February 8, 2019

TO: OPRA Market Data Recipients

FROM: OPRA, LLC

SUBJECT: UPDATE: MIAX Emerald TEST and ACTIVATION DATES

What's New:

MIAX Emerald, LLC, an affiliate of Miami International Holdings, has filed rules with the SEC establishing a new options exchange. The new exchange’s name is MIAX Emerald.

What's Changing:

The new Exchange’s Participant ID is “D”. MIAX Emerald will follow all OPRA/SIAC formats.

When is it Changing:

- The MIAX EMERALD launch date is scheduled for March 1, 2019.

- MIAX EMERALD Member Firm and Industry Testing will take place on the following date:
  - Saturday, February 23, 2019

Testing Schedule

Replay files with test data including the new MIAX Emerald Participant ID is available. Test data is disseminated Monday - Friday from 9:00 p.m. – 9:15 p.m. ET from the multicast Playback Test channels (not over Production channels).

Indirect OPRA subscribers must contact their service provider to coordinate testing.

Documentation

The OPRA specifications have been revised to include MIAX Emerald as a new Participant in OPRA. Please reference the latest specifications, which may be obtained at the website: www.opradata.com.

Technical Information:

- For any OPRA technical questions please email: CQS-CTS-OPRA@siac.com.
- Multicast Data Feed Subscribers can also contact the SIAC NMS Product Management Desk at 212-656-8177, Option 2. If support team members are engaged with other customers, please leave a
detailed voice message stating the purpose of your call, which will produce an email of your message to the support team.

For information on MIAX Emerald visit [https://www.miaxoptions.com/alerts/emerald](https://www.miaxoptions.com/alerts/emerald) or contact Trading Operations, TradingOperations@MIAXOptions.com or (609) 897-7302.

Sincerely,

OPRA, LLC