# Controlled Substances Estimate of the Uncertainty of Measurement- Update

Issued: 12/30/2014

Mettler Toledo XS2002S balances

The Controlled Substances discipline weighed check standards on all Mettler Toledo XS2002S model balances utilized in casework. This process is ongoing however the data collected from December 19, 2013 through September 2, 2014 was used for this update report. The ongoing estimation of the uncertainty of measurement test method is documented in the Controlled Substances Analysis Manual in Appendix III. One check standard (tablets packaged for suitability) was chosen for the Mettler Toledo XS2002S balances. The check standard is weighted on the balances weekly when the balance is utilized in casework or at a minimum once per month by a member of the Forensic Chemistry discipline.

## Changes to previous uncertainty components

*Check Standard Reproducibility Data (SD)*

A new standard deviation was calculated from check standard data collected from 12/19/13 to 9/2/14. One check standard was used (tablets) and measurements were made on all in service balances by all approved personnel.

$$SD = 0.010 \text{ g}$$

*Display resolution – rounding at zero and at load ($Read_{zero}$ & $Read_{load}$)*

No changes were made for these components

*Balance Calibration Uncertainty (Cal)*

The accredited external calibration laboratory's (Alaska Metrology & Calibration Services) scope of accreditation was updated. Their analytical balance calibration uncertainty for the range "Up to 5 000 g (10 mg)" is reported to be 0.013 g (k=2). Converted to standard uncertainty this is:

$$Cal = 0.013g/2 = 0.0065 \text{ g}$$

*Balance Linearity (Lin)*

No changes were made for this component.

*Reference Value Uncertainty (Ref)*

The most current calibration certificates for reference standards used were reviewed and it was determined that no changes were needed for this component.

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Mettler Toledo XS2002S balances

## Addition of new uncertainty components

No new uncertainty components were added to the budget.

## Combined standard uncertainty using component updates

The following table summarizes changes made to component values and the new estimated combined uncertainty (items that changed are highlighted).

| Uncertainty Component | 2013 | 2014 |
|---|---|---|
| SD | 0.007 | 0.010 |
| Readzero | 0.003 | 0.003 |
| Readload | 0.003 | 0.003 |
| Cal | 0.0007 | 0.0065 |
| Lin | 0.012 | 0.012 |
| Ref | 0.0005 | 0.0005 |
| Combined Uncertainty (k=2) | 0.0283 | 0.0345 |

## Reported uncertainty

The expanded combined standard uncertainty rounded to 1 significant figure is:

Expanded Combined Standard Uncertainty = ± 0.03 g

There is no change from the previous expanded combined standard uncertainty from 2013 which is currently being reported.

| Balance ID | Date | 0.10 gram | 10.00 grams | 100.00 grams | 1000.00 grams | 2000.00 grams | Check STD (grams) | Initials | Weight Set |
|---|---|---|---|---|---|---|---|---|---|
| Death | 12/19/2013 | 0.10 | 10.00 | 100.01 | 1000.01 | 2000.01 | 6.11 | AL | II |
| | 12/24/2013 | 0.10 | 10.00 | 100.00 | 1000.01 | 2000.02 | 6.10 | SB | II |
| | 1/3/2014 | 0.09 | 9.99 | 99.99 | 1000.00 | 2000.00 | 6.10 | SB | II |
| | 1/6/2014 | 0.10 | 10.01 | 100.00 | 1000.00 | 2000.01 | 6.10 | SB | II |
| | 1/13/2014 | 0.10 | 10.02 | 100.02 | 1000.01 | 2000.01 | 6.10 | SB | II |
| | 1/21/2014 | 0.09 | 10.00 | 100.02 | 1000.01 | 2000.01 | 6.13 | SB | II |
| | 1/28/2014 | 0.10 | 10.00 | 100.00 | 1000.00 | 1999.99 | 6.11 | SB | II |
| | 2/3/2014 | 0.09 | 9.99 | 99.99 | 1000.00 | 2000.02 | 6.13 | SB | II |
| | 3/3/2014 | 0.09 | 10.00 | 100.00 | 1000.00 | 1999.99 | 6.12 | JH | II |
| | 3/28/2014 | 0.10 | 9.99 | 99.99 | 1000.00 | 1999.99 | 6.11 | SB | I |
| | 4/7/2014 | 0.10 | 10.00 | 100.00 | 1000.00 | 2000.00 | 6.11 | SB | I |
| | 4/15/2014 | 0.11 | 10.00 | 100.01 | 1000.00 | 2000.00 | 6.12 | SB | I |
| | 4/25/2014 | 0.09 | 10.00 | 100.01 | 999.99 | 2000.01 | 6.12 | SB | I |
| | 4/30/2014 | 0.11 | 10.00 | 100.00 | 1000.00 | 1999.99 | 6.12 | SB | I |
| | 5/12/2014 | 0.09 | 10.00 | 100.00 | 1000.00 | 2000.00 | 6.11 | SB | I |
| | 5/22/2014 | 0.09 | 10.00 | 100.00 | 1000.00 | 2000.00 | 6.12 | SB | I |
| | 5/27/2014 | 0.09 | 10.00 | 100.00 | 1000.00 | 2000.00 | 6.11 | SB | I |
| | 6/2/2014 | 0.10 | 10.00 | 99.99 | 1000.00 | 2000.00 | 6.11 | SB | I |
| | 6/9/2014 | 0.09 | 10.00 | 100.00 | 1000.00 | 2000.00 | 6.12 | SB | I |
| | 6/19/2014 | 0.09 | 10.00 | 100.00 | 1000.00 | 2000.00 | 6.12 | SB | I |
| | 6/25/2014 | 0.11 | 10.02 | 100.01 | 1000.00 | 2000.01 | 6.11 | SB | I |
| | 6/30/2014 | 0.09 | 10.00 | 100.00 | 1000.01 | 2000.01 | 6.12 | SB | I |
| | 7/1/2014 | 0.10 | 9.99 | 100.00 | 1000.01 | 2000.01 | 6.12 | SB | I |
| | 7/8/2014 | 0.09 | 10.00 | 100.00 | 1000.01 | 2000.03 | 6.12 | SB | I |
| | 7/22/2014 | 0.09 | 10.00 | 100.00 | 1000.00 | 2000.00 | 6.14 | NR | I |
| War | 12/19/2013 | 0.10 | 10.01 | 100.00 | 1000.00 | 2000.00 | 6.11 | AL | II |
| | 12/23/2013 | 0.10 | 10.00 | 99.99 | 1000.00 | 2000.00 | 6.11 | JG | II |
| | 12/30/2013 | 0.10 | 10.00 | 100.00 | 1000.00 | 2000.00 | 6.10 | JG | II |
| | 1/6/2014 | 0.09 | 10.01 | 100.00 | 1000.00 | 1999.99 | 6.10 | JG | II |
| | 1/13/2014 | 0.10 | 10.00 | 99.99 | 1000.00 | 2000.01 | 6.10 | JG | II |
| | 1/27/2014 | 0.09 | 9.99 | 99.99 | 1000.00 | 1999.99 | 6.10 | JG | II |
| | 2/3/2014 | 0.10 | 9.99 | 100.00 | 1000.00 | 1999.99 | 6.10 | JG | II |
| | 2/10/2014 | 0.10 | 10.00 | 99.99 | 999.99 | 2000.00 | 6.10 | JG | II |
| | 2/18/2014 | 0.10 | 10.00 | 100.00 | 1000.00 | 1999.99 | 6.13 | JG | II |
| | 2/24/2014 | 0.10 | 10.00 | 100.00 | 1000.00 | 2000.01 | 6.11 | JG | II |
| | 3/3/2014 | 0.10 | 10.00 | 100.01 | 1000.01 | 2000.00 | 6.11 | JG | II |
| | 3/10/2014 | 0.10 | 9.99 | 100.02 | 999.99 | 2000.00 | 6.12 | JG | II |
| | 3/17/2014 | 0.09 | 9.99 | 99.99 | 1000.00 | 2000.00 | 6.12 | JG | I |
| | 3/24/2014 | 0.10 | 10.00 | 100.00 | 999.99 | 2000.01 | 6.13 | JG | I |
| | 4/1/2014 | 0.11 | 10.00 | 100.01 | 1000.00 | 2000.00 | 6.12 | JG | I |
| | 4/7/2014 | 0.09 | 9.99 | 100.01 | 1000.00 | 2000.00 | 6.12 | JG | I |
| | 4/14/2014 | 0.10 | 9.99 | 100.00 | 1000.01 | 1999.99 | 6.12 | JG | I |
| | 4/21/2014 | 0.09 | 10.00 | 99.99 | 999.99 | 2000.00 | 6.11 | JG | I |
| | 4/28/2014 | 0.09 | 10.00 | 100.00 | 1000.00 | 1999.99 | 6.13 | JG | I |
| | 5/5/2014 | 0.10 | 10.00 | 99.99 | 1000.00 | 2000.01 | 6.12 | JG | I |
| | 5/14/2014 | 0.09 | 10.00 | 100.00 | 999.99 | 1999.99 | 6.13 | JG | I |
| | 5/18/2014 | 0.10 | 10.01 | 99.99 | 1000.00 | 1999.99 | 6.12 | JG | I |
| | 5/27/2014 | 0.09 | 10.00 | 99.99 | 999.99 | 2000.01 | 6.12 | JG | I |
| | 6/3/2014 | 0.10 | 9.99 | 100.01 | 1000.00 | 2000.01 | 6.11 | JG | I |
| | 6/9/2014 | 0.09 | 9.99 | 100.00 | 1000.01 | 1999.99 | 6.12 | JG | I |
| | 6/16/2014 | 0.10 | 9.99 | 100.00 | 1000.00 | 1999.99 | 6.13 | JG | I |
| | 6/23/2014 | 0.10 | 10.00 | 100.00 | 1000.00 | 2000.00 | 6.11 | JG | I |
| | 6/30/2014 | 0.09 | 10.00 | 100.00 | 1000.01 | 1999.99 | 6.13 | JG | I |
| | 7/7/2014 | 0.10 | 9.99 | 100.00 | 999.99 | 1999.99 | 6.13 | JG | I |
| | 7/15/2014 | 0.09 | 9.99 | 99.99 | 1000.00 | 2000.00 | 6.12 | JG | I |
| | 8/1/2014 | 0.09 | 10.00 | 100.00 | 1000.01 | 2000.00 | 6.12 | NR | I |
| | 8/11/2014 | 0.10 | 10.00 | 100.00 | 1000.00 | 2000.01 | 6.13 | CRF | I |
| | 8/18/2014 | 0.10 | 10.00 | 100.00 | 1000.00 | 2000.00 | 6.13 | CRF | I |
| | 8/26/2014 | 0.09 | 10.00 | 100.00 | 1000.00 | 1999.99 | 6.14 | CRF | I |
| | 9/2/2014 | 0.10 | 10.00 | 100.00 | 1000.01 | 2000.00 | 6.14 | CRF | I |
| Pestilence | 12/19/2013 | 0.09 | 10.00 | 100.00 | 1000.00 | 2000.01 | 6.11 | AL | II |
| | 12/23/2013 | 0.09 | 10.00 | 100.01 | 1000.00 | 2000.00 | 6.10 | JH | II |
| | 12/30/2013 | 0.10 | 10.00 | 100.00 | 1000.01 | 2000.00 | 6.11 | JH | II |
| | 1/3/2014 | 0.10 | 10.00 | 100.00 | 1000.00 | 2000.01 | 6.11 | JH | II |
| | 1/13/2014 | 0.10 | 10.00 | 100.00 | 1000.00 | 2000.00 | 6.11 | JH | II |
| | 1/24/2014 | 0.09 | 10.00 | 100.01 | 1000.00 | 2000.00 | 6.12 | JH | II |
| | 1/27/2014 | 0.09 | 10.00 | 100.00 | 1000.00 | 2000.00 | 6.12 | JH | II |

| Weight | Mean | SD |
|---|---|---|
| 0.10 | 0.10 | 0.005479 |
| 10.00 | 10.00 | 0.004389 |
| 100.00 | 100.00 | 0.005492 |
| 1000.00 | 1000.00 | 0.006726 |
| 2000.00 | 2000.01 | 0.067808 |
| Check Std | 6.12 | 0.010266 |

Date Range 12/19/2013 9/2/2014

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 2/3/2014 | 0.09 | 10.00 | 100.00 | 1000.00 | 1999.99 | 6.12 | JH | II |
| | 2/10/2014 | 0.09 | 10.00 | 100.00 | 1000.00 | 1999.99 | 6.11 | JH | II |
| | 2/18/2014 | 0.10 | 10.00 | 100.00 | 1000.00 | 2000.00 | 6.11 | JH | II |
| | 2/24/2014 | 0.09 | 10.00 | 100.00 | 999.99 | 1999.99 | 6.12 | JH | II |
| | 3/3/2014 | 0.09 | 9.99 | 100.00 | 1000.00 | 2000.01 | 6.12 | JH | II |
| | 3/10/2014 | 0.09 | 10.00 | 100.00 | 1000.00 | 2000.00 | 6.12 | JH | II |
| | 3/17/2014 | 0.09 | 10.00 | 100.00 | 1000.00 | 2000.00 | 6.12 | JH | I |
| | 3/24/2014 | 0.09 | 10.00 | 99.99 | 1000.00 | 2000.00 | 6.12 | JH | I |
| | 4/7/2014 | 0.09 | 10.00 | 100.00 | 1000.00 | 2000.01 | 6.12 | AL | I |
| | 4/21/2014 | 0.10 | 10.00 | 100.01 | 1000.01 | 2000.00 | 6.11 | JH | I |
| | 4/28/2014 | 0.09 | 10.00 | 100.00 | 1000.00 | 2000.00 | 6.12 | JH | I |
| | 5/5/2014 | 0.09 | 9.99 | 100.00 | 1000.00 | 2000.00 | 6.12 | JH | I |
| | 5/12/2014 | 0.09 | 9.99 | 99.99 | 999.99 | 2000.00 | 6.12 | JH | I |
| | 5/19/2014 | 0.09 | 10.00 | 100.00 | 1000.00 | 2000.01 | 6.12 | JH | I |
| | 5/27/2014 | 0.09 | 10.00 | 100.00 | 1000.00 | 2001.01 | 6.12 | JH | I |
| | 6/2/2014 | 0.09 | 9.99 | 100.00 | 1000.00 | 2000.00 | 6.11 | JH | I |
| | 6/9/2014 | 0.09 | 10.00 | 100.00 | 1000.00 | 2000.00 | 6.11 | JH | I |
| | 6/16/2014 | 0.09 | 10.00 | 100.00 | 1000.00 | 2000.00 | 6.12 | JH | I |
| | 6/23/2014 | 0.09 | 10.00 | 100.00 | 1000.00 | 1999.99 | 6.12 | JH | I |
| | 6/30/2014 | 0.09 | 9.99 | 99.99 | 1000.00 | 1999.99 | 6.12 | JH | I |
| | 7/7/2014 | 0.10 | 10.00 | 100.00 | 1000.00 | 2000.00 | 6.12 | JH | I |
| | 7/23/2014 | 0.09 | 9.99 | 100.00 | 1000.00 | 2000.00 | 6.12 | JH | I |
| | 7/28/2014 | 0.09 | 9.99 | 100.00 | 1000.00 | 1999.99 | 6.12 | JH | I |
| | 8/4/2014 | 0.09 | 10.00 | 100.00 | 1000.00 | 1999.99 | 6.14 | JH | I |
| | 8/11/2014 | 0.09 | 10.00 | 100.00 | 1000.00 | 2000.00 | 6.13 | JH | I |
| | 8/18/2014 | 0.09 | 10.00 | 100.00 | 1000.00 | 1999.99 | 6.14 | JH | I |
| | 8/25/2014 | 0.10 | 10.00 | 100.00 | 1000.00 | 1999.99 | 6.14 | JH | I |
| Famine | 12/19/2013 | 0.10 | 10.00 | 99.99 | 1000.01 | 2000.01 | 6.11 | AL | II |
| | 12/23/2013 | 0.10 | 10.00 | 100.00 | 1000.01 | 2000.01 | 6.12 | AL | II |
| | 12/30/2013 | 0.09 | 10.00 | 100.00 | 1000.00 | 2000.01 | 6.12 | JG | II |
| | 1/6/2014 | 0.09 | 10.00 | 100.00 | 1000.00 | 2000.01 | 6.10 | AL | II |
| | 1/23/2014 | 0.10 | 10.00 | 100.00 | 1000.00 | 2000.01 | 6.11 | AL | II |
| | 1/27/2014 | 0.10 | 10.00 | 100.01 | 1000.01 | 2000.00 | 6.12 | AL | II |
| | 2/14/2014 | 0.09 | 10.00 | 100.00 | 1000.00 | 2000.01 | 6.12 | AL | II |
| | 2/18/2014 | 0.10 | 10.00 | 100.01 | 1000.01 | 2000.01 | 6.12 | AL | II |
| | 2/24/2014 | 0.10 | 10.00 | 100.01 | 1000.01 | 2000.00 | 6.12 | AL | II |
| | 3/4/2014 | 0.10 | 10.00 | 100.01 | 1000.00 | 2000.00 | 6.12 | AL | II |
| | 3/10/2014 | 0.10 | 10.00 | 100.00 | 1000.01 | 2000.01 | 6.11 | AL | II |
| | 3/17/2014 | 0.09 | 10.00 | 100.00 | 1000.00 | 2000.00 | 6.11 | AL | I |
| | 3/24/2014 | 0.10 | 10.00 | 100.00 | 1000.01 | 2000.02 | 6.13 | AL | I |
| | 4/1/2014 | 0.10 | 10.00 | 100.01 | 1000.01 | 2000.00 | 6.12 | AL | I |
| | 4/7/2014 | 0.09 | 10.00 | 100.00 | 1000.01 | 2000.01 | 6.11 | AL | I |
| | 4/16/2014 | 0.09 | 10.00 | 100.00 | 1000.00 | 2000.00 | 6.11 | AL | I |
| | 4/22/2014 | 0.10 | 10.01 | 100.00 | 1000.00 | 2000.01 | 6.11 | AL | I |
| | 4/28/2014 | 0.09 | 10.00 | 100.00 | 1000.00 | 2000.01 | 6.12 | AL | I |
| | 5/5/2014 | 0.10 | 10.00 | 100.01 | 1000.00 | 2000.01 | 6.12 | AL | I |
| | 5/13/2014 | 0.09 | 10.00 | 100.00 | 1000.00 | 2000.01 | 6.12 | AL | I |
| | 6/2/2014 | 0.10 | 10.00 | 100.00 | 999.99 | 2000.00 | 6.12 | AL | I |
| | 6/9/2014 | 0.10 | 10.00 | 100.00 | 1000.01 | 2000.00 | 6.12 | AL | I |
| | 6/16/2014 | 0.09 | 10.00 | 100.00 | 1000.01 | 2000.00 | 6.12 | AL | I |
| | 6/24/2014 | 0.09 | 10.00 | 100.00 | 1000.00 | 1999.99 | 6.13 | AL | I |
| | 6/30/2014 | 0.10 | 10.00 | 100.00 | 1000.00 | 2000.00 | 6.12 | AL | I |
| | 7/7/2014 | 0.10 | 10.00 | 100.00 | 1000.00 | 2000.00 | 6.12 | AL | I |
| | 7/21/2014 | 0.10 | 10.00 | 100.00 | 1000.00 | 2000.00 | 6.13 | AL | I |
| | 7/28/2014 | 0.10 | 10.00 | 100.01 | 1000.00 | 2000.00 | 6.13 | AL | I |
| | 8/4/2014 | 0.10 | 10.00 | 100.00 | 1000.00 | 2000.01 | 6.14 | AL | I |
| | 8/11/2014 | 0.10 | 10.00 | 100.00 | 1000.00 | 2000.00 | 6.13 | AL | I |
| | 8/19/2014 | 0.09 | 10.00 | 100.00 | 999.99 | 2000.00 | 6.13 | AL | I |
| | 8/25/2014 | 0.10 | 10.00 | 100.00 | 1000.01 | 2000.01 | 6.14 | Al | I |
| #5 | 12/19/2013 | 0.09 | 10.00 | 100.00 | 1000.01 | 2000.01 | 6.11 | AL | II |
| | 12/23/2013 | 0.10 | 10.00 | 100.00 | 1000.00 | 2000.01 | 6.10 | BMB | II |
| | 12/30/2013 | 0.10 | 10.00 | 99.99 | 1000.01 | 2000.01 | 6.10 | BMB | II |
| | 1/13/2014 | 0.09 | 10.00 | 100.00 | 1000.00 | 2000.00 | 6.11 | BMB | II |
| | 2/7/2014 | 0.10 | 10.00 | 100.00 | 999.99 | 1999.99 | 6.12 | BMB | II |
| | 2/20/2014 | 0.09 | 9.99 | 100.00 | 1000.00 | 2000.01 | 6.11 | BMB | II |
| | 2/27/2014 | 0.10 | 10.00 | 100.01 | 1000.00 | 1999.99 | 6.12 | BMB | II |
| | 3/10/2014 | 0.09 | 10.00 | 100.00 | 1000.00 | 2000.00 | 6.11 | BMB | II |
| | 3/18/2014 | 0.09 | 10.00 | 100.00 | 999.99 | 1999.99 | 6.11 | BMB | I |
| | 3/28/2014 | 0.09 | 10.00 | 100.00 | 1000.00 | 2000.00 | 6.11 | BMB | I |
| | 4/1/2014 | 0.10 | 10.00 | 100.00 | 1000.00 | 1999.99 | 6.11 | BMB | I |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 4/16/2014 | 0.10 | 10.00 | 100.00 | 999.99 | 1999.99 | 6.12 | BMB | I | |
| | 4/23/2014 | 0.10 | 10.00 | 100.00 | 1000.00 | 2000.00 | 6.11 | BMB | I | |
| | 4/28/2014 | 0.09 | 9.99 | 100.00 | 1000.00 | 2000.00 | 6.11 | BMB | I | |
| | 5/6/2014 | 0.09 | 10.00 | 100.00 | 1000.00 | 1999.99 | 6.10 | BMB | I | |
| | 5/13/2014 | 0.09 | 10.00 | 100.00 | 1000.00 | 2000.00 | 6.11 | BMB | I | |
| | 5/23/2014 | 0.10 | 10.00 | 100.01 | 1000.00 | 2000.00 | 6.11 | BMB | I | |
| | 5/28/2014 | 0.10 | 10.00 | 100.00 | 1000.00 | 1999.99 | 6.12 | BMB | I | |
| | 6/10/2014 | 0.10 | 9.99 | 100.01 | 1000.00 | 1999.99 | 6.12 | BMB | I | |
| | 6/16/2014 | 0.10 | 10.00 | 100.01 | 1000.00 | 1999.99 | 6.12 | BMB | I | |
| | 6/23/2014 | 0.09 | 10.00 | 100.00 | 1000.00 | 2000.00 | 6.13 | BMB | I | |
| | 6/30/2014 | 0.09 | 10.00 | 100.00 | 1000.00 | 2000.00 | 6.11 | BMB | I | |
| | 7/7/2014 | 0.09 | 10.00 | 100.00 | 999.99 | 1999.98 | 6.12 | CRF | I | |
| | 7/15/2014 | 0.10 | 10.00 | 100.00 | 999.99 | 2000.00 | 6.11 | BMB | I | |
| | 7/29/2014 | 0.10 | 10.00 | 100.00 | 1000.01 | 1999.99 | 6.13 | BMB | I | |
| | 8/6/2014 | 0.10 | 10.00 | 99.99 | 999.99 | 2000.00 | 6.13 | BMB | I | |
| | 8/11/2014 | 0.10 | 10.00 | 100.00 | 999.99 | 2000.01 | 6.13 | BMB | I | |
| | 8/19/2014 | 0.09 | 10.00 | 100.00 | 999.99 | 1999.99 | 6.13 | BMB | I | |
| | 8/28/2014 | 0.09 | 10.00 | 100.00 | 999.99 | 2000.00 | 6.13 | BMB | I | |
| | 9/2/2014 | 0.10 | 10.00 | 100.00 | 1000.00 | 1999.99 | 6.13 | BMB | I | |
| #6 | 12/19/2013 | 0.09 | 10.00 | 100.00 | 1000.01 | 2000.01 | 6.11 | AL | II | |
| | 1/2/2014 | 0.10 | 10.00 | 100.00 | 1000.01 | 2000.01 | 6.10 | CF | II | |
| | 1/6/2014 | 0.10 | 10.00 | 100.00 | 1000.01 | 2000.01 | 6.11 | CF | II | |
| | 1/13/2014 | 0.10 | 10.00 | 100.00 | 1000.00 | 2000.01 | 6.11 | CF | II | |
| | 1/22/2014 | 0.10 | 10.00 | 100.00 | 1000.00 | 2000.00 | 6.11 | CF | II | |
| | 1/27/2014 | 0.09 | 10.00 | 99.99 | 1000.00 | 1999.99 | 6.12 | CF | II | |
| | 2/3/2014 | 0.10 | 10.00 | 100.00 | 1000.00 | 2000.00 | 6.12 | CF | II | |
| | 2/10/2014 | 0.09 | 9.99 | 100.00 | 1000.01 | 2000.00 | 6.12 | CF | II | |
| | 2/27/2014 | 0.10 | 10.00 | 100.00 | 1000.00 | 2000.00 | 6.11 | CF | II | |
| | 3/3/2014 | 0.10 | 10.00 | 100.00 | 1000.00 | 2000.00 | 6.11 | CF | II | |
| | 3/10/2014 | 0.10 | 10.00 | 100.00 | 1000.00 | 2000.01 | 6.12 | CF | II | |
| | 3/28/2014 | 0.11 | 10.00 | 100.00 | 1000.00 | 2000.00 | 6.12 | CF | I | |
| | 4/2/2014 | 0.11 | 10.00 | 100.00 | 1000.01 | 2000.00 | 6.12 | CF | I | |
| | 4/7/2014 | 0.10 | 9.99 | 100.00 | 999.99 | 2000.00 | 6.13 | CF | I | |
| | 4/16/2014 | 0.09 | 10.00 | 100.00 | 1000.00 | 2000.01 | 6.11 | CF | I | |
| | 4/28/2014 | 0.10 | 10.00 | 100.00 | 1000.00 | 1999.99 | 6.12 | CF | I | |
| | 5/5/2014 | 0.09 | 10.00 | 100.00 | 1000.00 | 1999.99 | 6.12 | CF | I | |
| | 5/12/2014 | 0.10 | 10.00 | 100.00 | 1000.00 | 1999.99 | 6.11 | CF | I | |
| | 5/19/2014 | 0.10 | 10.00 | 100.00 | 1000.00 | 2000.00 | 6.12 | CF | I | |
| | 6/2/2014 | 0.10 | 10.00 | 100.00 | 1000.00 | 2000.01 | 6.12 | CF | I | |
| | 6/16/2014 | 0.10 | 10.00 | 100.00 | 1000.00 | 2000.01 | 6.12 | CF | I | |
| | 6/26/2014 | 0.10 | 9.99 | 100.00 | 1000.01 | 2000.02 | 6.13 | CF | I | |
| | 7/7/2014 | 0.10 | 10.00 | 100.00 | 1000.02 | 2000.04 | 6.13 | CF | I | |
| | 7/8/2014 | 0.09 | 10.00 | 100.00 | 1000.00 | 2000.00 | 6.13 | CF | I | |
| | 7/14/2014 | 0.10 | 10.00 | 100.00 | 1000.00 | 2000.00 | 6.13 | CF | I | |
| | 7/22/2014 | 0.10 | 9.99 | 100.00 | 1000.00 | 2000.01 | 6.13 | CF | I | |
| | 7/28/2014 | 0.10 | 10.00 | 100.00 | 1000.01 | 2000.02 | 6.13 | CF | I | |
| | 8/4/2014 | 0.09 | 10.00 | 100.00 | 1000.01 | 2000.03 | 6.14 | NR | I | |
| #7 | 12/19/2013 | 0.09 | 10.00 | 100.00 | 1000.00 | 2000.00 | 6.10 | AL | II | |
| | 1/9/2014 | 0.09 | 10.00 | 100.00 | 1000.00 | 2000.00 | 6.10 | NR | II | |
| | 1/27/2014 | 0.09 | 10.00 | 100.01 | 999.99 | 1999.98 | 6.11 | NR | II | |
| | 2/4/2014 | 0.09 | 10.00 | 100.00 | 1000.00 | 1999.98 | 6.12 | NR | II | |
| | 3/3/2014 | 0.09 | 10.00 | 99.99 | 999.99 | 1999.98 | 6.11 | NR | II | |
| | 4/2/2014 | 0.09 | 10.00 | 100.00 | 999.99 | 1999.98 | 6.11 | NR | I | |
| | 5/2/2014 | 0.09 | 10.00 | 100.00 | 999.99 | 1999.99 | 6.11 | NR | I | |
| | 6/2/2014 | 0.09 | 10.00 | 99.99 | 999.99 | 1999.98 | 6.12 | NR | I | |
| | 7/1/140.09 | 0.09 | 10.00 | 100.01 | 999.99 | 1999.97 | 6.12 | NR | I | |
| | 7/10/2014 | 0.09 | 10.00 | 100.00 | 1000.00 | 1999.99 | 6.13 | NR | I | |
| | 7/11/2014 | 0.09 | 10.00 | 100.01 | 1000.00 | 2000.00 | 6.13 | NR | I | |
| | 7/22/2014 | 0.10 | 10.00 | 100.00 | 999.99 | 2000.00 | 6.14 | NR | I | |
| | 8/1/2014 | 0.10 | 10.00 | 100.00 | 1000.00 | 2000.00 | 6.14 | NR | I | |
| | 8/11/2014 | 0.10 | 10.00 | 100.00 | 1000.01 | 2000.02 | 6.14 | CRF | I | |
| | 8/11/2014 | 0.10 | 10.00 | 100.01 | 1000.01 | 2000.04 | | CRF | I | out ofservice |
| Morgan | 12/19/2013 | 0.09 | 10.00 | 100.00 | 1000.00 | 2000.00 | 6.11 | AL | II | |
| | 1/9/2014 | 0.09 | 10.00 | 100.00 | 1000.02 | 2000.04 | 6.10 | NR | II | |
| | 4/16/2014 | 0.10 | 10.00 | 100.00 | 1000.01 | 2000.01 | 6.12 | AL | I | |
| | 5/2/2014 | 0.10 | 10.00 | 100.01 | 1000.01 | 2000.01 | 6.11 | NR | I | |
| | 6/2/2014 | 0.10 | 10.00 | 100.01 | 1000.01 | 2000.03 | 6.12 | NR | I | |
| | 6/4/2014 | 0.09 | 10.01 | 100.01 | 1000.01 | 2000.03 | 6.12 | NR | I | |
| | 6/5/2014 | 0.09 | 10.00 | 100.01 | 1000.03 | 2000.03 | 6.13 | NR | I | |
| | 7/1/2014 | 0.10 | 10.00 | 100.00 | 1000.02 | 2000.07 | 6.14 | NR | I | |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 7/8/2014 | 0.09 | 10.00 | 100.00 | 999.99 | 2000.01 | 6.13 | SB | I |
| | 7/10/2014 | 0.10 | 10.00 | 100.00 | 1000.00 | 2000.00 | 6.13 | NR | I |
| | 7/11/2014 | 0.09 | 10.00 | 100.00 | 1000.00 | 2000.00 | 6.13 | NR | I |
| | 7/14/2014 | 0.10 | 10.00 | 100.00 | 1000.00 | 2000.00 | 6.13 | SB | I |
| | 7/16/2014 | 0.10 | 10.00 | 100.00 | 1000.00 | 1999.99 | 6.13 | SB | I |
| | 7/21/2014 | 0.10 | 10.00 | 100.00 | 1000.00 | 2000.00 | 6.13 | SB | I |
| | 7/28/2014 | 0.10 | 10.00 | 100.00 | 1000.01 | 2000.01 | 6.13 | SB | I |
| #8 | 12/19/2013 | 0.10 | 10.00 | 100.01 | 999.99 | 1999.98 | 6.11 | AL | II |
| | 1/10/2014 | 0.10 | 10.00 | 100.00 | 1000.00 | 2000.00 | 6.10 | NR | II |
| | 1/21/2014 | 0.09 | 10.00 | 100.00 | 1000.00 | 2000.00 | 6.11 | NR | II |
| | 1/27/2014 | 0.10 | 10.01 | 100.00 | 1000.01 | 2000.00 | 6.11 | AL | II |
| | 2/4/2014 | 0.10 | 10.00 | 100.00 | 1000.00 | 2000.00 | 6.12 | NR | II |
| | 2/10/2014 | 0.10 | 10.00 | 100.00 | 1000.01 | 2000.01 | 6.11 | BMB | II |
| | 3/3/2014 | 0.09 | 10.00 | 100.00 | 1000.00 | 2000.00 | 6.11 | NR | II |
| | 4/2/2014 | 0.10 | 10.00 | 100.00 | 1000.01 | 2000.01 | 6.11 | NR | I |
| | 5/2/2014 | 0.10 | 10.00 | 100.00 | 1000.01 | 2000.01 | 6.12 | NR | I |
| | 6/2/2014 | 0.10 | 10.00 | 100.00 | 999.99 | 2000.00 | 6.13 | NR | I |
| | 6/30/2014 | 0.09 | 10.00 | 99.99 | 999.99 | 1999.99 | 6.13 | NR | I |
| | 7/1/2014 | 0.09 | 10.01 | 99.99 | 1000.00 | 1999.98 | 6.11 | NR | I |
| | 8/1/2014 | 0.10 | 10.00 | 99.99 | 999.99 | 1999.98 | 6.13 | NR | I |
| | 9/2/2014 | 0.10 | 10.00 | 100.00 | 999.99 | 1999.99 | 6.13 | NR | I |