09-150

TO: NYMEX Clearing Firms
                Service Bureaus / Systems Solutions Providers

FROM: CME Clearing

SUBJECT: **NYMEX Clearing Firm Integration Testing Plan**

DATE: Monday, April 13th, 2009

We are pleased to present the End-to-End testing plan for integrating NYMEX, COMEX and DME in CME Clearing systems. The testing process will verify that their trade processing and bookkeeping systems are ready for the launch of NYMEX, COMEX and DME contracts on CME Clearing systems. This testing will start on May 18, 2009 for beta firms and be available to all firms on June 1, 2009. Testing will include electronic trades executed on Globex, trades executed on CME Clearport and floor executed Pit trades. Testing will include Integration testing, End to End testing and finally mock trading sessions**.**

For those firms who currently do not clear CME, we have been working closely with you to establish the requisite set-ups prior to any testing.

Transition Phases

The transition of NYMEX, COMEX and DME contracts to CME Clearing will occur in two phases in order to mitigate risks associated with the cutover of all products at the same time.

The first cutover will occur on **Monday, August 17, 2009**. At that time all COMEX futures and option contracts will begin clearing at CME. The second and final cutover will occur on Monday, **September 14, 2009** at which time the remaining NYMEX and DME products will clear CME.

<u>Overview of NYMEX Integration into CME Clearing</u>
Before getting started, there are some general points that you need to be awareof:

- All existing clearing schedules will adhere to CME processing cycles, unless otherwise noted.
- All clearing trade confirmation will be in FIXML format only.
- All testing will conducted in CME Clearing New Release environment via CME Clearing testing Portal <u>connectcert.cme.com.</u>
- There are no substantive changes to the CME Clearing record layouts and/or reports used by member firms.
- All current delivery applications/mechanisms supporting NYMEX deliveries will use CME Clearing Delivery system.
- COMEX, NYMEX and DME positions will be available in the new CME Position application, while CME and CBOT continue to be posted in C21 Positions.
- Common member firms may elect to balance their NYMEX positions separately from their CME or CBOT positions, or may elect to combine them for balancing.

Testing effort
As a first step, each clearing firm is assigned a clearing account manager who will guide you through the set up and testing procedures. Your account manager will be your liaison between the business areas and technical teams. Setup and testing will be conducted in stages so your progress and status can be accurately tracked.

Integration Beta testing begins on May 18th. Any firm wanting to participate during that period must have established connectivity with CME Clearing, defined queues for the test, and have system authorization to use the on-line applications. Early testing efforts will focus on clearing trades executed electronically on Globex, CME Clearport and on the trading floor.

While firms may elect to participate in the beta testing phase testing, **all firms will be required to participate in the testing scheduled to commence on June 1st.** Firms testing will include:

- Injecting electronic and Clearport trades from prior day production data.
- Running firms' simulation testing by posting trades in Globex, Clearport and floor trades in the New Release testing environment.
- Entering trade transfers, PNT and other trade types applicable to NYMEX contracts.
- Submitting post trade processing Giveups, APS and making non critical trade changes/corrections via API and FEC application.
- Submitting option exercise and assignments.
- Submit PCS and Large Trader files.
- Test trades will be processed in a full End to End nightly testing cycle in clearing.
- Clearing may elect to run ITD cycle on certain dates and will generate clearing reports and data files.
- Testing will be scripted and unscripted. Firms are encouraged to coordinate with other firms to design and execute their own test cases.
- Firms may also coordinate their test cases with Globex CSET and CME Clearing Services.

The final phase of testing will focus on firms ability to process trades during the period where COMEX is clearing CME and NYMEX remains on their own. This will be Phase 5 of production – between August 17th and September 14th.

Clearing firm integration testing will take place simultaneously primarily during June and continues thru August. Its goal is to allow firms to test individual components of clearing functionality, piece by piece.

Integration testing will support testing by firms of all of the core functional changes associated with processing NYMEX products through CME Clearing. It will allow identification and correction of any defects, and it will lay the groundwork for smooth integration.

End-to-end testing will put all components of the clearing process together, so that firms can test their systems' interaction with the clearing system end-to-end from trade submission or capture, all the way through balancing and margin calculation.

An authorized,designated representative of the clearing firm will be required to "sign-off" that all testing has been completed and the firm is operationally prepared to process all NYMEX and COMEX business through CME clearing.

Three phases of end-to-end testing: Testing process will be broken out into three phases:

- **Phase I: unscripted, smaller data volumes:** these cycles will focus on verifying end-to-end functionality, and will make use of smaller volumes of test data.

- **Phase II: scripted and unscripted, larger data volumes:** these cycles will allow firms to process volumes of test data as large as desired, in both a scripted and an unscripted manner.

- **Phase III: initial launch period testing:** these cycles will allow firms to verify their ability to handle the initial launch period from August 17th through September 14th, when they will need to interact with the CME clearing system for the initial phase of COMEX products to be converted, and with NYMEX Clearing for the remainder of NYMEX and DME products.

Clearing Firm Deliveries Testing

Clearing firm testing of the applications for physical delivery of COMEX, NYMEX and DME products will take place during the same test period.

Clearing Firm Integration Test Cycles

The individual test cycles which comprise the clearing firm integration test are as follows:

- **Combined SPAN® and settlement price files**
- **Electronic trade FIXML messages**
- **Open-outcry trade FIXML messages**
- **CME Clearport Clearing**
- **WhenTechTerminals**
- **Give-up API**
- **Average Pricing System**
- **PNT**
- **PCS**
- **Larger Trader File**
- **Erosion File**
- **Trade Register File and Reports**
- **Mock Sessions**
- **Training**
- **Access to Clearing Applications**

Here is a detailed description of testing plans.

Combined SPAN® and Settlement Price Files:

Combined SPAN file is available for testing and firms are required to start using the file in production on June 12, 2009.

The Combined SPAN file: The file will contain data for CME, CBOT, NYMEX, COMEX and DME products and will allow firms to test their ability to run bookkeeping and to calculate margin requirements for customer accounts using the combined file. The test file can be found on ftp.cmegroup.com/pub/span/data/cme/test. For example, the intraday file for April 20 is named **cme.test.20090420.i.pa2.zip** and the end-of-day file is named **cme.test.20090420.s.pa2.zip**

Settlement price files for NYMEX, COMEX and DME: these will allow firms to test their ability to read a settlement price files in the same format as is currently provided for CME contracts. Firms can download NYMEX, COMEX and DME settlement FIXML and flat data price files in ftp://ftp.cmegroup.com/pub/settle/. Files are also available on the firms' private pub/settle ftp folder.

Electronic trade FIXML messages:

This will allow firms to test their FIXML based interaction with the clearing system for trades executed electronically on Globex:

Feed of electronic trade confirmation messages: Firms will receive FIXML electronic trade confirmation messages for trades in NYMEX, COMEX and DME products executed on GLOBEX and will be able to verify that they are able to correctly load these trades to books.

Submission of electronic trade change messages: firms will be able to submit change messages for trades executed electronically GLOBEX and will be able to verify that these changes were successfully applied.

Feed of electronic trade change confirmation messages: firm receiving confirmation messages resulting from the application of changes to electronic trades, will receive such messages for GLOBEX trades, and will be able to verify in both cases that they are able to receive and process these confirmation messages.

Clearport Clearing:

This will allow firms to test their ability to load and process trades cleared on CME Clearport Clearing via Front End Clearing. This will include OTC, PNT and Block trades. Similar to other NYMEX processes, Clearport Clearing confirm messages will be in FIXML format only. Trading firms', who currently subscribe to the web-based API fix messages, will continue to receive those messages in the same format from NYMEX Third Party Services as they do now.

Open outcry trade FIXML messages:

This will allow firms to test their FIXML based interaction with the clearing system for trades executed via Open Outcry, for both NYMEX and COMEX:

Open outcry "Pit" trades for NYMEX and COMEX Trade Entry: trades will be entered by the floor brokers or their clerks in Front End Clearing "FEC" on the trading floor. The seller will enter the trade and the buyer will accept it. Both brokers will allocate the trade to the perspective clearing firm.

Feed of open-outcry trade messages: firms will be able to verify that they are able to correctly load and process FIXML messages for pit trades for both NYMEX and COMEX products.

Submission of open-outcry change messages: firms will be able to verify that they are able to correctly submit FIXML messages to modify non-critical data for such trades post-match. Firms will also be able to mark the trades for Giveups and APS.

WhenTech Terminals:

This testing will build upon the tests for open-outcry trades, to allow firms to verify special features associated with trades executed via hand held terminals on NYMEX trading floor:

Feed of WhenTech trade confirmation messages: firms will receive FIXML messages for option trades executed via WenTech terminals on the floor and will be able to verify that they are able to read these messages and successfully load these trades to books.

Give-up API

This area of testing will allow firms to verify that they are able to use CME's Give-Up API, as implemented in the Allocate/Claim System (ACS), for trades in NYMEX, COMEX and DME products, exactly as it is currently used for trades in CME products:

Marking of the original trade for give-up at order submission time: this will allow firms to verify that trades marked for give-up when Globex orders are submitted, correctly flow into the Allocate/Claim System, both with and without the carrying firm specified on the order.

Routing trades to ACS via change messages: this will allow firms to verify that they are able to route trades in Globex products to ACS via submission of FIXML change messages, in exactly the same manner as is used for CME products.

Sending functionality of the Give-Up API: this testing will allow firms to verify that they can correctly submit FIXML messages associated with the Give-Up API, for NYMEX, COMEX and DME products in exactly the same

manner as for CME products, including allocations, acceptances, releases and reversals.

Receiving functionality of the Give-Up API: this will analogously allow firms to verify that they can receive and process all FIXML messages for the Give-Up API sent by the clearing system to firms.

Average Pricing System

This testing will allow firms to verify that they are able to receive and process APS FIXML confirms for trades in NYMEX, COMEX and DME products, analogously to the way they process APS trades in CME products.

Block and PNT Trades

This testing will allow firms to verify that they are able to receive and process FIXML trade confirmation messages for PNT (Privately Negotiated Transactions) and Block trades in NYMEX, COMEX and DME products, exactly as they are currently received for CME products.

PCS

This testing will allow firms to verify that they can correctly create and submit PCS FIXML files for positions in NYMEX, COMEX and DME products as they do for positions in CME products, both at the intraday cycle and the end-of-day cycle. Test files should submitted to the firms FTP/Incoming directory using CME file naming convention, but add letter C in the beginning of the file name to indicates it's a test file. Example: CPCS.CMF_xxx.xml where xxx is the firm clearing ID.

Large Trader File

This test will enable firms to submit their combined large trader file for NYMEX, COMEX and DME to the CME Clearing secured ftp server "Incoming" directory as they currently do so for CME and CBOT products. The file test name should be submitted as: TFPT.FXXX.RPS.NYMEX.DATA. When the file is submitted in production, the letter T at the beginning of the file name should be replaced with letter P to indicate a production file. Please note that firms are required to continue sending the combined file to NYMEX clearing as they do now.

Erosion File

This testing will allow firms to verify their ability to load NYMEX erosion file from CME Clearing. The file format will not change.

Trade Register

This testing will allow firms to verify that they are able to process Trade Register data files for NYMEX, COMEX and DME products. We will provide Trade Register reports and datafiles:

Showing all trade types in all products
Showing transactions resulting from exercise & assignment
Showing transactions resulting from delivery

Mock Trading Sessions

CME Clearing plans to conduct mock sessions in July and August time frames. The dates and times will be published later in June.

Training:

CME will provide training on CME Clearing applications in New York and Chicago. Firms who require training on CME Clearing applications should contact CME Group Client Management team via email cmts@cmegroup.com or call them at 312-930-4523.

Access to Clearing Applications:

To request access to CME Clearing applications including Portal, CME Positions, Document Direct Reports, Front End Clearing (FEC), please contact CME Firm Support at 312 930 3444 or via email to firmsupport@cmegroup.com.

Testing Schedule

CME Clearing will publish testing updates that will include test scripts, clearing cycle timelines and availability of register reports and data files. For questions or concerns on NYMEX integration testing, please contact CME Clearing at 312 207 2525 or via email to ccs@cmegroup.com