SUBMISSION COVER SHEET

***IMPORTANT*: Check box if Confidential Treatment is requested** ☐

Registered Entity Identifier Code (optional): 21-154

Organization: New York Mercantile Exchange, Inc. ("NYMEX")

Filing as a: ☒ **DCM** ☐ **SEF** ☐ **DCO** ☐ **SDR**

Please note - only ONE choice allowed.

Filing Date (mm/dd/yy): 06/02/21 Filing Description: Initial Listing of the Micro WTI Crude Oil Futures Contract

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 ONE 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 Names: See filing.

Product Terms and Conditions (product related Rules and 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 products	§ 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

Rule Numbers:

Christopher Bowen
Managing Director and Chief Regulatory Counsel
Legal Department

June 2, 2021

VIA ELECTRONIC PORTAL

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

Re: CFTC Regulation 40.2(a) Certification. Initial Listing of the Micro WTI Crude Oil Futures Contract. NYMEX Submission No. 21-154

Dear Mr. Kirkpatrick:

New York Mercantile Exchange, Inc. ("NYMEX" or "Exchange") is certifying to the Commodity Futures Trading Commission ("CFTC" or "Commission") the initial listing of the Micro WTI Crude Oil Futures contract for trading on the CME Globex electronic trading platform ("CME Globex") and for submission for clearing via CME ClearPort, effective on Sunday, July 11, 2021 for trade date Monday, July 12, 2021, as more specifically described below.

Contract Title	**Micro WTI Crude Oil Futures**
Rulebook Chapter	309
Commodity Code	MCL
Listing Schedule	Monthly contracts listed for 12 consecutive months and additional Jun and Dec contract months
First Listed Contract	August 2021
Contract Size	100 barrels
Settlement Method	Financial
Minimum Price Fluctuation	$0.01
Value per Tick	$1.00
CME Globex Match Algorithm	First-In, First-Out (FIFO)
Block Trade Minimum Threshold	500 contracts – subject to a minimum 15-minute reporting window
Termination of Trading	Trading terminates one business day prior to the termination of trading in the Light Sweet Crude Oil Futures month which is 4 business days prior to the twenty-fifth calendar day of the month prior to the contract month.

Trading and Clearing Hours	**CME Globex and CME ClearPort:** Sunday - Friday 6:00 p.m. - 5:00 p.m. Eastern Time/ET (5:00 p.m. - 4:00 p.m. Central Time/CT) with a 60-minute break each day beginning at 5:00 p.m. ET (4:00 p.m. CT) **CME Globex Pre-Open:** Monday - Thursday 5:45 p.m. - 6:00 p.m. ET (4:45 p.m. – 5:00 p.m. CT)

Exchange Fees:

	Member	Non-Member
CME Globex	$0.20	$0.50
EFP	$0.25	$0.55
Block	$0.25	$0.55
EFR/EOO	$0.25	$0.55

Processing Fees	Member	Non-Member
Cash Settlement	0.20	$0.50
Facilitation Fee	$0.06	
Give-Up Surcharge	$0.05	
Position Adjustment/Position Transfer	$0.10	

The Exchange is also notifying the CFTC that it is self-certifying the insertion of the terms and conditions for the new futures contract into the Position Limit, Position Accountability and Reportable Level Table and Header Notes located in the Interpretations and Special Notices Section of Chapter 5 of the NYMEX Rulebook in relation to the listing of the new contract. These terms and conditions establish the all month/any one-month accountability levels, expiration month position limit, reportable level, and aggregation allocation for the new contract. The new financially-settled Micro WTI Crude Oil futures contract is a referenced contract and will be subject to federal position limits during the spot month. The core referenced futures contract is the Light Sweet Crude Oil Futures contract (Commodity Code: CL; Rulebook Chapter 200). Please see Exhibit B attached under separate cover.

In addition, NYMEX is certifying block trading on the Contract with a minimum block threshold of five hundred (500) contracts, subject to a minimum 15-minute reporting window. This block level aligns with the Exchange's currently-listed Light Sweet Crude Oil Futures contract.

The Exchange reviewed the designated contract market core principles ("Core Principles") as set forth in the Commodity Exchange Act ("CEA" or "Act") and staff identified that the Contracts may have some bearing on the following Core Principles:

- **<u>Compliance with Rules</u>**: Trading in the Contract will be subject to all NYMEX Rules, including prohibitions against fraudulent, noncompetitive, unfair and abusive practices as outlined in NYMEX Chapter 4, the Exchange's trade practice rules, the majority of which are contained in Chapter 5 and Chapter 8 of the NYMEX Rulebook, and the dispute resolution and arbitration procedures of NYMEX Chapter 6. As with all products listed for trading on one of CME Group's designated contract markets, trading activity in the Contract will be subject to monitoring and surveillance by CME Group's Market Regulation Department. The Market Regulation Department has the authority to exercise its investigatory and enforcement power where potential rule violations are identified.

- **Contract Not Readily Subject to Manipulation:** The Contract is based on a cash price series that is reflective of the underlying cash market and is commonly relied on and used as a reference price by cash market brokers and commercial market participants.

- **Prevention of Market Disruption**: Trading in the Contract will be subject to the Rules of NYMEX, which include prohibitions on manipulation, price distortion, and disruption to the cash settlement process. As with any new product listed for trading on a CME Group designated contract market, trading activity in the futures Contract proposed herein will be subject to monitoring and surveillance by CME Group's Market Regulation Department.

- **Position Limitations or Accountability**: The speculative position limits for the Contract as demonstrated in this submission are consistent with the Commission's guidance.

- **Availability of General Information**: The Exchange will publish on its website information in regard to contract specifications, terms, and conditions, as well as daily trading volume, open interest, and price information for the Contract. In addition, the Exchange will advise the marketplace of the launch of the Contract by releasing a Special Executive Report ("SER"). The SER will also be posted on CME Group's website.

- **Daily Publication of Trading Information**: The Exchange will publish contract trading volumes, open interest levels, and price information daily on its website and through quote vendors for the Contracts.

- **Execution of Transactions**: The Contract will be listed for trading on CME Globex and for clearing through CME ClearPort. The CME Globex electronic trading venue provides for competitive and open execution of transactions. CME Globex affords the benefits of reliability and global connectivity.

- **Trade Information**: All requisite trade information for the Contract will be included in the audit trail and is sufficient for the Market Regulation Department to monitor for market abuse.

- **Financial Integrity of Contract**: The Contract will be cleared by the CME Clearing House, a derivatives clearing organization registered with the CFTC and subject to all CFTC regulations related thereto.

- **Protection of Market Participants**: NYMEX Rulebook Chapters 4 and 5 set forth multiple prohibitions that preclude intermediaries from disadvantaging their customers. These rules apply to trading in all of the Exchange's competitive trading venues.

- **Disciplinary Procedures**: Chapter 4 of the Rulebook contains provisions that allow the Exchange to discipline, suspend or expel members or market participants that violate the Rulebook. Trading in the Contracts will be subject to Chapter 4, and the Market Regulation Department has the authority to exercise its enforcement power in the event rule violations in these products are identified.

- **Dispute Resolution**: Disputes with respect to trading in the Contract will be subject to the arbitration provisions set forth in Chapter 6 of the Rulebook. Chapter 6 allows all nonmembers to submit a claim for financial losses resulting from transactions on the Exchange to arbitration. A member named as a respondent in a claim submitted by a nonmember is required to participate in the arbitration pursuant to Chapter 6. Additionally, the Exchange requires that members resolve all disputes concerning transactions on the Exchange via arbitration.

Pursuant to Section 5c(c) of the Act and CFTC Regulation 40.2(a), the Exchange hereby certifies that listing the Contract complies with the Act, including regulations under the Act. There were no substantive opposing views to the listing of the Contracts.

300 Vesey Street New York, NY 10282 T 212 299 2200 F 212 301 4645 christopher.bowen@cmegroup.com cmegroup.com

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: Exhibit A: NYMEX Rulebook Chapter 309
Exhibit B: Position Limit, Position Accountability, and Reportable Level Table in Chapter 5 of the NYMEX Rulebook (attached under separate cover)
Exhibit C: NYMEX Rule 588.H. – ("Globex Non-Reviewable Trading Ranges") Table
Exhibit D: NYMEX Rule 589 – ("Special Price Fluctuation Limits") Table
Exhibit E: Cash Market Overview and Analysis of Deliverable Supply

300 Vesey Street New York, NY 10282 T 212 299 2200 F 212 301 4645 christopher.bowen@cmegroup.com cmegroup.com

EXHIBIT A

NYMEX Rulebook

Chapter 309
Micro WTI Crude Oil Futures

309100. SCOPE OF CHAPTER

The provisions of these rules shall apply to all futures contracts bought or sold on the Exchange for cash settlement based on the Floating Price. The procedures for trading, clearing and cash settlement of this contract, and any other matters not specifically covered herein shall be governed by the general rules of the Exchange.

309101. CONTRACT SPECIFICATIONS

The Floating Price for each contract month will be equal to the Light Sweet Crude Oil Futures contract final settlement price for the corresponding contract month on the last trading day for the Micro WTI Crude Oil Futures contract month.

309102. TRADING SPECIFICATIONS

The number of months open for trading at a given time shall be determined by the Exchange.

309102.A. Trading Schedule

The hours of trading for this contract shall be determined by the Exchange.

309102.B. Trading Unit

The contract quantity shall be 100 U.S. barrels. Each contract shall be valued as the contract quantity (100) multiplied by the settlement price.

309102.C. Price Increments

Prices shall be quoted in U.S. dollars and cents per barrel. The minimum price fluctuation shall be $0.01 per barrel. The maximum price fluctuation shall be consistent with the prevailing price limits of the NYMEX Light Sweet Crude Oil futures contract.

309102.D. Special Price Fluctuation Limits

At the commencement of each trading day, the contract shall be subject to special price fluctuation limits as set forth in Rule 589 and in the Special Price Fluctuation Limits and Daily Price Limits Table in the Interpretations & Special Notices Section of Chapter 5.

309102.E. Position Limits, Exemptions, Position Accountability and Reportable Levels

The applicable position limits and/or accountability levels, in addition to the reportable levels, are set forth in the Position Limit, Position Accountability and Reportable Level Table in the Interpretations & Special Notices Section of Chapter 5.

A Person seeking an exemption from position limits for bona fide commercial purposes shall apply to the Market Regulation Department on forms provided by the Exchange, and the Market Regulation Department may grant qualified exemptions in its sole discretion.

Refer to Rule 559 for requirements concerning the aggregation of positions and allowable exemptions from the specified position limits.

309102.F. Termination of Trading

Trading shall cease one business day prior to the termination date of the Light Sweet Crude Oil Futures contract for the corresponding contract month.

309103. FINAL SETTLEMENT

Final settlement 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.

EXHIBIT B

NYMEX Rulebook

Chapter 5

("Trading Qualifications and Practices")

Position Limit, Position Accountability, and Reportable Level Table

(Attached under separate cover.)

EXHIBIT C

NYMEX Rulebook
Chapter 5
(“Trading Qualifications and Practices”)

NYMEX Rule 588.H. – (“Globex Non-Reviewable Trading Ranges”) Table

		Outrights			Spreads	
Instrument	Globex Symbol	Globex Non-Reviewable Ranges (NRR)	NRR: Globex Format	NRR:Minimum Ticks	NRR: Globex Format	NRR: Minimum Ticks
Micro WTI Crude Oil Futures	MCL	$0.50 per barrel	50	50	Each leg evaluated as an outright	

EXHIBIT D

NYMEX Rulebook
Chapter 5
("Trading Qualifications and Practices")

NYMEX Rule 589. – Special Price Fluctuation Limits and Daily Price Limits Table

Product	Rulebook Chapter	Commodity Code	PRIMARY/ASSOCIATED	ASSOCIATED WITH	Dynamically Calculated Variant	Daily Price Limit
Micro WTI Crude Oil futures	309	MCL	Associated	CL	15% of Dynamically Calculated Reference Price	Daily Price Limit Table

EXHIBIT E

Cash Market Overview and Analysis of Deliverable Supply

New York Mercantile Exchange, Inc. ("NYMEX" or "Exchange") is self-certifying the listing of the Micro WTI Crude Oil Futures, which is 100-barrel size financially-settled look-alike contract based on the settlement prices of the Light Sweet Crude Oil Futures.

Appendix C to part 38 of the Commission's regulations defines deliverable supply as "the quantity of the commodity meeting the 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."

I. Methodology and Data Sources

The Exchange considered three components in evaluating deliverable supply estimates of the Domestic Light Sweet Common Stream Crude Oil for the Cushing, Oklahoma delivery location of the Light Sweet Crude Oil Futures contract:

(1) Crude Oil Production;

(2) Crude Oil Flows to the delivery area; and

(3) Crude Oil Storage in the delivery area.

A. Crude Oil Production

While crude oil production information is, in part, available from other sources, particularly at the state level from energy or tax revenue authorities, the Exchange determined to use production information collected by the U.S. Department of Energy ("DOE") Energy Information Administration ("EIA"). Specifically, the Exchange has chosen to rely on the EIA production data because it constitutes a single source, employing common standards, across all states. The EIA data are highly regarded but they do not provide sufficient breakdown on the quality characteristics of the oil production to determine the subset of total production that would qualify as Domestic Light Sweet under the terms of the futures contract.

B. Crude Oil Flows to the Cushing Delivery Area

To determine the flows of Domestic Light Sweet crude oil into the delivery area, NYMEX consulted with industry executives and professionals from pipeline and storage terminal operators in Cushing as well as other major industry participants. It is noteworthy that the estimates provided here are materially less than the production that can readily access the delivery mechanism and which *could* be delivered due to the fact that the sources we used were specifically knowledgeable about *actual* Cushing deliveries. Thus, the information provided is not what *could be* delivered — the standard which is in accordance with Commission's policy and precedent — but what actually *is* delivered. The Exchange believes that the Cushing delivery mechanism for light sweet crude oil and corresponding commercial secondary market constitutes such a sophisticated and highly-developed commercial market mechanism that, at any time, the actual flows to and stocks in the delivery area represent precisely the deliverable supply sufficient to support the mechanism. In other words, even though at any time there is additional production that *could* be delivered to the delivery mechanism, we are only including what *actually* flows in our estimate of deliverable supply.

C. Crude Oil Storage in the Cushing Delivery Area

Storage data are provided on a weekly basis by EIA. Details are provided for the U.S. Petroleum Administration for Defense Districts ("PADDs") and Cushing. There are five PADDs and, in some cases, they correspond to broad regions. PADD 2 broadly includes the Midwest; PADD 3 broadly includes U.S. Gulf Coast states and New Mexico; PADD 4 contains the Rocky Mountain States excluding New Mexico. Cushing is the only single location where crude oil official inventory numbers are collected and publicly disseminated on a regular basis anywhere in the world. The actual geographic market that is consistently most applicable to the NYMEX crude oil futures contract would, therefore, include much of PADD 2, not just Cushing.

Nonetheless, NYMEX includes only inventories reported at Cushing, so these underestimate relevant storage. As with production, EIA does not provide details on the quality characteristics of stored crude oil, but the industry experts with whom NYMEX consulted consistently estimated that 60% to 70% of the crude oil stored at Cushing qualified as Domestic Light Sweet Common Stream (to be conservative, the Exchange will discount 40% of inventory in its calculation of deliverable supply estimates).

II. The Cushing Physical Delivery Mechanism: Scope of Deliverable Crude Oil

The Cushing physical delivery mechanism is comprised of a network of nearly two dozen pipelines and 12 storage terminals, with extensive inter-connectivity. Two of the storage facilities — Enterprise and Enbridge — and their pipeline manifolds are the core of the Cushing physical delivery mechanism.[1] Physical volumes delivered against the Light Sweet Crude Oil Futures contract within the Enterprise and Enbridge systems are at par value. Any deliveries made on futures contracts elsewhere in Cushing require the seller to compensate the buyer for the lower of the transportation netbacks from these facilities to where the delivery occurs. Detailed information about the inflowing and outflowing pipelines is contained below in Table 2.

Terminating obligations in the Light Sweet Crude Oil Futures contract are fulfilled by delivering WTI type light sweet crude oil designated as "Domestic Common Stream" by Enterprise Products LLC. Market participants commonly refer to the light sweet deliverable streams as "WTI." In addition, the Domestic Common Stream includes a fungible blend of light sweet streams produced in the U.S. shale oil areas, including the Bakken, Niobrara, and Permian producing areas. Furthermore, each of these light sweet crude oil streams is fungibly blended and included as part of the "Domestic Common Stream" within the complex that comprises the Cushing delivery mechanism, as well as in the WTI physical market which calls for delivery in the Cushing delivery mechanism.

III. Physical Market Trading Structure and Term Contracts

A. Physical Market Trading Structure

Typically, there is a chronology of sales and purchases of crude oil in the onshore U.S. market that starts with a sale from producer and finishes with a purchase by an end-user to consume the crude oil. First-sales are from producers to aggregators or other middleman-type firms with delivery at the property where it is produced. The first-sale buyer transports oil downstream from the point of sale. Usually the first-sale buyer resells the oil to someone other than the end-user but sometimes sells directly to the end-user.

Final sales are sales to end-users who when they consume the oil remove it from the supply chain. End-users, however, also resell oil. Such end-user re-sales sometimes occur during the same commercial cycle in which they purchased it; other times, they occur during a later commercial cycle after the oil has been stored for a period of time. Like end-users, other buyers of oil also can either resell it immediately or store it first for some period of time and then resell it later. Thus, it is a common commercial practice that the first-sale and multiple subsequent re-sales occur in the same delivery cycle.

As discussed above, the Cushing delivery market is essentially a major reseller market where buyers either: resell the oil to someone else; store the oil and resell it later; store the oil and then consume it later; or transport it to consume it. The Cushing market is essentially downstream of first-sales. Most of the sales

[1] Three of the major sources for the cash-market information provided herein are Plains All America, Enterprise and Enbridge. Enterprise oversees the vast majority of deliveries in the Cushing Delivery Market and, as indicated, Enterprise and Enbridge are the core delivery mechanism operators. Plains and Enbridge account for about 60% of the storage available at Cushing.

in the Cushing market are for resale and not for either storage or final-sale; in fact, the physical market in "WTI," in which the standard form of delivery is within the pipeline system at Cushing, is estimated to be 10-20 times the multiple of "WTI" oil that flows to Cushing. As such, it is clear that most sales are for resale because they constitute the selling, over-and-over (thus, *re*-selling), of the base physical oil that flows to Cushing. *Argus Media* documents about 5-8 times the flow in "WTI" sales but does not capture all of the sales.[2]

B. Term Contracts

The Exchange has spoken with and interviewed a number of market participants regarding common commercial practices with respect to the use of term contracts in the U.S. onshore crude oil market.[3] The responses we received were consistent and they can be summarized as follows:

- Almost all first-sales of production are sold term; as discussed in the previous section, typically for delivery on the property where it is produced (or nearest gathering pipeline or holding tank), and typically to middleman-firms or aggregators. These middleman-firms typically resell the crude oil to other middleman-firms (or participants performing that function) or to end-users. Typically, the first-sales contracts are "evergreen" contracts that can be discontinued by either party with notice. NYMEX is including evergreen contracts in the "term contracts" category.
- There are no restrictions applied to the resale of crude oil bought first-sale on a term basis from producers. In fact, that would clearly not be applicable because sales are typically to aggregators or others acting in a middleman-firm role with the expressed responsibility of reselling the oil.
- The Cushing market is downstream of first-sales; in other words, Cushing is downstream of any term sales from producers. Thus, even if barrels were sold term by the producer, in the Cushing market those barrels are re-sold and re-delivered by either the purchaser from the producer or a subsequent purchaser from that original purchaser. The Cushing market mechanism, which consists of trading and physical delivery of light sweet crude oil, is a commercial secondary (or *spot*) market which is extremely liquid, comprised of broad participation and results in a substantial quantity of physical delivery of crude oil.
- Some end-user refiners in the Cushing market purchase specific light sweet crude oil streams, such as Bakken or Niobrara Light Sweet crude oil, on a term basis, and these refiners tend to segregate a portion of the specific light sweet crude streams for processing at their refineries. Based on conversations with refiners in the Cushing market, the Exchange estimates that approximately 10% of the deliverable supply for Cushing is segregated and designated for use by end-user refiners, and therefore is not available for re-sale in the Cushing market. Consequently, the Exchange will reduce its estimate of deliverable supply in Cushing by 10% to account for the specific light sweet streams that are designated for processing and segregated by the end-user refiners.
- Our sources expressly advised us that any production sold long-term was available for potential re-sale, such as during periods of refinery maintenance, and this is especially the case in the Cushing market.

C. Crude Oil Production

The production area that supplies crude oil to Cushing via pipeline and rail is comprised of the following eight (8) states: North Dakota, Montana, Wyoming, Colorado, New Mexico, Onshore Texas, Oklahoma, and Kansas.

In the three-year period of December 2017 through November 2020, the average production of crude oil available in the eight states was approximately 8.3 million barrels per day. Based on discussions with industry participants, our estimate of the portion of that average production which would qualify as Domestic Light Sweet Common Stream is 50% or higher— i.e., approximately 4.15 million barrels per day. The 4.15

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[2] The commercial market for physical delivery of light sweet crude oil in Cushing is a *secondary* (or *spot*) market mechanism. The number of physical deliveries in this market each month is 240 million barrels or higher (240,000 futures contracts equivalent or higher).

[3] These include: Plains All America, a major Midcontinent aggregator and marketer and operator of pipeline and storage terminals including in Cushing; and an Energy Market Participant Group of several dozen market participants organized through Hunton & Williams LLP to discuss and comment on Regulatory issues.

million barrels per day of crude oil production is equivalent to approximately 124.75 million barrels per month, or 124,750 futures contracts equivalents (contract size: 1,000 barrels).

Table 1 below provides annual production data available for production in the eight states that supply the Cushing crude oil market for the period of December 2017 through November 2020. The data show that production peaked in 2019, and then declined in 2020. As indicated above, the Exchange has determined to not utilize production data in its deliverable supply estimate, but the data demonstrates that production levels are more than sufficient to support the actual flows of deliverable product to the delivery location.

D. Crude Oil Flows to the Cushing Delivery Area

Currently, there is approximately 4.1 million b/d of inflow pipeline capacity to Cushing and 3.2 million barrels per day of outflow capacity. In addition, according to the EIA, there are 91.2 million barrels of storage capacity in the Cushing area which continues to grow steadily.

The Exchange collects inbound Cushing crude oil flows periodically but not on an on-going or scheduled basis as such information is proprietary and non-public. Based on information provided by industry sources in Table 2 below, as of December 2020, actual flows of crude oil to Cushing have ranged from 2.3 million to 2.6 million barrels per day, with Domestic Light Sweet Common Stream Crude Oil averaging between 1.3 to 1.5 million barrels per day.[4] On a 30-day monthly basis, actual flows of Domestic Light Sweet Common Stream Crude Oil ranged from 39 to 46.5 million barrels per month, or 39,000 to 46,500 Light Sweet Crude Oil futures contract equivalents.

As of July 2018, actual flows of crude oil in-bound to Cushing have ranged from 2.2 million to 2.5 million barrels per day as shown in Table 3 below, with Domestic Light Sweet Common Stream Crude Oil averaging between 1.270 to 1.450 million barrels per day.[5] On a 30-day monthly basis, actual flows of Domestic Light Sweet Common Stream Crude Oil ranged from 38.0 to 43.5 million barrels per month, or 38,000 to 43,500 Light Sweet Crude Oil futures contract equivalents.

As of March 2015, estimated in-bound flows of Domestic Light Sweet Common Stream Crude Oil into Cushing averaged between 920,000 and 1,000,000 barrels per day as illustrated in Table 4 below. On a 30-day monthly basis, actual flows of Domestic Light Sweet Common Stream Crude Oil were 27.6 million to 30.0 million barrels per month or 27,600 to 30,000 Light Sweet Crude Oil futures contract equivalents.

Given that the Exchange only collects pipeline flow data on a periodic basis, the Exchange is unable to provide a three-year average of Domestic Light Sweet Common Stream Crude Oil flows into Cushing. As such, the Exchange determined to average the 2015, 2018 and 2020 estimated flows data collected. The average of the ranges for 2015, 2018 and 2020 for Domestic Light Sweet Common Stream Crude Oil flows into Cushing are 35,000 to 40,000 contract equivalents. The midpoint of the average of the ranges is approximately 37,500 contract equivalents.

E. Crude Oil Storage in the Cushing Delivery Area

As of May 2020, EIA reported that shell storage capacity at Cushing was 91.2 million barrels and working storage capacity was 75.8 million barrels.[6] Currently, there is substantial excess working capacity at Cushing (nearly 28 million barrels). Finally, it should be noted that, at least on a temporary basis, storage can exceed working capacity and it is common for an individual tank to reach 85-90% of shell capacity (which exceeds the 83% average underlying the EIA estimates).

Table 4 below provides monthly averages of weekly Cushing stocks for the period beginning January 2018 through December 2020 as published by the EIA. For the three-year average from January 2018 through December 2020, inventories averaged 42.6 million barrels and ranged from about 23 million to 60 million barrels. NYMEX asked operators of storage in Cushing if they would share specific data on quantities of Domestic Light Sweet Common Stream Crude Oil stored at their facilities and they responded that such data were confidential. As discussed above, the Exchange estimated that approximately 60% of the total oil stored at Cushing qualified as Domestic Light Sweet Common Stream Crude Oil. Based on the foregoing, for the January 2018 – December 2020 period, the monthly average Domestic Light Sweet

[4] The sources were various pipeline operators and other industry sources.

[5] The sources were: Plains All America, an aggregator and marketer of crude oil production and pipeline and storage terminal operator at Cushing; and other industry sources.

[6] http://www.eia.gov/petroleum/storagecapacity/table2.pdf Shell capacity is defined by EIA as the design capacity of a petroleum storage tank which is always greater than or equal to working storage capacity.

Common Stream Crude Oil stored at Cushing was approximately 25.5 million barrels or 25,500 futures contract equivalents.

The Exchange has further evaluated both operational practices at storage facilities as well as commercial practices by customers of storage facilities to determine if some components of inventoried product could rightfully be considered *not* to be readily deliverable.

With respect to operational practices, based on discussions with some industry experts, the Exchange conservatively estimates that 6.75% of stored product, on average, is required for operational minimums.[7] This converts into discounting an estimated 1.7 million barrels of Domestic Light Sweet crude oil based on the three-year average storage level (or 1,700 contract equivalents). In applying a discount of 6.75% to account for operational minimums, average monthly Domestic Light Sweet Common Stream Crude Oil for the January 2018 – December 2020 period is further reduced to approximately 23,800 contract equivalents.

With respect to commercial practices, the Exchange specifically sought whether storage customers were expressly allotting any stored barrels at Cushing for refining that were, therefore, unavailable for secondary market delivery. We consistently heard from market participants that was not the case; that barrels stored at Cushing are not specifically targeted for scheduled refining. Rather, refiners typically store barrels targeted for scheduled refining in tanks on the premises at their respective refineries or at other storage facilities. However, we did hear from one refiner that they keep barrels stored at Cushing for the contingency that there could be some unexpected interruption in their refinery supply; and, rather than refine the barrels stored at Cushing, they use them to trade for other barrels they would refine. Thus, the Exchange determined to further reduce the average monthly Domestic Light Sweet Common Stream crude oil stored at Cushing to account for this *contingency storage* in our estimate of deliverable supply. We estimate this quantity to be 2 million barrels (or 2,000 contract equivalents) of Domestic Light Sweet crude oil. Therefore, for the January 2018 – December 2020 period, the Exchange estimates stored product at Cushing (adjusted for quality specifications, operational minimums and contingency storage) and which is readily available for delivery against the Light Sweet Crude Oil futures contract to be approximately 21,800 contract equivalents.

ANALYSIS OF DELIVERABLE SUPPLY

Based on the above analysis, the Exchange determined at this time to base its estimates of deliverable supply on the sum of:

- Storage: 21,800 contract equivalents (which represents the average monthly inventory for the January 2018 – December 2020 period adjusted to account for quality specifications, operational minimums and contingency storage); and
- Inflow: 37,500 contract equivalents (which represents the midpoint of the average of the ranges of the 2015, 2018 and 2020 Domestic Light Sweet Common Stream Crude Oil flows into Cushing).

The total estimated deliverable supply, consisting of storage and pipeline inflows, was 59,300 contract equivalents. Additionally, and as noted in the above analysis, the Exchange shall apply a 10% reduction to the sum of inventory storage and inflows into Cushing in order to discount segregated barrels that may be designated for processing by end-user refiners and typically not available for re-sale in the Cushing market. Therefore, after applying the 10% reduction, the Exchange has determined the estimated deliverable supply available for delivery against the Light Sweet Crude Oil Futures contract at approximately 53,370 futures contract equivalents per month.

For purposes of calculating compliance with position limits, the Micro WTI Crude Oil Futures contract aggregates into the financially-settled Crude Oil Bullet Futures Contract (code WS) at a ratio of 10:1. The Crude Oil Bullet Futures contract is a cash-settled look-alike contract of the underlying Light Sweet Crude Oil Futures contract and terminates one business day prior to the Light Sweet Crude Oil Futures contract.

The spot month limits for the underlying Crude Oil Bullet Futures contract utilize a tiered structure of 6,000/5,000/4,000 contracts for the final three days of trading in the expiring contract month. Based on the foregoing analysis, the proposed spot month position limit of 6,000 contracts represents 11.2**%** of the

[7] We have been advised that, for older tanks, the operational minimum is 9% and, for newer tanks, it is 4.5%. Our assessment is that the majority of tanks at Cushing would qualify as newer. Nonetheless, to be conservative, we have applied the mid-point percentage—6.75%-- for all of Cushing.

estimated monthly deliverable supply. Further, the proposed spot month position limit of 5,000 contracts represents 9.4**%** of the estimated monthly deliverable supply. Finally, the proposed spot month position limit of 4,000 contracts represents 7.5**%** of the total estimated monthly deliverable supply.

Table 1
U.S. Crude Oil Production[8]
For Eight States that Supply Cushing, Oklahoma
(in Thousands of Barrels per Day)

Annual Averages based on Monthly EIA Data	Crude Oil Production (Thousands of Barrels per Day)
Dec 2017 to Nov 2018	7,601
Dec 2018 to Nov 2019	8,809
Dec 2019 to Nov 2020	8,543
Three-Year Average	**8,318**

Table 2
Crude Oil Flows to Cushing (as of December 2020)
(Barrels/Day)[9]

Incoming Pipelines	Capacity	Owner	Estimated Flows (in Barrels/Day)
Keystone XL (from Steele City, NE)	760,000	Transcanada	400,000 – 450,000 BD (100% Heavy Sour)
Basin Pipeline (Permian)	550,000	Plains All American	250,000 – 325,000 (90% WTI, 10% Sour)
Centurion North Pipeline (Permian)	170,000	Occidental	40,000 – 50,000 (100% WTI)
Spearhead Pipeline (Canada)	195,000	Enbridge	180,000 – 195,000 (100% Heavy Sour)
Flanagan South (Canada/Bakken)	600,000	Enbridge	450,000 – 500,000 (10% WTI, 90% Heavy Sour)
White Cliffs Pipeline (Niobrara)	90,000	Rose Rock	85,000 – 90,000 (100% WTI)
Cashion, OK Pipeline	250,000	Plains All American	120,000 – 130,000 (100% WTI)
Mississippian Lime Pipeline	150,000	Plains All American	70,000 – 80,000 (100% WTI)
Pony Express Pipeline (Niobrara)	400,000	Tallgrass	350,000 – 375,000 (100% WTI)
Saddlehorn/Grand Mesa	450,000	Magellan/Plains	225,000 – 300,000 (100% WTI)
Glass Mountain	210,000	Navigator	50,000 – 60,000 (100% WTI)
Hawthorn (Stroud to Cushing)	90,000	Hawthorn	25,000 – 30,000 (100% WTI)
SCOOP Pipeline	70,000	Magellan	45,000 – 50,000 (100% WTI)
Great Salt Plains	35,000	Parnon	25,000 – 30,000 (100% WTI)
Eagle North	25,000	Blueknight	4,000 – 7,000 (100% WTI)
Red River	35,000	Plains All American	1,000 – 5,000 (100% WTI)
TOTAL In-Bound Capacity	**4.1 Million Capacity**		**WTI Flow: 1,310,000 – 1,550,000 B/D**

Outgoing Pipelines	Capacity (B/D)	Owner
Seaway Pipeline	950,000	Enterprise
Keystone MarketLink	750,000	Transcanada
BP#1 (to Chicago)	180,000	BP
Ozark (to Wood River, IL)	360,000	Enbridge
Osage (to Eldorado, KS)	165,000	Magellan/NCRA
Coffeyville CVR pipeline	110,000	CVR Energy
Phillips (to Ponca City, OK)	122,000	ConocoPhillips
Phillips (to Borger, TX)	59,000	NuStar
Plains Red River (to Longview)	235,000	Plains All American
Diamond Pipeline (to Memphis)	200,000	Plains All American
Sunoco (twin lines to Tulsa)	70,000	Sunoco
Magellan Tulsa	30,000	Magellan
TOTAL Out-bound Capacity	**3.2 Million B/D**	

[8] The production listed here includes North Dakota, Montana, Wyoming, Colorado, New Mexico, Onshore Texas, Oklahoma, and Kansas. The web link is: http://www.eia.gov/dnav/pet/pet_crd_crpdn_adc_mbblpd_a.htm

[9] Sources: pipeline operators and other industry sources.

Table 3
Crude Oil Flows to Cushing (as of July 2018)
(Barrels/Day)[10]

Incoming Pipelines	Capacity	Owner	Estimated Flows (in Barrels/Day)
Keystone XL (from Steele City, NE)	590,000	Transcanada	350,000 - 400,000 BD (100% Heavy Sour)
Basin Pipeline (Permian)	450,000	Plains	350,000 - 400,000 (80% WTI, 20% Sour)
Centurion North Pipeline (Permian)	170,000	Occidental	120,000 - 140,000 (100% WTI)
Spearhead Pipeline (Canada)	195,000	Enbridge	150,000 - 175,000 (100% Heavy Sour)
Flanagan South (Canada/Bakken)	600,000	Enbridge	400,000 - 450,000 (10% WTI, 90% Heavy Sour)
White Cliffs Pipeline (Niobrara)	215,000	Rose Rock	100,000 - 120,000 (100% WTI)
Plains Cashion, OK Pipeline	250,000	Plains	120,000 -145,000 (100% WTI)
Mississippian Lime Pipeline	150,000	Plains	95,000 - 100,000 (100% WTI)
Pony Express Pipeline (Niobrara)	325,000	Tallgrass	300,000 – 325,000 (100% WTI)
Saddlehorn-Grand Mesa	340,000	Magellan/Plains	140,000 – 150,000 (100% WTI)
Glass Mountain	210,000	Sem Group	30,000 – 40,000 (100% WTI)
Hawthorn (Stroud to Cushing)	90,000	Hawthorn	10,000 – 20,000 (100% WTI)
Great Salt Plains	35,000	Parnon	30,000 – 35,000 (100% WTI)
Eagle North	20,000	Blueknight	5,000 – 10,000 (100% WTI)
TOTAL In-Bound Capacity	**3.6 Million Capacity**		**WTI Flow: 1,270,000 – 1,450,000 B/D**

Outgoing Pipelines	Capacity (B/D)	Owner
Seaway Pipeline	850,000	Enterprise
Keystone MarketLink	700,000	Transcanada
BP#1 (to Chicago)	180,000	BP
Ozark (to Wood River, IL)	345,000	Enbridge
Osage (to Eldorado, KS)	165,000	Magellan/NCRA
Coffeyville CVR pipeline	110,000	CVR Energy
Phillips (to Ponca City, OK)	122,000	ConocoPhillips
Phillips (to Borger, TX)	59,000	NuStar
Plains Red River Pipeline (to Longview)	125,000	Plains All American
Plains Red River Pipeline	25,000	Plains All American
Sunoco (twin lines to Tulsa)	70,000	Sunoco
Plains Cherokee	20,000	Plains All American
Magellan Tulsa	30,000	Magellan
Diamond Pipeline (to Memphis)	200,000	Plains
TOTAL Out-bound Capacity	**3.0 Million B/D**	

Table 4
Crude Oil Flows to Cushing (as of March 2015)
(Barrels/Day)[11]

Incoming Pipelines	Capacity	Owner	Estimated Flows (in Barrels/Day)
Keystone XL (from Steele City, NE)	575,000	Transcanada	200,000 - 250,000 BD (Heavy sour)
Basin Pipeline (Permian)	450,000	Plains	250,000 (80% WTI)
Centurion North Pipeline (Permian)	120,000	Occidental	95,000 - 100,000 (100% WTI)
Spearhead Pipeline (Canada)	210,000	Enbridge	150,000 - 175,000 (Canadian sour)
Flanagan South (Canada/Bakken)	585,000	Enbridge	400,000 - 450,000 (10% WTI, 90% Sour)
White Cliffs Pipeline (Niobrara)	150,000	Rose Rock	100,000 - 120,000 (100% WTI)
Plains Cashion, OK Pipeline	100,000	Plains	80,000 (100% WTI)
Mississippi Lime Pipeline	175,000	Plains	110,000 (100% WTI)
Pony Express Pipeline (Niobrara)	320,000	Tallgrass	180,000 – 200,000 (100% WTI)
Hawthorn (Stroud to Cushing)	90,000	Hawthorn	20,000 – 25,000 (100% WTI)
Great Salt Plains	30,000	JP Energy	15,000 – 20,000 (100% WTI)
Northern Cimarron	30,000	Rose Rock	15,000 – 20,000 (100% WTI)
Midcontinent Pipeline	30,000	Sunoco Logistics	25,000 – 30,000 (100% WTI)
Glass Mountain Pipeline	140,000	Rose Rock	40,000 – 50,000 (100% WTI)
TOTAL In-Bound Capacity	**3.0 Million Capacity**		**WTI Flow: 920,000 – 1,000,000 B/D**

[10] Sources: Plains All American Pipeline Company, and other industry sources.

[11] Sources: Plains All American Pipeline Company, JSK consulting, and other industry sources.

Table 5
Cushing Storage[12]
Monthly Average of Weekly EIA Stocks Data
(in Thousand Barrels)

Year	Month	Stock
2018	Jan	41,309
	Feb	31,941
	Mar	30,448
	Apr	35,519
	May	36,509
	Jun	31,754
	Jul	24,175
	Aug	23,714
	Sep	23,301
	Oct	29,339
	Nov	35,977
	Dec	40,779
2019	Jan	41,574
	Feb	43,977
	Mar	46,961
	Apr	45,133
	May	48,553
	Jun	52,712
	Jul	50,567
	Aug	43,000
	Sep	39,921
	Oct	43,780
	Nov	45,286
	Dec	38,672
2020	Jan	35,715
	Feb	38,237
	Mar	39,614
	Apr	56,831
	May	57,986
	Jun	46,927
	Jul	50,002
	Aug	52,722
	Sep	54,744
	Oct	59,464
	Nov	60,373
	Dec	58,353
Three-Year Avg.		**42,640**

[12] http://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=PET&s=W_EPC0_SAX_YCUOK_MBBL&f=W