both refinery supply and transport destinations.

Refinery and Blender Production

The EIA provides refinery and blender production data¹⁸ on a monthly basis by Petroleum Administration Defense District (PADD) and three categories of fuel oil Sulfur levels: Less Than 0.31% Sulfur, 0.31% to 1.00% Sulfur and Greater than 1.00% Sulfur. According to a

http://www.eia.gov/cfapps/ipdbproject/iedindex3.cfm?tid=5&pid=66&aid=13&cid=ww,&syid=2009&eyid=2013&unit =TBPD http://www.edf.org/sites/default/files/10071 EDF BottomBarrel Ch3.pdf

http://www.eia.gov/dnav/pet/pet_pnp_refp_a_epprh_ypr_mbblpd_m.htm

¹³ http://www.eia.gov/todayinenergy/detail.cfm?id=4250

http://www.usaee.org/usaee2014/submissions/OnlineProceedings/Implications%20of%20RFO%20Phase%20Out-Ramberg&VanVactor.pdf

http://www.epa.gov/nonroad/marine/ci/420r08021.pdf

industry sources that represent the trading and price reporting community (three traders and two price reporting agencies to be specific) the "majorit"y of the "Greater than 1.00% Sulfur" category is composed of HSFO with Sulfur levels at or above 3.50%. For the purposes of this analysis, the 50% discount for HSFO will be applied to all other EIA data reported in this category to disallow lower sulfur levels within the category. The Exchange implemented this practice as a conservative way of estimating the share of HSFO within the EIA "Greater than 1.00% Sulfur" category. While the bulk of feedback the Exchange heard from industry sources was qualitative in nature, for the purposes of calculating deliverable supply, the Exchange chose to set a conservative 50% midpoint estimate. This assumption is further solidified by refinery production economics. The product slate of a straight run refinery has heavy fuel production of approximately 50% of the crude feed ¹⁹. It is important to re-state that the fuel oil market is a "blend-to-spec" market, where the benchmarks that trade in the physical market (such as 1%S or 3%S) are not necessarily the end-user product. Rather, the products are blended to meet the specifications of whatever end-use the product will be used in, mainly utility or bunkers.

According to the EIA and Table 1 below, the three-year average refinery and blender production of residual fuel oil greater than 1% Sulfur in PADD 3 (Gulf Coast) is 170,000 barrels per day. Taking 50% of this value, the production of HSFO is estimated to be 85,000 barrels per day in the July 2012-2015 time period.

Table 1: Net Refinery and Blender Production of Residual Fuel Oil Greater than 3.5% Sulfur in PADD 3

Date	PADD 3 Refinery and Blender Net Production of Residual Fuel Oil, Greater Than 1% Sulfur (Thousand Barrels per Day)	PADD 3 Refinery and Blender Net Production of Residual Fuel Oil, Greater Than 3.5% Sulfur (Thousand Barrels per Day)
Jul-2012	204	102
Aug-2012	236	118
Sep-2012	216	108
Oct-2012	205	103
Nov-2012	186	93
Dec-2012	134	67
Jan-2013	134	67
Feb-2013	222	111
Mar-2013	295	148
Apr-2013	250	125
May-2013	210	105
Jun-2013	180	90
Jul-2013	198	99
Aug-2013	134	67
Sep-2013	147	74

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 $http://www.chevronmarineproducts.com/docs/Chevron_EverythingYouNeedToKnowAboutFuels_v3_1a_DESKTOP.pdf$

Oct-2013	145	73
Nov-2013	175	88
Dec-2013	167	84
Jan-2014	208	104
Feb-2014	161	81
Mar-2014	159	80
Apr-2014	136	68
May-2014	143	72
Jun-2014	152	76
Jul-2014	130	65
Aug-2014	144	72
Sep-2014	136	68
Oct-2014	123	62
Nov-2014	134	67
Dec-2014	115	58
Jan-2015	127	64
Feb-2015	157	79
Mar-2015	193	97
Apr-2015	192	96
May-2015	151	76
Jun-2015	151	76
Jul-2015	143	72
Three-		
Year Average	170.08	85.04

International and Domestic Trade

Around the world, there are approximately 400 major bunkering ports. Logistics and transport cost factors influence the location of these bunker ports as well as local environmental regulations. In addition to being located close to supply sources (petroleum refineries) and consumers of transported goods (major population centers), bunkering ports are often strategically located along high-density shipping lanes.

The Port of Houston is a 25-mile-long complex of diversified public and private facilities located just a few hours by ship from the Gulf of Mexico. The port is consistently ranked 1st in the United States in foreign waterborne tonnage; 1st in U.S. imports; 1st in U.S. export tonnage and 2nd in the U.S. in total tonnage²⁰. The Port of Houston Authority owns, operates and leases the public facilities at the Port of Houston. Those facilities include the general cargo terminals at the Turning Basin, and the Barbours Cut and Bayport container terminals. Ample truck, rail and air connections allow shippers to economically transport their goods between Houston and inland points.

Between 6 and 15 major suppliers operate in the Houston Port area, though major suppliers like Shell Marine Products, Valero Marketing and Supply Co., Chemoil Corp., BP

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²⁰ http://www.portofhouston.com/about-us/overview/

Marine Fuels, and Bominflot Atlantic LLC dominate²¹. In addition several smaller suppliers have storage terminals in or near the port area and operate barge delivery services.

Due to rising gross exports and falling gross imports, the United States became a net exporter of residual fuel oil in 2008. US gross exports of residual fuel oil increased steadily since the early 1990s. Additionally, after a sharp decline in gross imports from a high of more than 1,800 thousand barrels per day in 1973 to a low of less than 200 thousand barrels per day in 1995, gross imports have averaged about 350 thousand barrels per day over the last 10 years.

The EIA provides imports data²² on a monthly basis by PADD and three categories of fuel oil Sulfur levels: Less Than 0.31% Sulfur, 0.31% to 1.00% Sulfur and Greater than 1.00% Sulfur. According to industry sources about 50% of the "Greater than 1.00% Sulfur" category is composed of HSFO with Sulfur levels at or above 3.50%. For exports²³, the EIA does not differentiate between the three sulfur categories. The US tends to export all grades of fuel oil across the sulfur spectrum depending on blending economics and market demand. Therefore, for the purposes of this analysis, the Exchange assumes that exports are evenly distributed across the three sulfur ranges, so the "Greater than 1.00% Sulfur" category represents 1/3 of the total. To further refine the results, and consistent with the approach to production and imports data, the Exchange applied a 50% discount to the "Greater than 1.00% Sulfur" values to represent the HSFO market. According to the EIA and Table 2 below, the three-year average HSFO net imports are estimated at minus 31,130 barrels per day. In other words net exports are 31,130 barrels per day by dividing monthly data by 30.

Table 2: Net Imports of Residual Fuel Oil Greater than 3.5% Sulfur in PADD 3

Month	PADD 3 Imports of Residual Fuel Oil, Greater Than 1% Sulfur (Thousand Barrels per Day)	PADD 3 Imports of Residual Fuel Oil, Greater Than 3.5% Sulfur (Thousand Barrels per Day)	PADD 3 Exports of Residual Fuel Oil (Thousand Barrels)	PADD 3 Exports of Fuel Oil Greater than 1% Sulfur (Thousand Barrels)	PADD 3 Exports of Fuel Oil Greater than 3.5% Sulfur (Thousand Barrels)	PADD 3 Exports of Fuel Oil Greater than 3.5% Sulfur (Thousand Barrels per day)	PADD 3 Net Imports of Fuel Oil Greater than 3.5% Sulfur (Thousan d Barrels per day)
Jul-12	35	18	7,253	2,418	1,209	40	-23
Aug-12	13	7	9,634	3,211	1,606	54	-47
Sep-12	45	23	8,406	2,802	1,401	47	-24
Oct-12	26	13	7,958	2,653	1,326	44	-31
Nov-12	23	12	9,492	3,164	1,582	53	-41
Dec-12	19	10	12,842	4,281	2,140	71	-62

²¹ http://www3.epa.gov/nonroad/marine/ci/420r08021.pdf

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http://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=PET&s=MRZIMP32&f=M http://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=PET&s=MREEXP32&f=M

Three- Year Average	30.92	15.46	8,386	2,795	1,398	46.59	-31.13
Jul-15	13	7	6,273	2,091	1,046	35	-28
Jun-15	15	8	8,456	2,819	1,409	47	-39
May-15	50	25	8,686	2,895	1,448	48	-23
Apr-15	7	4	10,529	3,510	1,755	58	-55
Mar-15	19	10	7,003	2,334	1,167	39	-29
Feb-15	41	21	7,412	2,471	1,235	41	-21
Jan-15	15	8	6,027	2,009	1,005	33	-26
Dec-14	18	9	7,961	2,654	1,327	44	-35
Nov-14	14	7	7,002	2,334	1,167	39	-32
Oct-14	19	10	8,561	2,854	1,427	48	-38
Sep-14	44	22	7,528	2,509	1,255	42	-20
Aug-14	19	10	6,503	2,168	1,084	36	-27
Jul-14	40	20	7,392	2,464	1,232	41	-21
Jun-14	12	6	7,277	2,426	1,213	40	-34
May-14	13	7	6,999	2,333	1,167	39	-32
Apr-14	68	34	7,425	2,475	1,238	41	-7
Mar-14	27	14	10,186	3,395	1,698	57	-43
Feb-14	16	8	9,311	3,104	1,552	52	-44
Jan-14	18	9	7,463	2,488	1,244	41	-32
Dec-13	19	10	8,233	2,744	1,372	46	-36
Nov-13	49	25	7,801	2,600	1,300	43	-19
Oct-13	47	24	7,840	2,613	1,307	44	-20
Sep-13	56	28	6,249	2,083	1,042	35	-7
Aug-13	73	37	9,957	3,319	1,660	55	-19
Jul-13	73	37	8,424	2,808	1,404	47	-10
Jun-13	40	20	9,527	3,176	1,588	53	-33
May-13	37	19	12,404	4,135	2,067	69	-50
Apr-13	22	11	10,372	3,457	1,729	58	-47
Mar-13	31	16	12,558	4,186	2,093	70	-54
Feb-13	62	31	7,502	2,501	1,250	42	-11
Jan-13	6	3	5,850	1,950	975	33	-30

As for domestic trade of HSFO, the EIA produces "Net Receipts" data by PADD²⁴, which is the difference between total movements of residual fuel oil into and out of each PADD by pipeline, tanker, and barge. Similar to production and imports data, the EIA reports Net Receipts for each of the three Sulfur categories: Less Than 0.31% Sulfur, 0.31% to 1.00% Sulfur and Greater than 1.00% Sulfur. According to industry sources about 50% of the "Greater than 1.00% Sulfur" category is composed of HSFO with Sulfur levels at or above 3.50% so a discount of 50% will be applied to the Net Receipts numbers reported by the EIA for the Greater than 1.00% Sulfur category. According to the EIA and Table 3 below, the three-year average HSFO net receipts are estimated at 12,700 barrels per day.

²⁴ http://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=pet&s=mrgnr r30-z0p 2&f=m

Table 3: Net Receipts of Residual Fuel Oil Greater than 3.5% Sulfur in PADD 3

	PADD 3 Net Receipts of Residual Fuel	PADD 3 Net Receipts of Residual Fuel		
	Oil, Greater Than 1% Sulfur	Oil, Greater Than 3.5% Sulfur		
Date	(Thousand Barrels per Day)	(Thousand Barrels per Day)		
Jul-2012	28	14		
Aug-2012	26	13		
Sep-2012	35	18		
Oct-2012	7	4		
Nov-2012	13	7		
Dec-2012	27	14		
Jan-2013	27	14		
Feb-2013	25	13		
Mar-2013	37	19		
Apr-2013	26	13		
May-2013	34	17		
Jun-2013	26	13		
Jul-2013	34	17		
Aug-2013	24	12		
Sep-2013	33	17		
Oct-2013	24	12		
Nov-2013	20	10		
Dec-2013	36	18		
Jan-2014	11	6		
Feb-2014	19	10		
Mar-2014	40	20		
Apr-2014	44	22		
May-2014	28	14		
Jun-2014	23	12		
Jul-2014	30	15		
Aug-2014	13	7		
Sep-2014	32	16		
Oct-2014	25	13		
Nov-2014	18	9		
Dec-2014	25	13		
Jan-2015	18	9		
Feb-2015	13	7		
Mar-2015	22	11		
Apr-2015	12	6		
May-2015	39	20		
Jun-2015	5 3			
Jul-2015	40	20		
Three-Year Average	25.38	12.69		

Stocks

The EIA provides stocks data²⁵ on a monthly basis by PADD and three categories of Sulfur levels: Less Than 0.31% Sulfur, 0.31% to 1.00% Sulfur and Greater than 1.00% Sulfur. According to industry sources about 50% of the "Greater than 1.00% Sulfur" category is composed of HSFO with Sulfur levels at or above 3.50%. According to the EIA and Table 4 below, the three-year average HSFO stocks are estimated at 281,550 barrels per day. For the purposes of estimating deliverable supply, 50% of the maximum stocks are considered to be available to the market at any time to take into account pipeline flow minimums and to avoid over counting produced barrels that might flow into storage simultaneously. Applying the discount of 50%, the three-year average for HSFO stocks is 140,775 barrels per day.

Table 4: Stocks of Residual Fuel Oil Greater than 3.5% Sulfur in PADD 3

Date	Gulf Coast (PADD 3) Ending Stocks of Residual Fuel Oil, Greater Than 1% Sulfur (Thousand Barrels)	Gulf Coast (PADD 3) Ending Stocks of Residual Fuel Oil, Greater Than 3.5% Sulfur (Thousand Barrels)	Gulf Coast (PADD 3) Ending Stocks of Residual Fuel Oil, Greater Than 3.5% Sulfur (Thousand Barrels per Day)
Jul-2012	15352	7676	256
Aug-2012	15540	7770	259
Sep-2012	16188	8094	270
Oct-2012	17582	8791	293
Nov-2012	16765	8382.5	279
Dec-2012	13919	6959.5	232
Jan-2013	16255	8127.5	271
Feb-2013	18225	9112.5	304
Mar-2013	16361	8180.5	273
Apr-2013	17514	8757	292
May-2013	16646	8323	277
Jun-2013	16424	8212	274
Jul-2013	17026	8513	284
Aug-2013	16299	8149.5	272
Sep-2013	16519	8259.5	275
Oct-2013	16711	8355.5	279
Nov-2013	16652	8326	278
Dec-2013	18620	9310	310
Jan-2014	19782	9891	330
Feb-2014	17307	8653.5	288
Mar-2014	16043	8021.5	267
Apr-2014	16436	8218	274
May-2014	16825	8412.5	280
Jun-2014	17308	8654	288
Jul-2014	16706	8353	278

²⁵ http://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=PET&s=MRGSTP31&f=M

Three-Year Average	16,893	8,447	281.55
Jul-2015	19047	9523.5	317
Jun-2015	18688	9344	311
May-2015	19369	9684.5	323
Apr-2015	18746	9373	312
Mar-2015	19532	9766	326
Feb-2015	18019	9009.5	300
Jan-2015	13455	6727.5	224
Dec-2014	14111	7055.5	235
Nov-2014	16527	8263.5	275
Oct-2014	16151	8075.5	269
Sep-2014	16542	8271	276
Aug-2014	15858	7929	264

Analysis of Deliverable Supply

As can be seen in Table 5 below, in its analysis of deliverable supply, the Exchange relied on: production, net imports, net receipts and stocks data. The deliverable supply of Gulf Coast HSFO is estimated at 207,190 b/d, or 6.22 million barrels per month, which is equivalent to 6216 contracts. The Exchange has set conservative speculative limits at 1,000 contracts (equivalent to one million barrels), which is approximately 16% of the monthly deliverable supply.

Table 5: Deliverable Supply Components, Thousand Barrels per Day

	Production	Imports	Exports	Net Receipts	Stocks (50% of Total)	Deliverable Supply
2012 (Jul-Dec)	98.42	13.42	-51.47	11.33	132	204
2013	94.04	21.46	-49.41	14.42	141	222
2014	72.54	12.83	-43.34	12.83	139	193
2015 (Jan-Jul)	79.57	11.43	-43.16	10.64	151	209
Average	86.14	14.79	-46.85	12.31	140.75	207.14