State Directors. Breakfast Questions and Responses Regarding NTEP Issues 2004

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For the past several years, the Scale Manufacturers Association and the National Conference on Weights and Measures have hosted meetings of the State Weights and Measures Directors at the regional Weights and Measures association venues throughout the year. At these meetings, the same set of NTEP interpretation questions are asked. The purpose of the exercise is to exchange information on how the issues are dealt with in each jurisdiction, and to encourage NTEP Standization among the States and other weights and measured jurisdications.

Each year we have asked for candidate questions from SMA, NIST/OWM, NCWM, and State Directors. The canidate questions were balloted and scored by degree of interest. We then selected the top three or four questions to ask that year.

We have published the composite of the responses to the 1997, 1998, 1999, 2000, 2001, 2003, and 2003 questions. They are available for review or download as PDF Files on the SMA Web Site at http://www . scalemanufacturers.org.

This document covers the four questions asked at the four regional W&M Conferences in 2004.

2004 STATE DIRECTORS. BREAKFAST NTEP QUESTIONS

State Directors' Breakfast Questions and Responses Regarding NTEP Issues

QUESTION ONE - 2004

NTEP approves separate main elements like indicators and scale bases and states that they may be combined with any approved, compatible element. How does your jurisdiction inspect devices that are combinations of separately approved elements (OIML: modules)? Do you do any specific testing to ensure that the separate elements are, in fact, compatible?

Northeast Weights and Measures Association Responses:

NEWMA-1 - The device is confirmed to have a CoC and after this the instrument is tested. Basic tests are performed using acceptance tolerances. We also look at the instrument and the application to determine suitability. No specific test or additional inspection is performed to see if separate elements are compatible.

NEWMA-2 - The device is confirmed to have a CoC and after this the instrument is tested. Basic tests are performed using acceptance tolerances. We also look at the instrument and the application to determine suitability. No compatibility checking is performed.

NEWMA-3 - Some compatibility testing is performed. The indicator and load receiving elements are looked at for e_{min} and n_{max} value compatibility. One this is found to be correct, the instrument is tested. Tests are performed using acceptance tolerances. We also look at the application for suitability.

Southern Weights and Measures Association Responses:

SWMA-1 - We require that each piece of equipment or module have its own NTEP Certificate of Conformance. We have no means of determining compatibility.

SWMA-2 - We permit the practice of combining separately approved devices but do not conduct any compatibility testing.

SWMA-3 - Our state also permits the combining of separately evaluated modules. If the total system passes the initial testing, we accept it for use.

SWMA-4 - We permit combining separate approved modules into a single system. There is no additional testing to ensure compatibility. We assume that if the system passes the initial verification testing, it is acceptable for use.

SWMA-5 - If it is a new installation, the whole system must have its own NTEP Certificate of Conformance. We will permit changes or modifications as long as the new module has its own NTEP Certificate of Conformance.

SWMA-6 - We use our own compatibility worksheet which includes verifying that the n_{max} of the components is sufficient as well as verifying that the V_{min} requirements are met. Our biggest problem in compatibility of components has been with V_{min} and n_{max} where an indicator may not have a n_{max} of sufficient size to meet the system requirements.

SWMA-7 - We inspect the device as a whole with no separate element testing. Each element or module must have its own NTEP Certificate of Conformance.

SWMA-8 - We permit the practice of combining modules into a single system but require that each module have its own NTEP Certificate of Conformance.

SWMA-9 - We determine the compatibility of the individual modules by checking their n_{max} and V_{min} values but we don't conduct any individual testing. We conduct a normal system test and, if found compliant, the system is accepted for use.

SWMA-10 - In the past we did not allow this practice but we do now. The individual components must have their own NTEP Certificates of Conformance and the system must pass the initial verification testing.

SWMA-11 - We determine compatibility by checking n_{max} and V_{min} values but we do not perform any individual testing of modules.

Central Weights and Measures Association Responses

CWMA-1 - We make certain that each one of the components have the proper markings and that the device complies with the appropriate tolerances.

CWMA-2 - As long as each component has sits own NTEP Certificate of Conformance, we are satisfied that they are compatible.

CWMA-3 - We require that drawings are submitted for each component. We check the drawings and applicable NTEP Certificates of Conformance against each component to ensure compliance.

CWMA-4 - We have just become and NTEP state and are currently developing our policy so therefore I cannot answer this question.

CWMA-5 - We check the markings on each component and verify against the certificates. The total instrument (scale) must meet the appropriate tolerances.

CWMA-6 - We don't do any specific or special testing to ensure compatibility. We take a hard look at the components and verify compliance with the applicable tolerances and requirements.

CWMA-7 - We essentially do the same things as CWMA-1 and CWMA-6. We use a worksheet developed by CWMA-6 to verify compatibility.

CWMA-8 - We have no specific testing for compatibility. We check the component's markings when the instrument is submitted as a collection of separate but compatible components.

Western Weights and Measures Association Responses:

WWMA-1 - Devices that are combinations of separately approved elements are inspected and tested as a complete device in accordance with our state Code of Regulations which has adopted Handbook 44 by reference with modifications. If each device functions according to the specifications outlined in its Certificate of Approval, according to the manufacturer's stated purpose and meets current code requirements, it is sealed for commercial use. If a device works as intended, the elements are compatible.

WWMA-2 - All components of the system must have NTEP Certificates of Conformance but it is the whole system that is tested. No, no specific testing is performed to ensure that elements are compatible.

WWMA-3 - We see these types of systems comprised of separate main elements frequently. We don't do any special testing of separate elements as long as the whole system meets the appropriate tolerances.

WWMA-4 - The NTEP Certificate of Conformance for each element must be listed on our placed in service report. We look at the individual components and their certificates before going to test the complete device. We review the certificates to ensure the operational parameters of the elements are compatible. Once this is verified, the field examination takes place and the device accepted. Yes, we perform a review of the individual elements but don't test them separately.

WWMA-5 - We perform the standard H44 inspection. The inspector may come back and review the paperwork to determine compatibility of the elements.

WWMA-6 - We test the complete device to ensure compliance with the applicable requirements. We don't do any specific testing of separate elements.

WWMA-7 - We test it as a complete system. If questions arise during the test, we refer back to the appropriate NTEP Certificates of Conformance. No, we don't perform any testing of separate elements.

WWMA-8 - All of the elements making up the system must meet the appropriate requirements of Handbook 44. It is tested as a complete system. We do not test the individual elements making up the total system.

QUESTION TWO - 2004

Does your jurisdiction treat the first test of a new device (initial verification) different from routine testing during annual re-inspections (subsequent verification)? If so, what additional inspections or tests would you perform? Do you assign this to specific staff or is it done by all inspectors?

Northeast Weights and Measures Association Responses:

NEWMA-1 - We treat both tests the same but use acceptance tolerances for the first test and maintenance tolerances for subsequence testing. We also review the CoC on the initial test.

NEWMA-2 - No difference in testing except tolerances used.

NEWMA-3 - Attempt to instruct inspectors to look harder during initial verification testing. We do have 'special' inspectors trained to do initial testing. While we would like to perform additional or more testing during initial inspection this is not always possible. If the inspector has time he may perform some additional testing or may perform the standard tests twice.

Southern Weights and Measures Association Responses:

SWMA-1 - We use the same test for both initial and subsequent verification unless there is some reason not to do so, i.e., pre-NTEP device that requires a special test that is appropriate for it.

SWMA-2 - No, the first test of a new device is the same as a routine test performed as subsequent verification.

SWMA-3 - No, we use the same test for both.

SWMA-4 - We use the same test for both.

SWMA-5 - Basically, we use the same test. Sometimes we make the first test a little more stringent paying closer attention to the installation.

SWMA-6 - It's the same test. We used to take the scale to full capacity on the first test but no longer do this.

SWMA-7 - We use the same test for both.

SWMA-8 - No, we use the same test for both.

SWMA-9 - It's the same test. We're a little more thorough on the first test looking closely at markings and installation.

SWMA-10 - The first test of a new device requires that a registered service technician perform the test and place the scaled in service. The first state inspection takes place soon after.

SWMA-11 - We use the same test for both.

Central Weights and Measures Association Responses

CWMA-1 - The initial verification includes a check of the NTEP Certificate of Conformance status while subsequent verification does not.

CWMA-2 - We don't perform a specific test for the initial verification. We check for proper installation and double check shift tests on a new device to verify stability. We concentrate our attention on the installation of the device.

CWMA-3 - We make sure that the device is suitable for the application. We don't perform annual checks but, rather, work on a complaint basis. We don't do subsequent checks unless there is a complaint.

CWMA-4 - We make certain that the device has an appropriate NTEP Certificate of Conformance. There are no specific procedures for the initial verification.

CWMA-5 - We check to ensure that the device has been properly installed and has an appropriate NTEP Certificate of Conformance.

CWMA-6 - We have specific regulations and requirements for installation of devices and therefore take a close look at the installation to ensure that it complies with our requirements. We use one of our test trucks to check sections, mid spans, and repeatability. We are finding more and more scales that have been calibrated with too little load.

CWMA-7 - We make no distinction between the initial verification and the subsequent verification.

CWMA-8 - We check the installation to ensure that it complies with our requirements as well as checking the applicable documentation.

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Western Weights and Measures Association Responses:

WWMA-1 - The tests are the same but the tolerances applied are not. Acceptance tolerances are applied to initial verification of new devices while maintenance tolerances are applied to devices during normal annual re-inspections. Some counties may assign their staff to inspect different types of devices (i.e. gas pumps, heavy capacity scales, counter scales, etc.) but new and re-inspected devices within those groups are inspected and tested in accordance with our state Code of Regulations (Handbook 44 adopted by reference with modifications)

WWMA-2 - We spend more time on initial verification by verifying characteristics and settings of the device. We also check at least one load cell to verify that the cells used are the same ones as listed in the application. All inspectors perform initial verifications. Last year our inspectors were trained on inspection of vehicle scales. We also look closely at the installation to make certain that it is correct and will not be the source of future problems. We always try to perform the initial verification within 30 days and apply acceptance tolerances at that time.

WWMA-3 - Initial verification employs acceptance tolerances. We look at the installation and permanence of the system. Subsequent verification is less intense. Our inspectors perform both initial and subsequent verifications.

WWMA-4 - We do a more thorough test during initial verification of a device. We check the installation and make a photographic record of it. We work closely with the scale company. Our inspectors are divided geographically throughout the state and therefore are responsible for both initial and subsequent device evaluations.

WWMA-5 - The first test of a device is more thorough than subsequent evaluations. We don't have a placed in service system installed and used both acceptance and maintenance tolerances depending on the length of time that has passed since the device was installed.

WWMA-6 - In an initial device evaluation, we check and verify the appropriate NTEP Certificates of Conformance, we look at the load cell(s) to make a proper identification, examine the installation to make certain it is correct, and review all of the supporting documentation. Our inspectors are assigned to specific geographic territories within the state and therefore perform both initial and subsequent evaluations.

WWMA-7 - We work from the NTEP Certificate of Conformance making certain that system components are compatible. We also look at the installation and supporting documentation. Our inspectors are also assigned to specific geographic regions and therefore are responsible for both initial and subsequent evaluations within their areas.

WWMA-8 - We begin with completion of a scale test report which is required for both the initial and subsequent verification. We pay particular attention to the approached to vehicle scales to ensure that they meet the appropriate requirements. We do not have special inspectors that are restricted to initial evaluations.

QUESTION THREE - 2004

How do your field inspectors distinguish between built for purpose and not built for purpose devices?

Northeast Weights and Measures Association Responses:

NEWMA-1 - The inspectors look for the basic required information such as the model number and the serial number. They also look at the CoC to determine suitability. Beyond this the instrument is tested.

NEWMA-2 - This may be done on a case-by-case basis. Generally the instrument is looked at for suitability and then tested. However, the inspectors do have the leeway to go further if they feel it is necessary.

NEWMA-3 - The inspectors have the leeway to determine if the instrument is properly marked for the type installed and if the instrument is suitable for the application. This seems to be getting more difficult as instrument types change and manufacturers and users look for more functions from a single device.

Southern Weights and Measures Association Responses:

SWMA-1 - Our field inspectors haven't a clue between built for purpose and not built for purpose.

SWMA-2 - We don't distinguish between built for purpose and not built for purpose.

SWMA-3 - Our inspectors do not know how to tell the difference between these device types.

SWMA-4 - We don't know the difference between these device types.

SWMA-5 - We don't know the difference; it just has to work and meet tolerance.

SWMA-6 - We have some training to, in part, point out differences in these two types of device. Our major concern in this area is with point of sale systems.

SWMA-7 - Our inspectors don't know how to make the distinction.

SWMA-8 - We don't know how to tell the difference between these device types.

SWMA-9 - Our inspectors don't know how to tell the difference between them.

SWMA-10 - Our inspectors ask the device owner how it will be used.

SWMA-11 - We don't know the difference…we just make certain it works correctly.

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Central Weights and Measures Association Responses

CWMA-1 - We look the device over to make certain that the device is appropriate for the application. This hasn't been much of a problem for us.

CWMA-2 - We make certain that the device is correct for the application. If a problem is found, the office is called and a check of the documentation is made.

CWMA-3 - It really hasn't been a concern to our inspectors. We look at the whole device. We determine if the device is software driven. We have found some software driven devices in which there has been a significant change to the software without a corresponding revision in the NTEP Certificate of Conformance.

CWMA-4 - I guess we are behind the curve because we are not considering whether the device is built for purpose or not built for purpose.

CWMA-5 - This is a difficult question because these terms have not been clarified. We have a number of questions from our inspectors about identifying and verification of the software version.

CWMA-6 - This is the first we've heard of built for purpose devices. If our inspectors have problems, they call the office.

CWMA-7 - We're not checking this in the field. More training is required to address this issue.

CWMA-8 - I'm not certain. If the inspector has a problem, they call the office. I'm not sure our inspectors specifically look for this.

Western Weights and Measures Association Responses:

WWMA-1 - Field officials do not need to distinguish between built for purpose and not built for purpose devices. All equipment used in legal for trade applications must have a Certificate of Conformance. Certificates of Conformance designate the purpose for which the device is approved and the official will use this information to determine if the device is being used for its intended purpose. If a device is being used commercially without a Certificate of Conformance, it will be tagged and placed out of service.

WWMA-2 - We look at the Certificate of Conformance to see what it allows. We do have difficulty distinguishing between built for purpose and not built for purpose devices.

WWMA-3 - This situation is found primarily in vehicle scales and batch plants. We look at the NTEP Certificate of Conformance to see what was tested and check it to that point.

WWMA-4 - This type of system is almost always a one-of-a-kind system which is allowed in our state. We look closely to see if the device has been modified.

WWMA-5 - We rely on the NTEP Certificate of Conformance and make assessments of add-on devices to determine their metrological significance.

WWMA-6 - We look closely at the NTEP Certificate of Conformance and perform a base evaluation based on information contained on the certificate. We determine if the add-on devices have any affect on the metrological integrity of the system.

WWMA-7 - We make certain that the NTEP Certificate of Conformance matches the equipment in the field. We don't check software.

WWMA-8 - We follow Handbook 44 requirements and refer to the NTEP Certificate of Conformance. We've seen the replacement of not-built-for-purpose devices in the field but have been letting this go.

QUESTION FOUR - 2004

Does the CC contain satisfactory / sufficient / detailed information for your field inspectors to quickly and easily perform inspection on the device? Does the information regarding the test conditions, listed on the second page, provide you with any information of value?

Northeast Weights and Measures Association Responses:

NEWMA-1 - Most of the information on the first page is helpful and used on a regular basis. The information on the second page does not contain enough information to be useful. The inspectors check the CoC for the basic information and then test the instrument. It passes or fails.

NEWMA-2 - Inspector often calls to confirm compliance to the CoC. Information on the second page, such as the test conditions, are not of great concern to inspectors.

NEWMA-3 - Inspectors call the office with the model number, the office reviews the CoC and offers information to assist inspector. Some information, such as the test conditions, are not of any use. Other information is often helpful in determining suitability of elements and application.

Southern Weights and Measures Association Responses:

SWMA-1 - The information is adequate. It's not critical. It helps more on the LMD side than on scales.

SWMA-2 - We haven't adopted NTEP yet.

SWMA-3 - Most of the time, yes.

SWMA-4 - Most of the time the information is adequate, however, sometimes we do need more information.

SWMA-5 - Yes, the information is adequate. We don't know how much our inspectors use it. We're normally able to answer our inspectors' questions based on information found on the certificate.

SWMA-6 - Some NTEP certificates don't have enough information. We need more detailed information on the audit trail. Test condition information is very useful. Some information is lacking depending on who drafted the certificate. We print out the certificate for the inspector's use when they are working with a new installation.

SWMA-7 - Normally the information on the certificate is sufficient.

SWMA-8 - Usually the certificate contains sufficient information.

SWMA-9 - Inspectors normally do not have the certificate with them although it is available to them. Sealing information is very helpful. Test condition information is nice to know but we're not sure just how valuable it is.

SWMA-10 - Yes, there is sufficient information on the certificate and we find the test condition information of value as well.

SWMA-11 - There is sufficient information on the certificate but we're unsure just how valuable the test condition information is to us. Our inspectors call in with questions and the information on the certificate is normally enough to allow us to answer those questions.

Central Weights and Measures Association Responses

CWMA-1 - Yes. We have no problems with the NTEP Certificates of Conformance at present.

CWMA-2 - When the inspector goes to the field, he already knows which NTEP CC covers the device and has reviewed the certificate.

CWMA-3 - I don't have enough information to respond to this question.

CWMA-4 - Our inspectors call the office if they have questions and a review of the NTEP CC is made at that time. Most of the needed information is already on the certificate.

CWMA-5 - Our inspectors get the NTEP CC with the placed in service report so we encounter few problems. Normally, we do not review the second page of the certificate except to check for the location of the calibration seal and to verify the acceptable applications for the device.

CWMA-6 - We would like to see more information on the certificate. We do look at the second page of the certificate in an attempt to see if the device in question is covered. We use the NTEP CC index in the field and call the office for interpretations therefore achieving greater uniformity in policy decisions. We would like to see photographs added to the NTEP CC. We have found differences in cell mounting from what was originally evaluated and often this information comes from the scale technician himself.

CWMA-7 - We try to streamline certificates while putting as much information on them as is possible. Many pre-NTEP CCs do not have sufficient information.

CWMA-8 - The NTEP CCs contain sufficient information for the most part. We don't normally look at the second page.

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Western Weights and Measures Association Responses:

WWMA-1 - A certificate contains information for the field inspector to identify the equipment and determine if it is suitable for its intended use. The test conditions on a certificate may provide the field inspector with information to guide him in the testing of the device, however, inspection procedures are found in our Field Reference Manual. The Identification, Sealing, and Operation (if available) information on the certificate provides valuable information to the field inspector when gathering the required data.

WWMA-2 - Security information on many NTEP Certificates of Conformance is insufficient, particularly for RMD devices and weight indicators. Many indicators can be left in the calibration mode, particularly those with lead-wire security seals. We would like to see the information necessary to determine whether calibration is enabled on a particular device along with instructions how to enter and exit the calibration mode placed on the applicable NTEP CC.

WWMA-3 - Yes, to both questions. We normally only look at the NTEP Certificate of Conformance if we are not familiar with the specific device.

WWMA-4 - Yes and yes. We would like to see more information describing access to calibration placed on the certificate.

WWMA-5 - Yes, to both questions. We rely on the NTEP Certificate to provide us with information but also upon the inspector's knowledge and experiences.

WWMA-6 - The NTEP Certificates of Conformance are satisfactory. We would like to see photographs of the device added to the certificate.

WWMA-7 - Yes, to both questions. Calibration information would be a welcome addition to the NTEP Certificates of Conformance.

WWMA-8 - Yes, to both questions. We use the appropriate EPOs to conduct our device inspections.

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