Plant Protection Division ♦ Weights and Measures Program
Metrology Laboratory
2747 29th Avenue Southwest ♦ Tumwater ♦ Washington ♦ 98512
Office (360) 753-5042 ◆ Fax (360) 586-4728 ◆ e-mail – dwright@agr.wa.gov

FOR SCOPE OF ACCREDITATION UNDER NVLAP LAB CODE 200446-0

Report of Calibration # L2441-2

Relevant Information

- In-accordance-with ISO/IEC FDIS 17025, *General Requirements for the Competence of Testing and Calibration Laboratories,* paragraph 5.10.4.4 'A calibration certificate (or calibration label) shall not contain any recommendation on the calibration interval except where this has been agreed with the client. This requirement may be superseded by legal regulations.'
- In-accordance-with Washington Administrative Code (WAC) Chapter 16-663, *Service Agents -- Reporting, Test Procedures, Standards And Calibration Of Weighing And Measuring Devices,* Section 16-663-130, *Adequacy of standards and submission of standards for certification,* paragraph 2, '… All standards used for servicing, repairing and/or calibrating commercial weighing and measuring devices must be submitted at least every two years for examination and certification…'
- The artifact(s) listed above have been found and/or left within the stated tolerances for the classification stated above, except as noted. An artifact is considered in-tolerance when the correction plus the measurement uncertainty is equal to or less than the specified tolerance.
- 1 avoirdupois pound equals 453.59237 grams exactly.
- All corrections stated in this report correlate to a "conventional mass" (also known as 'apparent mass") scale verses 8.0 g/cm^3 reference mass density and an air density of 1.2 mg/cm^3 at 20 °C.
- The results listed in this report relate only to the artifacts described and extent of calibrations performed.

Traceability Statement

The item(s) listed above have been compared to the Standards of the State of Washington. The Standards of the State of Washington are traceable to the National Institute of Standards and Technology (NIST) and are part of a comprehensive measurement assurance program for ensuring continued accuracy and measurement traceability within the level of uncertainty reported by this laboratory. The report of calibration number identified in the title of this report is the unique report number to be used in referencing measurement traceability for the artifact(s) identified in this report only.

Uncertainty Statement

The combined standard uncertainty includes uncertainties reported for the standard, uncertainties associated with the measurement process, uncertainties for any observed deviations from reference values which are less than surveillance limits, and other uncertainties associated with the particular artifact (i.e., reading meniscus, air buoyancy corrections, etc.). The combined standard uncertainty is multiplied by *k*, a coverage factor of 2, to give the expanded uncertainty (which defines an interval with an approximate 95 percent level of confidence). The expanded uncertainty presented in this report is consistent with NIST Technical Note 1297. Stated uncertainties are less than 1/3 of the applicable tolerances.

Certification Statement

Accredited by the National Institute of Standards and Technology (NIST) through the National Voluntary Laboratory Accreditation Program (NVLAP) for the specified scope of accreditation under lab code 200446-0. This laboratory meets the requirements of ISO/IEC 17025 and ANSI/NCSL Z540-1-1994. This report may not be used to claim product endorsement by NVLAP or any other government agency, and may not be reproduced, except in full, without written approval from the laboratory.

I certify (or declare) under penalty of perjury under the laws of the State of Washington that the foregoing is true and correct.

Executed this 10th day of November at Tumwater, Thurston County, Washington

Dan Wright

Dan Wright, State Metrologist

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Report of Calibration # L2441-2

Report Date: ***November 10, 2005*** Calibration Due Date: ***November 9, 2007***

Artifact

TEST ITEM ---------:	Test Weights, 18 pieces	MANUFACTURE----------:	See Calibration Results
RANGE/VALUE ----:	1000 lb, 50 lb, & 25 lb	MATERIAL----------:	Cast Iron
SERIAL NUMBER --:	See Calibration Results	MFG. SPECIFICATION --------:	NIST HB 105-1, Class F
DATE RECEIVED---:	November 7, 2005		

Submitted By

BUSINESS NAME---:	Washington State Patrol	PURCHASE ORDER------:	N/A
ADDRESS ----------:	8623 Armstrong Road SW Olympia, WA 98504-2626	POINT OF CONTACT ----:	David Cromer 360-596-6000

Artifact Calibration Results

Weight Description	Serial Number	Manufacture	Correction As found (g)	Correction As Left (g)	Specification Class Tolerance ± (g)	Uncertainty k=2 (g)
1000 lb	SP1	Toledo	16.4	16.4	45	5.2
1000 lb	SP2	Toledo	18.3	18.3	45	5.2
1000 lb	SP3	Toledo	14.3	14.3	45	5.2
1000 lb	SP4	Toledo	13.1	13.1	45	5.2
1000 lb	SP5	Toledo	18.2	18.2	45	5.2
1000 lb	SP6	Toledo	26.6	26.6	45	5.2
1000 lb	SP7	Toledo	22.5	22.5	45	5.2
1000 lb	SP8	Toledo	10.3	10.3	45	5.2
1000 lb	SP9	Toledo	15.5	15.5	45	5.2
1000 lb	SP10	Hern Iron Works	22.8	22.8	45	5.2
1000 lb	SP11	Toledo	26.4	26.4	45	5.2
1000 lb	SP12	Hern Iron Works	16.0	16.0	45	5.2
1000 lb	SP13	Hern Iron Works	-13.7	-13.7	45	5.2
1000 lb	SP14	Hern Iron Works	-4.3	-4.3	45	5.2
1000 lb	SP15	Hern Iron Works	-9.2	-9.2	45	5.2
1000 lb	SP16	Hern Iron Works	-8.9	-8.9	45	5.2
50 lb	WA114-8	Troemner	1.29	1.29	2.3	0.14
25 lb	WA129-0	Fairbanks	-0.23	-0.23	1.1	0.14

Calibration Information

DATE(S) TESTED:	November 8, 2005			TESTED BY:	Dan Wright
PROCEDURE(S)--:	NISTIR 6969, SOP 8			CONDITION OF ARTIFACT(S) :	Good
AMBIENT CONDITIONS	AIR TEMPERATURE:	22.2	°C	WATER TEMPERATURE:	N/A °C
	BAROMETRIC PRESSURE:	764.2	MMHG	Relative Humidity:	40 %

WSDA METROLOGY LABORATORY STANDARDS USED IN THE CALIBRATION OF THE ABOVE DESCRIBED ARTIFACT

DESCRIPTION / SERIAL NUMBER	REPORT NUMBER	DATE CALIBRATED	DATE DUE
Mass Standards, 1000 lb – 20 lb / SET WC	L2300-1	10/28/2004	10/27/2006