

## Section 4

### Quality System Requirements

#### 4.11 Control of Inspection, Measuring & Test Equipment

Approved by: \_\_\_\_\_



Prepared by: \_\_\_\_\_

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Date: \_\_\_\_\_

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### **4.11.1 Policy**

It is Advatek Systems Inc.'s policy that all inspection, measuring and test equipment such as volt meters and test weights, used for verifying and inspecting scale quality in the Quality Assurance Program be selected, used, calibrated, maintained and controlled in accordance with *Measurement Canada's Quality Assurance Standard, S-A-01*.

### **4.11.2 Purpose**

The purpose of this document is to establish and maintain a system for the selection, use, calibration and control of all inspection, measuring and test equipment.

### **4.11.3 Scope**

This procedure applies to all inspection, measuring and test equipment used within the Quality Assurance Program for the verification and inspection of scales.

### **4.11.4 References**

- 4.11.4.1 Measurement Canada's Quality Assurance standard, S-A-01
- 4.11.4.2 Weights & Measures Act, Regulations and Specifications
- 4.11.4.3 Measurement Canada Bulletins
- 4.11.4.4 Measurement Canada's Notices of approval

### **4.11.5 General**

#### **4.11.5.1 Identification of Inspection, Measuring and Test Equipment**

It is the responsibility of the Quality Assurance Specialist to identify and maintain a listing of all inspection, measuring and test equipment used in the Quality Assurance Program for the purpose of verifying and inspecting scales by using a Test Weight Log Sheet (see attachments and document ADV-DOC-005 in Appendix A). This document shall also be used to establish certification intervals, as they may apply, to ensure that all inspection, measuring and test equipment shall be inspected prior to their inspecting expiry date. Information contained on this form shall include:

- a) The equipment manufacturer and model;
- b) Brief description (i.e. capacity of weight);
- c) Serial #;
- d) Last inspection date and inspection expiry date. (if applicable)

All inspection, measuring and test equipment used for final inspections of scales shall be traceable to national standards and shall have a valid certification.

The QAS shall keep this document as part of Quality Records (4.16).

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**4.11.5.2 Inspection, Measuring and Test Equipment Certificates**

The Quality Assurance Specialist is responsible to maintain all inspection, measuring and test equipment certificates. Copies of the certificates for these equipments shall be kept with the equipment in question to ensure that they are available to the user.

**4.11.5.3 Certification of Inspection, Measuring and Test Equipment**

Inspection, measuring and test equipment identified to be used to determine the final inspection of scales shall be subject to the *Measurement Canada's* (re) certification as per *section 56 of the Weights and Measures Regulations*.

The Senior Technician is responsible to ensure that the test weights are cleaned and painted prior to re-certification by Measurement Canada. The weights shall be cleaned in the service shop using a brush and water. Once the weights are clean, they shall be painted with a spray paint, either black or red in color, and allowed to dry for a 24 hour period in the service area.

One 50 lb. standard shall be calibrated accurate and kept in storage. This standard shall be used as a reference weight if ever there is question to the accuracy of any of our weights.

**4.11.5.4 Inspection, Measuring and Test Equipment Definition**

For the purpose of inspection, measuring and test equipments used by Advatek Systems Inc., they shall be referred to as test equipment, weight standards, test weights or mass standards.

**4.11.6 Control Procedure****4.11.6.1 New Inspection, Measuring and Test Equipment Specifications**

Advatek Systems Inc. shall, for every device inspection, select the measuring equipment capable of producing a satisfactory test.

The General Manager, with the assistance of the Senior Technician, shall provide to the QAS specifications for any new test equipment to ensure they are capable of fulfilling their intended purpose.

**4.11.6.2 Non-Conforming Inspection, Measuring and Test Equipment**

All recognized persons using standards for inspections of devices at Advatek Systems Inc. are responsible of verifying that these weight standards are legally certified prior to usage.

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The QAS is responsible to ensure that test equipments and standards are calibrated and certified according to *section 56 of the Weights and Measures Regulations*.

If the expiry date has elapsed for certification of verification weighing devices, a Nonconformance Report (see attachments and document ADV-DOC-004 in Appendix A) shall be issued and forwarded to the QAS. If the test equipment certification has elapsed, the weight standards shall be brought in immediately.

In the event that weight standards are found to be out of date, an assessment shall be conducted by the QAS on the validity of inspections conducted using these non-verified standards. Records of these assessments shall be kept in Quality Records (4.16).

#### **4.11.6.3 Inspection, Measuring and Test Equipment Indicator**

For all mass standards used to inspect weighing devices, the status indicator is of the type of die cast stamp on lead in the adjustment hole. This indicator shall bear the identification of the organization that performed the certification as well as the month and year of certification.

These weights shall be identified by a unique serial number. This serial number is stamped on the weight with a metal die.

For weights contained in a weight kit, there will be a serial plate on the weight kit box as well as a certification sticker on the inside of the cover.

For electronic test equipment, the serial number is located on the serial data plate. A calibration status sticker (see attachments for example as well as document ADV-FOR-001 in Appendix B) shall be affixed on the equipment.

#### **4.11.6.4 Storage and Handling of Inspection, Measuring and Test Equipment**

All employees of Advatek Systems Inc. using test equipments and weight standards in the shop as well as in the field shall handle and store them in a manner in such that accuracy and fitness for use are maintained.

There will be a designated area in the shop for the purpose of storing weight standards. When transporting weight standards in vehicles, the weight standards will be stored and placed in the vehicles in a manner that will adhere to safety guidelines and in a manner that will prevent damage.

Weight standards shall be assigned to technicians who will in turn log them out by using a Test Weight Log Sheet (see attachments and document ADV-DOC-005 in Appendix A). This log sheet shall be kept with the weight standards in the designated shop area. It is the Senior Technician's responsibility to ensure that the weight standards are logged out properly.

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When weight standards are handled in an environment that could cause the calibration of the weight to change (i.e. salt water, mud, etc.), the weight standards in question shall be cleaned immediately after usage.

If during the use of these weigh standards, the technician has reason to believe that a weight is out of calibration, the standard in question shall be brought to the shop and a Nonconformance Report (see attachments as well as document ADV-DOC-004 in Appendix A) shall be forwarded to the QAS.

Any weight standard that is known to be out of certification or is inaccurate or suspected of being inaccurate shall be quarantined. A quarantine tag (see example in attachments as well as document ADV-FOR-002 in Appendix B) shall be affixed to the standard. Only the QAS has the authority to remove a quarantine tag.

In the event of finding a test weight which is inaccurate, a correlation test of the other weights in that same weight category shall be performed by comparing them to the reference weights kept in storage. The correlation test will be done by sampling and performed by a Designated Technician. The results of these tests will be recorded on a As-Found Weight Test Sheet (see attachments and document ADV-DOC-006 in Appendix A).

#### **4.11.6.5 Use of Third Party of Test Weights and Truck**

In the event that Advatek Systems needs to use third party test weights while performing vehicle scale inspections, Advatek Systems Inc. will either use customer supplied test weights and truck or shall rent them from a third party. Prior to using these weights and truck, the Recognized Technician shall perform a visual inspection to ensure that the weights are not damaged and are suitable for use. We will also request a copy of the weight certificates to ensure that they have a valid certification and are not out of date. A copy of this certificate will be kept in Quality Records (4.16).

#### **4.11.7 Attachments (see Appendix A & B)**

4.11.7.1 Test Weight Log Sheet (ADV-DOC-005)

4.11.7.2 Nonconformance Report (ADV-DOC-004)

4.11.7.3 Calibration Sticker (ADV-FOR-001)

4.11.7.4 As-Found Weight Test Sheet (ADV-DOC-006)

4.11.7.5 Quarantine Tag (ADV-FOR-002)

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