



United States  
Department of  
Agriculture

Grain Inspection,  
Packers and Stockyards  
Administration

STOP 3630  
1400 Independence Ave., SW  
Washington, DC 20250-3630

Test No.: CM14-31  
August 22, 2014  
Page 1 of 2

## Calibration Certificate

Four – 1000 lb. Weights  
I.D.: See page 2.

Submitted by: Abacus Scales & Systems  
1640 W. Pershing Rd.  
Chicago, IL 60609

The items identified above have been compared by modified substitution procedures (NIST HB 145 SOP 8) to the standards of the Federal Grain Inspection Service, Master Scale Depot, 5800 W. 69th Street, Chicago, Illinois 60638. Calibration of these standards is traceable to the National Institute of Standards and Technology.

The appearance of the weights was good. They complied with the specifications of Class F as specified by NIST Handbook 105-1, 1990, and were found or adjusted to within tolerances. According to Illinois requirements, they shall be re-verified two years from the date of test.

Date of Test: August 22, 2014 & September 10, 2014  
Test Conducted by: Marcus Harwitz, Technical Manager

Marcus Harwitz, Technical Manager  
Chicago, IL

cc: MSD  
IL W&M

Item	I.D.:	As found (lb)	As left (lb)	As left condition	NIST Class F Tolerance (lb)	Expanded Uncertainty (lb)
1000-pound Test Weight	1	-0.175	0.01	IN TOLERANCE	0.10	0.028
<del>1000-pound Test Weight</del>	<del>2</del>	<del>-0.185</del>		<del>Rejected</del>	<del>0.10</del>	<del>0.028</del>
1000-pound Test Weight	3	-0.05	-0.05	IN TOLERANCE	0.10	0.028
1000-pound Test Weight	4	-0.075	-0.075	IN TOLERANCE	0.10	0.028

Note: Weight #1 was adjusted and re-tested on 9/10/2014.

Environmental conditions as specified in SOP 8 were maintained within the following parameters during test:

Temperature	Relative Humidity
18 °C to 27 °C, maximum change 2.0 °C/h	40 % to 60 % ± 20 % / 4h

This report relates only to the items listed in the report at the time of test. This report may not be used to claim endorsement by NIST, OWM, NVLAP or any agency or the U.S. Government. This report shall not be reproduced except in full without the written approval of this laboratory.

\* All mass values provided in this report are Conventional Mass values (formerly referred to as Apparent Mass vs 8.0 g/cm<sup>3</sup>). The mass as weighed in air as determined at 20 °C, in air having a density of 0.0012 g/cm<sup>3</sup>, against standards having a reference density of 8.0 g/cm<sup>3</sup>.

\*\* The reported expanded uncertainty given here is in compliance with NIST Technical Note 1297 ("Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Results") with a coverage factor of two (2) through using SOP29 (NISTIR 6969-2003).