August 18, 2020

TO: OPRA Multicast Data Subscribers

SUBJECT: OPRA Failover Testing to Secondary Data Center: Final Reminder

**Failover Testing:**

As previously announced, SIAC will be conducting failover testing with the OPRA exchanges on **Saturday, August 22, 2020, from 9:00 am - 11:30 am ET.** All OPRA multicast Data Subscribers are invited to participate.

**Failover Test Details:**

The failover to the secondary data center can occur at any time during the 9:00 am - 11:30 am ET time window, to simulate an unexpected real-time event requiring a failover. Participating exchanges will continue to generate test data which will be disseminated over the production multicast lines sourced from the secondary data center.

Upon failover to the secondary data center OPRA Data Subscribers will see:

<table>
<thead>
<tr>
<th>OPRA Failover Messaging Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category H, Type K, Reset Multicast Line Sequence Number Control messages</td>
</tr>
<tr>
<td>Category H, Type P, Disaster Recovery Data Center Activation Control messages</td>
</tr>
<tr>
<td>Zero quotes for all securities</td>
</tr>
<tr>
<td>OPRA trades and quotes after the exchanges fail over</td>
</tr>
</tbody>
</table>
2020 Quarterly Failover Test Schedule

- Sat 8/22/20: SIP Failover / MWCB Level 1/2 Test #2
- Sat 9/12/20: MWCB Level 1/2/3 & Day 2 Verification Test
- Sat 12/5/20: SIP Failover / MWCB Level 1/2 Test #3

Testing Coordination:

To coordinate testing and to provide oral or written confirmation of testing (as required of all Data Subscribers), please register as follows:

- E-mail your name, organization name, phone number to: CQS-CTS-OPRA@siac.com

Each OPRA Data Subscriber should validate the messages in the test script.

Data Subscribers who receive OPRA from connectivity service providers other than ICE Global Network must contact their connectivity service providers to coordinate testing.

Documentation:

Please reference the latest OPRA Output Multicast Specifications which may be obtained from www.opraplan.com.