USDA

United States Department of Agriculture

Grain Inspection, Packers and Stockyards Administration

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

Calibration Certificate

Thirty One 50-pound Weights
Four 25-pound 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 reverified two years from the date of test.

Date of Test: June 27, 2014
Test Conducted by: Marcus Harwitz, Industrial Specialist

Marcus Harwitz, Technical Manager
Chicago, IL

cc: MSD
IL W&M

Item	I.D.:	As found (g)	As left (g)	As left condition	NIST Class F Tolerance (g)	Expanded Uncertainty (g)
50-pound Test Weight	2	**15.63**	0.85	IN TOLERANCE	2.3	0.090
50-pound Test Weight	14	**10.27**	0.52	IN TOLERANCE	2.3	0.090
50-pound Test Weight	-	**17.17**	1.30	IN TOLERANCE	2.3	0.090
50-pound Test Weight	36	**-1.85**	0.47	IN TOLERANCE	2.3	0.090
50-pound Test Weight	OCIO	**4.50**	2.13	IN TOLERANCE	2.3	0.090
50-pound Test Weight	23	1.93	1.93	IN TOLERANCE	2.3	0.090
50-pound Test Weight	-	-0.40	-0.40	IN TOLERANCE	2.3	0.090
50-pound Test Weight	26	**7.08**	0.57	IN TOLERANCE	2.3	0.090
50-pound Test Weight	25	**-2.12**	0.57	IN TOLERANCE	2.3	0.090
50-pound Test Weight	35	**3.35**	0.53	IN TOLERANCE	2.3	0.090
50-pound Test Weight	X29	**7.00**	0.73	IN TOLERANCE	2.3	0.090
50-pound Test Weight	13	0.33	0.33	IN TOLERANCE	2.3	0.090
50-pound Test Weight	30	**9.83**	0.51	IN TOLERANCE	2.3	0.090
50-pound Test Weight	18	**4.24**	1.09	IN TOLERANCE	2.3	0.090
50-pound Test Weight	16	**3.00**	0.14	IN TOLERANCE	2.3	0.090
50-pound Test Weight	34	1.78	1.78	IN TOLERANCE	2.3	0.090
50-pound Test Weight	27	**8.76**	0.16	IN TOLERANCE	2.3	0.090
50-pound Test Weight	7	**11.31**	0.25	IN TOLERANCE	2.3	0.090
50-pound Test Weight	21	**OPEN**	0.39	IN TOLERANCE	2.3	0.090
50-pound Test Weight	3	**8.94**	0.07	IN TOLERANCE	2.3	0.090
50-pound Test Weight	29	**2.55**	0.11	IN TOLERANCE	2.3	0.090
50-pound Test Weight	-	1.75	1.75	IN TOLERANCE	2.3	0.090
50-pound Test Weight	-	2.20	2.20	IN TOLERANCE	2.3	0.090
50-pound Test Weight	-	**12.54**	1.08	IN TOLERANCE	2.3	0.090
50-pound Test Weight	19	0.73	0.73	IN TOLERANCE	2.3	0.090
50-pound Test Weight	-	0.82	0.82	IN TOLERANCE	2.3	0.090
50-pound Test Weight	-	**-2.71**	0.72	IN TOLERANCE	2.3	0.090
50-pound Test Weight	-	2.21	2.21	IN TOLERANCE	2.3	0.090
50-pound Test Weight	-	1.12	1.12	IN TOLERANCE	2.3	0.090
50-pound Test Weight	-	**2.98**	0.56	IN TOLERANCE	2.3	0.090
50-pound Test Weight	1	**14.60**	2.11	IN TOLERANCE	2.3	0.090
25-pound Test Weight	3	**4.34**	0.57	IN TOLERANCE	1.1	0.043
25-pound Test Weight	5	**8.75**	0.73	IN TOLERANCE	1.1	0.043
25-pound Test Weight	6	**1.61**	0.38	IN TOLERANCE	1.1	0.043
25-pound Test Weight	-	**1.51**	0.24	IN TOLERANCE	1.1	0.043

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^3.). The mass as weighed in air as determined at 20 °C, in air having a density of 0.0012 g/cm^3, against standards having a reference density of 8.0 g/cm^3.

** 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).