ANNUAL REPORT ON THE TESTING AND INSPECTION ACTIVITIES OF THE DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES WEIGHTS AND MEASURES PROGRAM

Todd P. Haymore, Commissioner

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Annual Report on the Testing and Inspection Activities of the Department of Agriculture and Consumer Services Weights and Measures Program

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Annual Report on the Testing and Inspection Activities of the Department of Agriculture and Consumer Services Weights and Measures Program

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EXECUTIVE SUMMARY

This document is submitted pursuant to § 3.2-5609(B) of the Code of Virginia (Code), which requires the Commissioner of Agriculture and Consumer Services to report annually to the Chairmen of the Senate Committee on Finance and the Senate Committee on Agriculture, Conservation and Natural Resources, and the Chairmen of the House Appropriations Committee and House Committee on Agriculture, Chesapeake and Natural Resources, the results of testing and inspection activities carried out by staff in the weights and measures program of the Department of Agriculture and Consumer Services. During the fiscal year ending June 30, 2008, staff inspected 57,812 weights and measures devices that are used in commercial transactions in Virginia, posted an overall frequency of inspection per device of 24 months, and investigated 885 consumer complaints. The report also includes several informational tables.

LEGISLATIVE MANDATE

This document complies with the provisions of § 3.2-5609(B) of the Code of Virginia, which requires the Commissioner of Agriculture and Consumer Services to report annually to the Chairmen of the Senate Committee on Finance and the Senate Committee on Agriculture, Conservation and Natural Resources, and the Chairmen of the House Appropriations Committee and House Committee on Agriculture, Chesapeake and Natural Resources, the results of testing and inspection activities carried out by staff in the weights and measures program of the Department of Agriculture and Consumer Services, including the number and frequency of inspections for the weights and measures devices.

I. PROGRAM OVERVIEW

VDACS' weights and measures program has been traditionally funded by general fund (GF) appropriations. The 2003 Appropriations Act eliminated all general fund appropriations and required the Commissioner of VDACS to collect a registration fee of $9.00 for each weight and measure device that was subject to inspection. The 2004 General Assembly, responding to concerns raised by industry, reduced the registration fee from $9.00 to $4.00 per device and instructed the Commissioner to develop a long-term plan for the weights and measures program in conjunction with industry representatives. The 2005 Session of the General Assembly eliminated the $4.00 fee and approved a number of changes to Title 3.2, Chapters 56 and 57 of the Code of Virginia. The approved changes granted the Commissioner discretion to determine the frequency interval for inspections of commercial weighing and measuring devices, allowed for the random re-inspection of rejected devices and random initial verification of newly installed devices, and allowed for the acceptance of inspections of weighing and measuring devices by private companies as official inspections. GF appropriations by the 2005 General Assembly restored staffing to pre-2003 levels.

For fiscal year (FY) 2008, the GF appropriation was $2,073,462. During that period, staff inspected 57,812 of the 118,164 weights and measures devices that are known to the agency as being used in commercial transactions in Virginia. The overall frequency of device inspection remained at approximately 24 months, the same as the previous year. There was also a 111% increase in the number of re-inspection of devices, from 4,902 during FY 2007 to 10,356 during FY 2008. The increase in re-inspections was driven by the program's efforts to monitor devices placed into service by private companies, as well as the additional inspectional work resulting from the higher number of consumer complaints received during the year.

II. WEIGHTS AND MEASURES DEVICES IN VIRGINIA

VDACS' weights and measures database lists 118,164 commercial weighing and measuring devices, an increase of 5,690 devices (or 4.8%) over the previous year. The number of motor fuel dispensers increased in FY 2008 by 4,114 devices (or 4.7%), from 81,919 the previous year to 86,033. The following table details the number of devices by type. See the

Glossary for the definition of each device type.

Device Type	Number
Petroleum Product Dispensers	81,414
Computing/Hanging/Counter/Platform Scales	24,261
Vehicle Tank Meters	1,976
Liquefied Petroleum Gas (LPG) Meters	1,546
Vehicle Scales	1,648
Truck Stop Dispensers	4,619
Bulk Plant Meters	605
Warehouse Scales	559
Hopper Scales	174
Farm Scales	292
Vehicle On-Board Weighing System	266
Moisture Machines	50
Livestock Scales	76
Railroad Scales	54
Analytical Balances	24
Belt Conveyor Scales	9
Monorail Scales	2
Miscellaneous Meters	51
Miscellaneous Scales	538
Total Number of Devices	118,164

III. STAFFING RESOURCES

As of June 30, 2008, the weights and measures program had 38 full-time equivalent (FTE) positions filled. One FTE is involved in the regulation and sampling of motor fuel quality and three FTE's are involved with program administration, training and compliance activities. The remaining 34 FTE positions perform weights and measures inspections and are allocated as follows:

Of the 34 positions, two positions perform metrology calibrations for government and industry clients. These are laboratory positions that perform calibrations of mass standards as small as a micro-pound (.000001 lb.) to over 2,500 pounds, and volumetric calibrations from one milliliter to 10 gallons. VDACS' Metrology Laboratory also performs calibrations of timing devices, frequency generators (e.g. tuning forks), and temperature measurement devices. Calibrations of length were suspended in FY 2008 due to very low demand and the high cost of maintaining the calibration of the state standards for length. The laboratory is recognized by the National Institute of Standards and Technology and it is accredited under its National Voluntary Laboratory Accreditation Program. This level of accreditation gives laboratory clients direct traceability to national standards of measurement.

Twenty-four positions are involved in the testing of small capacity devices, such as retail motor fuel devices, retail computing scales, medium capacity bench, counter, and floor scales. They also determine the accuracy of point-of-sales systems, verify the accuracy of packaged commodities, enforce advertising and method of sale requirements, audit sales activities, and investigate consumer complaints.

Eight positions are engaged in the testing and inspection of all large capacity weighing and measuring devices, which include fuel oil and liquid petroleum gas (LPG) meters, both vehicle mounted and bulk; as well as large capacity scales which include vehicle, belt conveyor, and railroad scales.

All field inspectors are responsible for the enforcement of the Commission Merchant, Cotton Handlers, Weights and Measures Service Agency and Technician, Burley Tobacco, and Public Weighmaster Laws. The program also utilizes two part-time employees to inspect livestock scales annually at approximately 250 privately owned farms.

Training is an important consideration that impacts staff availability. New inspectors typically undergo six months of initial classroom and field training, but it may take up to three years for them to become fully proficient in the many technical complexities of the program. Seasoned inspectors also undergo in-service training. During FY 2008, staff received over 7,758 hours of instruction on legal and technology topics, a 55.7% increase in training over that received in FY 2007.

The program experienced a number of personnel transactions that directly impacted the availability of staff to conduct inspections. During the year, seven new employees were hired, three former District Inspectors were promoted to supervisory positions, two persons retired, and one person resigned. This level of personnel turnover, coupled with the training activities previously indicated, effectively limited the number of device inspections.

IV. INSPECTION ACTIVITIES BY DEVICE GROUP

During FY 2008, staff investigated 885 consumer complaints (a 22.9% increase from FY 2007) that required 2,879 man hours. VDACS places high priority on responding to and investigating consumer complaints while recognizing that time spent on investigative activities reduces overall staff availability to conduct device inspections.
The largest number of inspections involves the testing of measuring devices used to dispense petroleum products, including gasoline, diesel fuel, fuel oils, liquefied petroleum gas (LPG), and kerosene. During FY 2008, inspections were completed on 44,697 such devices, an increase of 1,795 devices (or 4.2%) over FY 2007.

Measuring Device Inspections

Device Type	Population	Number Inspected	Pct. Rejected
Petroleum Dispensers	81,414	43,148	17%
Vehicle Tank Meters	1,976	957	21%
LPG Meters	1,546	168	32%
Truck Stop Meters	4,619	417	24%
Bulk Plant Meters	605	7	14%
Total	90,160	44,697	

The second largest number of inspections involved 27,814 devices that are used to weigh retail purchases, road and other construction materials, agricultural products, and household goods. During FY 2008, staff inspected 13,115 weighing devices, or 47% of the total population, a 3% increase over the previous year.

Weighing Device Inspections

Device Type	Population	Number Inspected	Percent Rejected
Retail Scales	24,261	11,410	9%
Vehicle Scales	1,648	815	22%
Warehouse Scales	559	266	27%
Farm Scales	292	294	22%
Hopper Scales	174	141	12%
On-Board Weighing	266	113	27%
Livestock Scales	76	53	19%
Other Scales	538	23	17%
Total	27,814	13,115	

Re-inspections

During FY 2008, the program reported a 111% increase in the number of re-inspection of devices from 4,902 in FY 2007 to 10,356 in FY 2008 year. The number of re-inspections of devices used to dispense petroleum products, including gasoline, diesel fuel, fuel oils, liquefied petroleum gas (LPG), and kerosene increased from 4,347 to 8,831, while the number of re-inspections of weighing devices increased from 559 to 1,525. The increase in re-inspections was driven by the program's efforts to more closely monitor devices placed into service by private companies, as well as the additional inspectional work resulting from the higher number of consumer complaints. Changes to Title 3.21, Chapter 57 of the Code of Virginia during the 2005 session of the General allowed for the acceptance of "Placed Into Service Reports" by private companies. During FY 2008, approximately 4,200 new devices were placed into service by private companies. The rejection rates observed for those devices has continued to vary greatly, from 20 to 30% for small capacity devices to as

much as 40% on the first test of large capacity scales, and up to 25% on large capacity meters. The analysis of the re-inspection data has helped staff identify areas to emphasize during the training sessions that the program provides for service technicians. It is expected that the deployment in FY 2009 of an automated field inspection solution will yield more precise data to help manage re-inspections.

Measuring Devices	Number of Re-inspections
Petroleum Dispensers	8,478
Vehicle Tank Meters	178
LPG Meters	45
Truck Stop Meters	129
Bulk Plant Meters	1
Total	8,831

Weighing Devices	Number of Re-inspections
Retail Scales	1,112
Vehicle Scales	235
Warehouse Scales	88
Farm Scales	14
Hopper Scales	20
On-Board Weighing	36
Livestock Scales	10
Other Scales	10
Total	1,525

V. OTHER FIELD INSPECTION ACTIVITIES

During FY 2008, surveillance activities related to motor fuel quality, accuracy of packaged commodity weights, sales of agricultural products, and point-of-sales systems resulted in 37,429 samples being verified, which involved over 4,397 staff hours.

Inspection Activity	Samples Verified
Retail Store Prepared Packaged Commodities	25,721
Point-of-Sales Pricing Verified (Scanners)	8,843
Motor Fuel Quality Samples	2,685
Factory Prepared Packaged Commodities	180
Total	37,429

VI. METROLOGY ACTIVITIES

The work unit operates a Metrology Laboratory which performed 11,734 calibration tests for industry and government during FY 2008, a 3.4% reduction from the previous year.

Standard Type	Industry Client	Government Client	Total Tests
Tolerance Test Less than 10 lbs	4,045	1,233	5,278
Tolerance Test 10 to 50 lbs	2,269	506	2,775
Tolerance Test 51 to 1,000 lbs	400	106	506
Value Determination 3 kg and less	63	78	141
Volumetric Provers Less than 10 gallons	174	144	318
Thermometers	10	11	21
Tolerance Test over 1,000 lbs.	21	12	33
Volumetric Provers Greater than 10 gallons	12	0	12
Length Standards	0	0	0
Radar Tuning Forks	0	2,583	2,583
Value Determination Greater than 3 kg	18	49	67
Total	7,012	4,722	11,734

During the year, the program lost the capability to perform volumetric calibrations up to 2,000 gallons due to the closure of the Virginia Department of Transportation Fulton District Shop, in Richmond, where the tests were performed. Ongoing budget uncertainty precluded the program from pursuing an alternate location for this type of testing.

VII. COMPLAINT INVESTIGATION ACTIVITIES

Each year, the work unit receives an average of 600 consumer complaints that require field investigation. During FY 2008, staff spent over 2,879 work hours in the investigation of 885 consumer complaints, or 23.9% more than were investigated in FY 2007. The significant increase in complaints was attributed to heightened public sensitivity about the rising cost of motor fuels and increased consumer attention to the accuracy of motor fuel dispensers.

Consumer Complaint Investigations

Type of Complaint	Number Received	Valid Allegations	Percent Found Valid
Petroleum Quantity	413	39	9%
Petroleum Pricing	40	7	18%
Petroleum Other	253	56	22%
Petroleum Quality	69	4	6%
Petroleum Advertising	41	9	22%

Type of Complaint	Number Received	Valid Allegations	Percent Found Valid
Other Measuring	10	4	40%
Other Weighing	14	3	21%
Retail Weighing	8	2	25%
Point-of-Sales (Scanners)	6	2	33%
Firewood Measurement	05	0	0%
Other	1	0	0%
Total	885	130	15%

VIII. ENFORCEMENT AND COMPLIANCE ACTIVITIES

The program seeks to administer its assigned legislative and regulatory mandates in the least intrusive manner possible. Our philosophy is to inform, educate, and as a final step, take enforcement action. Typically, when a device is found to be incorrect, it is rejected, which involves the placement of a seal upon the device that notifies the owner of the device and consumers that the device is in need of corrective repairs. The owner is generally allowed up to 10 days to either initiate the necessary repairs or remove the device from commercial use. In extreme situations involving egregious errors, the device is condemned and immediately removed from commercial use. Situations involving repeat violations or actions of a criminal nature are subject to civil penalty assessments or prosecution under the Virginia Weights and Measures Law as Class 1 misdemeanors. During FY 2008, civil penalties totaling $18,190 were assessed.

IX. TRENDS

The number and frequency of device inspections are impacted by a variety of internal and external factors. Internally, personnel turnover and the resulting increase in the training needs of new employees effectively reduce staff availability to conduct routine inspections. From an external perspective, the continued increase in the number of devices subject to inspection, as well as the increase in the number and complexity of consumer complaints, all contribute to a reduction in the program's ability to conduct routine inspections. This operational challenge was exacerbated by the drastic spike in the price of petroleum products and the resulting unprecedented increase in the number of consumer complaints involving quality and quantity of motor fuels. Historically, the program has handled a weekly average of 12 consumer complaints involving weights and measures devices, but that average more than tripled at times during the fourth quarter of FY 2008 as a result of motor fuel complaints.

The program has adapted to the changes in the law in a manner that seeks to continue to assure both consumers and businesses that the most critical weights and measures devices that are widely used in the Commonwealth conform to the required specifications.

Glossary

Analytical Balance – A device used for precision measurements with a value of the verification scale division equal to or greater than 5 grams, and having at least 100 scale divisions, however no more than 1,200 scale divisions.

Belt Conveyor Scales – A device that employs a weighing element in contact with a belt to sense the weight of the material being conveyed and the speed (travel) of the material, and integrates these values to produce the total delivered weight.

Bulk Plant Meters – A device capable of delivering liquid products at a high rate of volume per minute.

Computing/Hanging/Counter/Platform Scales – A device with a low nominal rated capacity used in the majority of direct retail sales transactions.

Crane Scales – A device with a nominal capacity of 5,000 pounds or more designed to weigh loads while suspended freely from an overhead, track-mounted crane.

Hopper Scales – A scale designed for weighing bulk commodities whose load-receiving element is a tank, box, or hopper mounted on a weighing element.

Liquefied Petroleum Gas (LPG) Meters – A system including a mechanism or machine of the meter type designed to measure and deliver liquefied petroleum gas in the liquid state by a definite quantity, whether installed in a permanent location or mounted on a vehicle.

Livestock Scales – A scale equipped with stock racks, gates, and other adaptations for weighing livestock standing on the scale platform.

Moisture Machines – A device that indicates either directly or through the use of conversion tables and/or correction tables the moisture content of grains and seeds.

Monorail Scales - A device used to weigh livestock carcasses that may be used as a static or dynamic indicator, mounted on a truck and tree assembly that travels on a monorail system.

Petroleum Dispensers – A device designed for the measurement and delivery of liquids used as fuel for internal-combustion engines. Normal single deliveries of less than 50 gallons.

Railroad Scales - A device used to weigh railroad cars that may be used as a static or dynamic indicator.

Truck Stop Dispensers – A device designed for the measurement and delivery of liquids used as fuel for internal-combustion engines. Normal single deliveries of 50 gallons or more.

Vehicle On-Board Weighing System – A weighing system designed as an integral part of or attached to the frame, chassis, lifting mechanism, or bed of a vehicle, trailer, industrial truck, industrial tractor, or forklift truck.

Vehicle Scales – A scale adapted to weighing highway, farm, or other large industrial vehicles loaded or unloaded.

Vehicle Tank Meters – A meter mounted on a vehicle tank including those used for the measurement and delivery of petroleum products or agri-chemical liquids such as fertilizers, feeds, pesticides, and bulk deliveries of water.

Warehouse Scales – A device usually having a nominal rated capacity greater than 5,000 pounds which is permanently mounted in the floor where located.