November 12, 2015

VIA E-MAIL

Brent J. Fields
Secretary
Securities and Exchange Commission
100 F Street, N.E.
Washington, D.C., 20549-1090

Re: Investors‘ Exchange LLC Form 1 Application (Release No. 34-75925; File No. 10-222)

Dear Mr. Fields:

NYSE Group (‘‘NYSE’’) appreciates the opportunity to provide written comments in connection with the Investors’ Exchange LLC (‘‘IEX’’) Form 1 application (‘‘Application’’) and applauds IEX’s planned evolution from dark pool to a lit exchange that is regulated to display public quotes and increase public price transparency. The nature of the IEX application is concerning to us, however. Like the ‘‘non-fat yogurt’’ shop on Seinfeld, which actually serves tastier, full-fat yogurt to increase its sales, IEX advertises that it is ‘‘A Fair, Simple, Transparent Market,’’ whereas it proposes rules that would make IEX an unfair, complex, and opaque exchange.

In addition, IEX omitted critical operating procedure detail from its rules, which makes it impossible to fully ascertain how it proposes to operate as an exchange. Accordingly, we recommend that IEX amend its Application to provide a complete explanation in its rules of the operation of IEX to issuers, investors, and other market participants. NYSE believes that it and other market participants should be provided an opportunity to comment on a complete proposal by IEX, which has not yet been provided, before the Securities and Exchange Commission (‘‘Commission’’) approves a new exchange.

I. BACKGROUND

Exchanges play important roles in the national market system. The Securities Exchange Act of 1934, as amended (‘‘Exchange Act’’) and Regulation National Market System (‘‘Regulation NMS’’)
 impose high standards and obligations on registered exchanges that are critical to the functioning of the national market system. In addition, unlike broker-dealers, exchanges are self-regulatory organizations (‘‘SROs’’) with the obligation to enforce compliance with the Exchange Act, the rules promulgated under the Exchange Act by the Commission, and the exchange’s own rules. The exchanges all operate trading venues that publicly display quotations. These quotations are fundamental to the functioning of the securities markets. Without publicly displayed quotations,

1 17 CFR 242.600 through 242.612.
price discovery would be severely impaired and investors would be unable to assess the quality of the executions they receive.

The Commission also relies on SROs to operate the national market system plans, which form the backbone of industry-wide coordinated activities such as the dissemination of consolidated quotation and trade information and the volatility controls found in the limit up limit down bands and trading pauses. The Commission has also directed the SROs to develop the consolidated audit trail. For these reasons, the Commission holds SROs to high standards that differ from the obligations of a broker-dealer operating a registered alternative trading system (“ATS”).

IEX currently operates as a broker-dealer and ATS. As an ATS, IEX is not required to meet the standards required to operate as a registered exchange. As discussed below, we believe that in several respects, IEX’s Application falls short of the standards required to be registered as an exchange under the Exchange Act.

II. DISCUSSION

A. IEX’s Proposed Rules Lack Clarity and Raise Important Issues Regarding the Soundness of the Application

IEX’s Application does not impart transparency because it fails to include salient details upon which to evaluate whether the Application is consistent with the Exchange Act. Specifically, IEX’s proposed rules are silent on one of its proposed main features, the IEX Point of Presence (“POP”). Exhibit E to the Application briefly explains that the POP is designed to provide Access Participants with 350 microseconds of latency from the IEX POP to the System. While Exhibit E to the Application defines the term “Access Participant,” IEX does not define the term “System” or what is encompassed in the term “access.” More egregious, IEX’s proposed rules fail to describe at all how the POP would function.

Without clarity in IEX’s proposed rules regarding when the POP would introduce latency or to which “System” operated by IEX such latency would be applicable, it is impossible to provide comprehensive comments on the Application. Moreover, as an integral part of IEX’s proposed exchange, a description of the POP should be included in IEX’s exchange rules not only so the Commission, market participants and investors can fully evaluate the Application, but also so that any changes to how the POP would function would be subject to filing rule changes with the Commission. As well as allowing the Commission to determine the consistency of proposed rule changes with the Exchange Act, such rule filings allow market participants and investors to comment on such proposed changes. While IEX currently plans that its POP would add 350 microseconds of latency, without including this requirement in a rule, IEX could unilaterally increase this intentional delay without filing a proposed rule change with the Commission, explaining how such change would be consistent with the Exchange Act, or providing the opportunity for investor comment.

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3 Exhibit E to the Application defines the term "Access Participants" to mean Members of IEX, Sponsored Participants and/or Service Bureaus on behalf of a Member.
To provide market participants with a meaningful opportunity to comment on IEX’s proposed rules, IEX must clearly state in its rules at which point the POP introduces latency and which systems operated by IEX are impacted by such latency, including the following:

1. Do all incoming messages, including those to cancel or modify an order, go through the POP?
2. Do all outgoing messages, including order acknowledgement messages, go through the POP?
3. Do IEX quote and trade reports to the SIPs go through the POP?
4. Does quote and trade data disseminated by IEX through its proprietary data feeds go through the POP?
5. Does the incoming market data that IEX receives from other markets, either via direct feeds or the SIP, go through the POP?
6. Are the prices of pegging interest resting on IEX’s book (all of which is undisplayed) updated based on away market protected quote changes that go through the POP?
7. Do orders that are sent from the IEX matching engine to its affiliated router, or from IEX’s affiliated router to the IEX matching engine or to away markets, go through the POP?
8. Must market participants, including vendors and other exchanges that subscribe to IEX’s proprietary market data feeds, connect through the POP?

Because IEX’s proposed rules provide no details about the specific information that must go through the POP, which systems would be connected to the POP, and what information would not go through the POP, it is impossible to fully evaluate and comment on IEX’s proposed exchange. The Commission should not approve IEX’s Application until IEX includes details about the POP in its rules and provides the opportunity for public comment on a full and complete version of IEX’s rules.

B. IEX’s Affiliated Routing Broker Has Access to Trade Execution Information that IEX is Withholding from Investors

IEX’s proposed rules do not describe how its affiliated routing broker, IEX Services, LLC (“IEXS”), connects to IEX’s trading systems and whether orders it sends to and from IEX are subject to the POP. As noted above, IEX’s proposed rules are silent on how the POP would function and to which systems it would be connected. However, information on IEX’s website describes the current functionality of IEX’s “Smart Order Router” or “SOR” as making routing decisions on unexecuted orders before trade execution information is made publicly available: “the IEX patent-pending PoP is designed to enable IEX’s SOR to interact with all protected markets before market participants can react to fills received on IEX or other market centers.” Assuming that the proposed IEX exchange would function the same as its ATS and that this information on IEX’s website would apply but not be in its rules, the website statement raises concerns that IEXS would not be required to connect to the “System” via the POP like all other IEX members would be required to do. If our assumption is correct, this information, at a minimum, should be in the IEX rules.

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5 Proposed IEX Rule 11.230(c)(2) and (c)(5) describes IEX’s “Route to Take with Re-Sweep” functionality, which includes routing portions of an order to protected quotations after trading with
IEX is explicit in its marketing materials that its SOR has an information advantage. If IEX as an exchange would allow one of its members (i.e., its affiliated broker-dealer, IEXS) to make routing decisions based on trade execution information and intentionally delay the same information to other market participants, this built-in time advantage would unfairly discriminate against IEX members that are not its affiliates. This built-in informational disparity would give IEXS a competitive advantage over broker-dealers that provide that same services that IEXS provides. The consequence of IEX granting an advantage to its affiliated routing broker is that IEX’s members would effectively be required to use the IEX routing broker to route any unfilled portion of orders because IEXS would be the only IEX member permitted to avoid the intentional 350 microsecond delay. Members who choose, as they do on other markets, to have unfilled portions of orders returned and then make routing decisions themselves would be subject to the 350 microsecond delay and therefore would be at an unfair competitive disadvantage. While this is a function that IEX can currently provide as a broker-dealer operating an ATS, an exchange providing a function that creates regulatory disparities that provides an inappropriate advantage over its own members providing the same service is not consistent with the Exchange Act, as the Commission has previously found.

To illustrate, if an IEX member were to send a 1,000 share routable order to IEX, the IEX POP would hold that order for 350 microseconds before matching the order against orders in the IEX order book. If 200 shares of this incoming order traded against orders resting in the IEX order book, leaving 800 unexecuted shares, the member would have to wait an additional 350 microseconds more than the normal latency attendant with message transmission to receive notice that 800 shares remained unexecuted. Only then would the member be able to send these 800 shares to another venue to attempt an execution. If, however, the member were to direct the IEX affiliated routing broker to route any unfilled portion of its original 1000 share order, the member’s remaining 800 shares would be routed 350 microseconds faster. Thus, while IEX’s rules do not require its members to use IEXS, the unfair advantage provided to IEXS requires its members to use IEXS or potentially miss execution opportunities on markets other than IEX.

The unfair advantage would be further compounded if IEX were approved as a registered exchange and IEX’s displayed quotes were granted protected quotation status under Regulation NMS. If IEX’s displayed quotes were considered protected under Regulation NMS, market participants would be required under the Order Protection Rule to route orders to IEX before executing at a worse price available on another market. Because of the informational advantage of IEXS and the intentional delay added by the POP, IEX members with institutional and retail customer orders would have to consider whether best execution obligations required such members to use the IEXS for any unexecuted portion of orders rather than routing themselves.

orders on the IEX order book. However, the proposed rule is silent on when IEXS would receive information about the unexecuted portion of the order.

See, e.g., Securities Exchange Act Release No. 68629 (January 11, 2013), 78 FR 3928, 3931 (January 17, 2013) (SR-NASDAQ-2013-059) (“NASDAQ Disapproval Order”) (Order disapproving proposal to establish “benchmark orders” because, in part, the proposed functionality would create regulatory disparities that would give NASDAQ an inappropriate advantage over broker-dealers providing the same services and therefore the Commission could not find that the proposal would be consistent with Section 6(b)(8) of the Exchange Act).
The NYSE, like all other exchanges, has an affiliated broker. But, these affiliated brokers do not have the unfair advantage that IEXS appears to provide itself.

We note further that the proposed informational advantage that IEXS would have regarding trade executions is inconsistent with proposed IEX Rule 2.220(a)(5), which provides that IEX “shall establish and maintain procedures and internal controls reasonably designed to adequately restrict the flow of confidential and proprietary information between” IEX and IEXS. Providing IEXS with the trade execution information and intentionally delaying the same information to the counterparties to the trade and perhaps to recipients of its data feeds would not be consistent with this proposed rule.

C. IEX’s Intentional Programmed Delay Will Result in the Investors Receiving Stale and Misleading Quote Information and Does Not Meet the Requirements of a Protected Quotation Under Regulation NMS

As noted above, the Application provides scant details of IEX’s POP functionality, which IEX describes in its marketing materials as the hallmark of IEX’s model and how IEX differentiates itself from other trading venues. What is clear, however, is that IEX has programmed an intentional delay into all orders entering its ATS systems and would continue this functionality if approved to operate as an exchange.7 Because of the intentional programmed delay, a non-marketable Limit Order would not be immediately displayed. IEX’s displayed quotes therefore would not meet the definition of an automated quotation in Rule 600(b)(3) of Regulation NMS8 and therefore would not be protected quotes eligible for the Order Protection Rule.9 Accordingly, if the Commission approves the Application in its current form, the Commission should make a finding that IEX’s displayed quotations are not protected quotations eligible for protection under the Order Protection Rule.

Rule 600(b)(3) defines an “automated quotation” as a quotation displayed by a trading center that:

(i) Permits an incoming order to be marked as immediate-or-cancel;

(ii) Immediately and automatically executes an order marked as immediate-or-cancel against the displayed quotation up to its full size;

(iii) Immediately and automatically cancels any unexecuted portion of an order marked as immediate-or-cancel without routing the order elsewhere;

7 As discussed above, because of the lack of detail in the Application, it is unclear whether quote and trade messages that are sent to either the SIPs or proprietary data feeds go through the POP, or if data recipients only must also connect via the POP. If so, this would be an additional programmed delay on top of the initial programmed delay on arrival of an order.

8 17 CFR 242.600(b)(3).

9 17 CFR 242.611 (“Order Protection Rule”).
(iv) Immediately and automatically transmits a response to the sender of an order marked as immediate-or-cancel without routing the order elsewhere; and

(v) Immediately and automatically displays information that updates the displayed quotation to reflect any changes to its material terms.

Rule 600(b)(57) of Regulation NMS further defines a “protected bid or protected offer” (together, a “protected quotation”) to be an automated quotation that is the best bid or best offer of a national securities exchange.

Regulation NMS thus requires that a trading center displaying an automated quotation must provide an “immediate-or-cancel” (“IOC”) functionality for an incoming order to execute immediately and automatically against the quotation up to its full size, and for any unexecuted portion of such incoming order to be cancelled immediately and automatically without being routed elsewhere. The trading center also must immediately and automatically respond to the sender of the IOC order.

As the Commission found, to qualify as an automatic execution, “no human discretion in determining any action taken with respect to an order may be exercised after the time an order is received.” And while Regulation NMS contemplates a certain amount of latency inherent with message transmission, the Commission made clear that while there is no specific time standard for when a market should “immediately” respond to an incoming order, any programmed delay equates to human discretion in determining action taken with respect to an order:

The definition of automated quotation as adopted does not set forth a specific time standard for responding to an incoming order. The Commission agrees with commenters that the standard should be ‘immediate’, i.e., a trading center’s systems should provide the fastest response possible without any programmed delay. (emphasis added).

Use of the POP by a registered exchange would be inherently inconsistent with the Commission’s statement in Regulation NMS that, to qualify as an automated trading center, “the trading center must have implemented such systems, procedures, and rules as are necessary to render it capable of displaying quotations that meet the action, response, and updating requirements set forth in the definition of an automated quotation.” Because all orders sent to IEX would be required to go through IEX’s POP, contrary to Regulation NMS, an IOC order would not immediately and automatically execute and any unexecuted portion would not be cancelled immediately and automatically. Rather, the programmed intentional delay of 350 microseconds on order entry would mean that an IOC order would not receive an immediate execution and thus IEX’s quote would not meet the second prong of the definition of an automated quotation. The

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10  17 CFR 242.600(b)(57).
12  Id.
13  Id.

Regulation NMS Adopting Release, 70 FR at 37520.
POP would then add an additional 350 microseconds to provide the response, which means that IEX would not meet the fourth prong of the definition of an automated quotation. In addition, this programmed 700 round-trip microsecond delay would be in addition to any normal latency for transmitting messages between a broker-dealer and a trading venue. Accordingly, contrary to the statements in proposed IEX Rule 11.240(c) that IEX would display “automated quotations” within the meaning of Regulation NMS, IEX’s POP functionality would be fundamentally inconsistent with Regulation NMS and would not meet the requirements of an automated quotation. And because IEX’s quotes would not qualify as automated quotations, they could not be considered protected quotations under Regulation NMS.

Finally, if the Commission re-interprets Regulation NMS’s definition of an automated quotation to permit systematic delays, other exchanges would likely make similar assessments. And, if IEX is permitted to include this programmed delay without including it in its rules, other exchanges could similarly add an intentional delay without changing their rules, without the benefit of any input from the Commission regarding what amount of systematic delay would be acceptable. NYSE believes this would be a step backwards in the development of the national market system, and urges the Commission not to go in this direction by making clear that IEX’s proposed systematic delay precludes it from having a protected quote under Regulation NMS.

D. IEX’s POP Functionality Creates an Unfair Advantage for Orders on IEX’s Book and Harms Investors With Orders on Other Markets

IEX has marketed its platform as the trading venue designed to “protect” investors from what IEX considers predatory traders and to neutralize the “unfair” advantage these traders have. As noted in Section A above, IEX’s application does not fully describe what information IEX plans to intentionally delay and not to delay in order to eliminate what it views as an unfair advantage. However, proposed IEX Rule 11.410 does state that IEX proposes to use the direct feeds from each exchange to calculate the NBBO. Information on IEX’s website regarding the “IEX True Price Matching Engine (Patent-Pending)” confirms that the IEX Matching Engine will calculate the NBBO for use in pricing trades on its market in less than the 350 microsecond intentional “communication buffer” introduced by “IEX’s POP Architecture (patent-pending).” In other words, assuming the IEX exchange would use this same architecture, IEX would not be receiving market information from other trading venues on a delayed basis.

In conjunction with IEX’s proposal to use direct feeds to calculate the NBBO, IEX’s website states that the IEX POP adds 350 microseconds to order and trade communications, including, e.g., new orders, order cancellations/modifications and trade execution reports. Based on this information, it appears that other market participants would only receive IEX’s quote and trade information through the “communication buffer” of the POP. While NYSE understands from the examples on IEX’s website how this protects orders on IEX’s order book when the NBBO is changing, NYSE is concerned that IEX’s proposed structure would shift any supposed unfair advantage to IEX and

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15 See http://www.iextrading.com/trading/trueprice/.
orders on its book, to the detriment of orders resting on the books of competing markets, and thus to the detriment to the mechanism of a fair and orderly market and national market system.

To illustrate:

**Example A:**

The PBBO is .10 x .20 and IEX has a midpoint peg order to buy with a limit price of .15.

If the PBBO changes to .10 x .15 because of a quote change on the NYSE, the IEX True Price Matching Engine will immediately change the price of the pegged order resting on its order book to .125 and IEX’s POP Architecture would prevent any incoming order from trading with the midpoint peg order prior to its price being revised to reflect the new PBBO.

**Example B:**

The PBBO is .10 x .20 and NYSE has a midpoint peg order to buy with a limit price of .15.

If the PBBO changes to .10 x .15 because of a quote change on IEX, the NYSE will not receive the IEX quote change until it passes through the 350 microsecond “communication buffer” of the POP. The midpoint peg order to buy resting on the NYSE’s book would remain (mis)priced at .15 because of this intentional delay. In addition, IEX’s affiliated routing broker could send an order to trade with this order on NYSE’s book.

These examples show that IEX is proposing a structure premised on impairing the quality of investors’ executions on competing venues. By publicly disseminating IEX quote and trade information on a delayed basis, orders resting on the IEX book would clearly benefit, but it would likewise disadvantage orders at other markets. A certain amount of latency among venues is inherent in the technology employed by different venues. However, IEX is proposing to systematically create a latency that provides an informational advantage to orders on its markets and make orders on other trading venues vulnerable to this informational advantage.16

The NYSE believes that the harm that would result to investors trading on venues other than IEX as a result of this programmed delay would both impose an unnecessary and inappropriate burden on competition that is inconsistent with Section 6(b)(8) of the Exchange Act17 and create new

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16 NYSE customers have already requested that if IEX is approved as an exchange, that NYSE and other exchanges should develop order types that would bypass the IEX protected quotations. The purpose of such an order type would be to avoid a degraded execution quality by pegging to a stale, IEX quote. The introduction of such an order type of other markets would introduce new complexity into the national market system.

impediments to a fair and orderly market and national market system that is inconsistent with Section 6(b)(5) of the Exchange Act.\textsuperscript{18}

E. IEX is Not a “Simple” or “Transparent” Market

IEX advertises that it is “A Fair, Simple, Transparent Market,” implying that other markets are not. NYSE wants to correct IEX’s claims that its market is “simple” because it offers just a handful of “simple” order types and is not “complex.” It is clear from the proposed rules in IEX’s Application that IEX would have as many order types and modifiers as other exchanges and that certain of its proposed order types, such as the discretionary pegged order, are even more complex than those of other exchanges.

IEX proposed Rule 11.190, which runs for twenty pages of rule text, describes IEX’s proposed orders and modifiers. When all of the possible modifier and order type combinations available on IEX are factored in, it is unclear how IEX’s menu of order types and modifiers can be considered “simple.”

As with all other exchanges, IEX will offer limit, market, pegged, and reserve orders. But then the complexity begins, because IEX would also offer Displayed Orders, Non-Displayed Orders, IEX Only Orders, Primary Peg Orders, Midpoint Peg Orders, Discretionary Peg Orders, Minimum Quantity Orders, and Intermarket Sweep Orders. In addition, depending on which type of order is selected, it can be sent with multiple choices of modifiers, including:

- one of six time-in-force conditions;
- an instruction to be IEX only (i.e., does not route) or routable;
- if routable, a menu of six different routing strategies from which to choose;
- an instruction to be displayed, non-displayed, or partially-displayed; and
- an instruction of an optional minimum quantity.

The tally of potential different combinations of instructions for limit orders alone is in the hundreds. While most of these order and modifier combinations are not novel, the simple fact is that there is nothing “simple” in the IEX’s order combination offerings.

NYSE also believes that IEX’s proposal to provide a systematic and measurable advantage to its dark, pegged orders is not the hallmark of a “transparent” market. Pegged orders play a dominant role in IEX’s application, with three proposed flavors of pegged orders, none of which would be displayed. While other exchanges offer pegged order types, IEX’s proposal is unique in that all pegged orders would be dark and pegged orders would be provided advantages that other orders on IEX would not enjoy.

As described in Section D above, the price of pegged orders would be updated based on direct market data feeds, which would not be required to go through the POP. By contrast, displayed orders on the IEX book could not be cancelled or modified by the entering market participant without going through the 350 microsecond POP. In addition, IEX would offer an “Order Execution

\textsuperscript{18} 15 U.S.C. 78f(b)(5).
Recheck” only to pegged orders.\textsuperscript{19} With this functionality, which is not available for displayed orders, following a change in the IEX order book or change to the NBBO, IEX would “invite” its resting pegged orders for a new execution opportunity based on the updated market conditions. Thus, not only would dark, pegged orders be re-priced immediately, the Order Execution Recheck would systematically provide these orders with an execution opportunity before other orders on IEX.

Market participants are unlikely to be willing to send orders for display on IEX when such orders would have none of the advantages of the dark, pegged orders on IEX. Accordingly, NYSE believes that it is likely that IEX’s order book would be composed primarily, or entirely, of these dark, pegged orders and would not be performing one of the central functions of a registered exchange, which is to foster the price discovery process through display of orders.

\section{F. IEX’s Proposes to Offer Broker-Dealer Function}

Finally, we note that among the orders offered by IEX is a proposed feature typically performed by broker-dealers. Specifically, IEX proposes to use its own algorithm to assess the quality of the NBBO for purposes of determining whether a Discretionary Peg Order would exercise discretion. If IEX’s algorithm identifies a period of “quote instability,” \textit{i.e.}, a “crumbling quote,” IEX would not allow Discretionary Peg Orders to exercise discretion.\textsuperscript{20}

The Commission has previously disapproved proposed exchange functionality that is designed to compete with services offered by broker-dealers.\textsuperscript{21} NYSE believes that IEX’s proposal for the exchange to use its own algorithm to assess the quality of the NBBO to identify periods of quote instability and apply that determination to resting Discretionary orders is inconsistent with the Commission’s previous disapproval. NYSE does not oppose IEX’s proposal in this regard. However, to ensure that other exchanges can fairly compete, it is important that the Commission clearly articulate the boundaries of when an exchange may and may not offer services that are otherwise performed by broker-dealers and, in particular, when it is appropriate for an exchange to monitor the quality of the prices in a market to determine how to price an order.

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For the reasons stated above, NYSE believes that IEX’s Application to become registered as an exchange falls short of Exchange Act requirements. The Application omits critical details that make understanding the key features of IEX’s proposal a guessing game, which is not the basis on which the public should be required to comment. Based on information outside of the Application, NYSE believes that IEX’s key features would create an informational advantage both to dark, pegged orders on its market and to IEX’s affiliated routing broker by intentionally delaying IEX market data and access to IEX’s matching engine through the POP. This intentional delay would be done under the pretense of correcting a supposed unfairness in the current market structure. However, it appears from IEX’s Application that in an effort to address this unfairness, IEX is proposing to become an exchange that retains its dark pool characteristics of favoring hidden

\textsuperscript{19} See IEX proposed Rule 11.230(a)(4)(D).

\textsuperscript{20} See IEX proposed Rules 11.190(a)(10) and (g).

\textsuperscript{21} See NASDAQ Disapproval Order, supra note 6.
orders over transparent ones and that slows down some market participants and certain order
types but not others. While it may be reasonable to be concerned about the speed of cars on the
Autobahn, requiring only some cars to slow down and/or turn off their lights would not create a
safer Autobahn, it would create a calamity.

Respectfully submitted,

Elizabeth K. King

Cc: Mary Jo White, Chair
Luis Aguilar, Commissioner
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