



## **State Directors Breakfast Questions and Responses Regarding NTEP Issues 2006**

### **NON-ATTRIBUTABLE RESPONSE VERSION**

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 Standardization among the States and other weights and measured jurisdictions.

Each year we have asked for candidate questions from SMA, NIST/OWM, NCWM, and State Directors. The candidate 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 through 2005 questions. They are available for review or download as PDF Files on the SMA Web Site at [http://www . scalemanufacturers.org](http://www.scalemanufacturers.org).

This document covers the four questions asked at the four regional W&M Conferences in 2006.

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This document is provided as a free service by the Scale Manufacturers Association in support of the continuing education effort required to insure the success of the National Type Evaluation Program.

## 2006 STATE DIRECTORS. BREAKFAST NTEP QUESTIONS

### QUESTION ONE:

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Wireless communication between load-receiving elements and primary indicators is becoming more and more common.

- Do you feel your inspectors should be concerned with testing the integrity of the wireless communications in initial verification or in subsequent evaluations or both?
- Should NTEP include testing of the wireless communications in the evaluation process?
- Do you have any specific recommendations for such evaluations?

### QUESTION TWO:

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A device as originally supplied by the manufacturer has an NTEP Certificate of Conformance. Installation of a replacement part supplied by the same manufacturer renders the device out of conformance with Handbook 44. Should a disclaimer be included in all advertising and literature for the replacement part? If so, how should it be stated and how prominent should it be?

### QUESTION THREE:

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Shortly after arriving at a site to conduct an inspection on a livestock scale you observe racks have been added to the deck of a vehicle scale for livestock weighing. What administrative, inspection and test procedures do you follow to determine the scale is suitable for this application(s)?

### SURVEY QUESTION:

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Does your state or jurisdiction require registration of scale sales personnel?

# State Directors' Breakfast Questions and Responses Regarding NTEP Issues

## **QUESTION ONE - 2006**

Wireless communication between load-receiving elements and primary indicators is becoming more and more common.

- Do you feel your inspectors should be concerned with testing the integrity of the wireless communications in initial verification or in subsequent evaluations or both?
- Should NTEP include testing of the wireless communications in the evaluation process?
- Do you have any specific recommendations for such evaluations?

### **Central Weights and Measures Association Responses**

1 We're concerned about the initial verification. Some Ethanol plants are using the technology in our state. NTEP should make this part of the evaluation process. No, we don't have any specific recommendations for these evaluations.

2 We assisted in the NTEP evaluation of a railroad track scale that had a wireless network where it communicated with a device 500 feet distant. It was necessary to use a 25-ft pole for the antenna. The scale service company sealed the device. Our concern was with potential interference from the magnets used to load the scrap metal at the facility. We spent several hours checking it and found that it worked quite well. We still test for RFI using on-site equipment.

3 We're concerned with both the initial and subsequent evaluations. We have had one hopper scale with a wireless link to a Bobcat loader but have had no problems with it. We also feel that NTEP should include testing of the wireless link if it is to be used.

4 Yes, we're also concerned. We're concerned that the wireless signal can be manipulated to facilitate fraud. This technology brings new challenges but we don't know enough about it to know what to expect. NTEP should be involved but we are not sure to what extent.

5 We received a phone call from another state regarding a device that our lab had evaluated. A company there was collecting bids for devices that would utilize a wireless interface on crane scales. We advised them that the wireless feature was not listed on the NTEP Certificate of Conformance for the device. NTEP should look at this. We have worked on an ad hoc procedure for the evaluation of the wireless feature and the procedure has already been approved by the NTEP Committee. As part of this, you need to check what happens to the primary indicator when the signal from the load receiver is lost i.e. does the display remain fixed at the last weight or does it blank?

6 Yes, we're concerned as well. We have encountered wireless interfaces and have called NTEP for assistance. We still don't know enough about it.

### **Northeast Weights and Measures Association Responses**

1 We would rely on NTEP to address this during type evaluation. We would conduct field inspections to follow-up and verify if the wireless communications worked correctly. No, we don't have any specific recommendations for these evaluations.

2 We need to make sure that information/data sent from point A to point B is accurate. In other words, can you verify that the weighing system is communicating properly to ensure data and metrological integrity when using wireless communication. It will take experience to conduct field inspections and tests.

3 We're concerned with both the initial and subsequent evaluations. We need to understand the factors or influences that create errors or lead to fraud.

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4 This technology brings new challenges but we don't know enough about it to know what to expect. How do we know it is being used? How do we test it?

5 I believe we have a lot to learn on this subject. What kind of influences are we testing for? We need NTEP (with the assistance of the Weighing Sector) to develop a procedure for the evaluation of the wireless feature. We believe that initial verification by weights and measures inspectors will be necessary.

### Western Weights and Measures Association Responses

1 We're not aware of any in our state but we are interested in maintaining metrological integrity. We feel that NTEP should include testing wireless interfaces in its evaluation. We want it to be "bullet-proof, tamper-proof, and idiot-proof". A field test procedure would be necessary. We currently use radios on hand to test for interference with the weighing system.

2 Yes, we would be concerned. We need Examination Procedure Outlines (EPOs) for testing during initial evaluation. Yes, NTEP should make this part of their evaluation. We need to have an EPO created for this.

3 Testing of wireless interfaces needs to be part of the NTEP process. We would perform a test during the initial evaluation if an appropriate EPO were available.

4 We're not sure whether we have any of systems in our state that employ wireless interfaces. We agree that we need to maintain metrological integrity and that it needs to be part of the NTEP evaluation process. We also would like to have an EPO to use during initial evaluation of these devices.

5 We too are concerned but with both wireless and wired interfaces. We would normally check the interface for interference using sources of rf with wavelengths of 11m, 2m and the cellular radio band.

6 Both. Elements of a weighing system must be properly coupled and identified to ensure data and metrological integrity. Flexible systems that permit configuring multiple elements such as weighing or measuring elements to indicating elements and system controllers only function correctly when operators and customers understand which elements are active and can verify that active elements are correctly applied to the individual transactions being made.

Yes. Audit trail information and configuration menus should conform to applicable legal requirements in Handbook 44. Environmental influence factors should not result in erroneous metrological determinations. We have no specific recommendations. This is probably best left to the sector and the labs, but those groups clearly need to address existing requirements to ensure active and coupled elements be clearly identifiable, do not facilitate fraud, and are not affected by RFI and other metrological influences. A draft checklist is under consideration by the laboratories.

6 Yes, we would be concerned. The integrity of the wireless system should be checked. Yes, NTEP should include checking the wireless interface as part of their evaluation procedure.

7 We found such a system at a rock quarry. You need to look at the whole system. An EPO needs to be developed. EMC from adjacent inductive equipment needs to be addressed as well.

8 We agree that the evaluation and field testing of wireless interfaces needs to be addressed. An EPO would be beneficial during initial and subsequent evaluations.

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## Southern Weights and Measures Association Responses

- 1 No comment.
- 2 Yes, we're concerned but we are not sure how we would test for this in the field. We would like to see some field test procedures developed but we have no specific recommendations at this time.
- 3 We're concerned but not sure of the exact procedures to be used in testing. We feel that some specific procedures need to be developed for field testing.
- 4 We want our field inspectors to be concerned with this. We also feel strongly that the testing for integrity of wireless communications between devices must be a part of the NTEP evaluation.
- 5 We too are concerned. This is something that needs to be tested both in the field and during an NTEP evaluation.
- 6 We are concerned about this and feel that it should start with the NTEP evaluation of the device. We are also concerned about the wireless interface between the indicating device and any remote box / display / printer. Field evaluations should not require any in-depth procedures or special equipment. The effects of externally generated noise should be considered during the NTEP evaluation.
- 7 We are concerned about this but have no specific recommendations regarding the testing at this time.
- 8 We are concerned and would like to see the development of guidelines for field evaluation. It may be as simple as verifying that the value shown at the indicator is the same as the value shown at the peripheral device.
- 9 Yes, we are concerned. It should start with the NTEP evaluation of the device.
- 10 Yes, we too are concerned and would look to NTEP for guidance. We're not sure we know enough about the technology to identify the proper influence factors. Variables like transmission distance need to be considered.
- 11 No comment
- 12 Perhaps there would be less concern if we could identify already existing standards and use them.

## State Directors' Breakfast Questions and Responses Regarding NTEP Issues

### **QUESTION TWO - 2006**

A device as originally supplied by the manufacturer has an NTEP Certificate of Conformance. Installation of a replacement part supplied by the same manufacturer renders the device out of conformance with Handbook 44. Should a disclaimer be included in all advertising and literature for the replacement part? If so, how should it be stated and how prominent should it be?

#### **Central Weights and Measures Association Responses**

- 1 Weights and Measures cannot get into advertising literature. If the manufacturer knowingly did this, it should be addressed by weights and measures.
- 2 No. The official has done their job if they remove the device from service and can issue the report or statement regarding the modification and the associated violations. Any service agent making such "corrective repairs" has also violated the state law.  
There are separate sections in the State Business and Professions Code that address unfair business practices. They are not the responsibility of weights and measures officials. They provide a basis for a small claims or other legal action by the device owner, the service agency, or any interested local prosecutor.  
It is appropriate to take action against any unlawful involvement by a service agency and to inform the victims of any legal remedies they may want to explore further.
- 3 We would look at the complete unit and not the component parts. It would not be an issue in our state. The device simply has to perform within the appropriate tolerances or it is rejected and removed from service.
- 4 We agree. It either is within tolerance and acceptable for use or not within tolerance and must be removed from service.
- 5 We don't have the expertise to look at individual components to determine whether they are acceptable or not.

#### **Northeast Weights and Measures Association Responses**

This question was discussed with all of the states present and all agreed that a repaired device simply has to perform within the appropriate tolerances or it is rejected and removed from service. All repairs to a device should be made to the manufacturer's specifications.

#### **Western Weights and Measures Association Responses**

- 1 The component or assembly must be identified.
- 2 No. The official has done their job if they remove the device from service and can issue the report or statement regarding the modification and the associated violations. Any service agent making such "corrective repairs" has also violated the state law.  
There are separate sections in the State Business and Professions Code that address unfair business practices. They are not the responsibility of weights and measures officials. They provide a basis for a small claims or other legal action by the device owner, the service agency, or any interested local prosecutor.  
It is appropriate to take action against any unlawful involvement by a service agency and to inform the victims of any legal remedies they may want to explore further.  
You need to deal with the basic situation – lack of control and insufficient knowledge led to this problem. When devices like these are encountered, they should be taken out of service.

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- 3 It should be marked as not acceptable for commercial use.
- 4 The component should be marked. We're not sure how you could control this on a replacement part basis.
- 5 There should be a greater distinction between similar parts that can be used in commercial and non-commercial applications.
- 6 There should be designations distinguishing the differences. Things like this are hard for us to find.

### Southern Weights and Measures Association Responses

- 1 The component or assembly must be identified.
- 2 There should be a disclaimer or warning statement and, perhaps, it should be marked on the device as well.
- 3 The part(s) should be identified.
- 4 The part(s) should be identified.
- 5 The part(s) should be identified.
- 6 Use of this type of part should prevent the device from being associated with the CC when a non-approved part is installed. The device and parts should be marked. We want them marked but cannot require it.
- 7 Such a device with a non-compliant part should be taken out of service.
- 8 We want it marked. The scale technician should notify the device owner of this discrepancy.
- 9 We feel it should be marked. Much of it depends on how the service technician handles the problem.
- 10 We would like to see the part marked.
- 11 Responsibility falls on the shoulders of the service technician. Use of a non-complaint part should prevent the device from being used in commerce. The part should be marked or identified in some manner. The device manufacturer must let the device owner and technician know that use of such a part will render the device unfit for commercial use.

## State Directors' Breakfast Questions and Responses Regarding NTEP Issues

### **QUESTION THREE - 2006**

Shortly after arriving at a site to conduct an inspection on a livestock scale you observe racks have been added to the deck of a vehicle scale for livestock weighing. What administrative, inspection and test procedures do you follow to determine the scale is suitable for this application(s)?

#### Central Weights and Measures Association Responses

- 1 Changing the purpose of the scale from what it was intended is not acceptable. The scale would have to be approved as a livestock scale.
- 2 We would have an issue with it.
- 3 We have some old scales like this that were grandfathered. If it were a new scale, I'd check to make sure the NTEP Certificate of Conformance is appropriate for the application.
- 4 We have had this happen within our state. If the livestock weighing application is not listed on the NTEP Certificate of Conformance, we won't approve it. The problem is usually with division size. Normally a multi-range indicator is required. It is a problem in our state. We have also seen it go the other way where a vehicle is to be weighed on a livestock scale.
- 5 There are situations where manufacturers have used low capacity vehicle scales as livestock scales. We would check the NTEP Certificate of Conformance. If the scale can accommodate 5 pound divisions, we'd take a look at it.
- 6 We're not aware of this happening in our state.
- 7 We haven't heard of this specific modification but have had others. We'd look at the NTEP Certificate of Conformance to see if the scale is appropriate for the application.
- 8 We would look at the NTEP Certificate to see if it is appropriate for the application. We would be concerned about the dead load the stock racks add to some lower capacity mechanical scales.
- 9 Local officials should generally test commercial livestock scales in accordance with Packers and Stockyards test procedure and the Notes contained in Handbook 44. Communication regarding service work or modification of a scale are required within 24 hours of completion. Information on the model and CC number should be know before arriving at the site.

#### Northeast Weights and Measures Association Responses

- 1 This is not an issue for us because of the absence of livestock scales in the state.
- 2 We do not have any livestock scales in the state.
- 3 We're not aware of this happening in our state, however we do not have many livestock scales in commercial service.
- 4 If the livestock weighing application is not listed on the NTEP Certificate of Conformance, we will not approve the scale.
- 5 Just because the scale is evaluated as a vehicle scale doesn't preclude it from weighing items other than vehicles. We would test as a livestock scale and accept this application if it was accurate. The scale would have to meet all of the Packers and Stockyards requirements and the division size must be suitable for the installation.



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## Western Weights and Measures Association Responses

- 1 We'd check the NTEP Certificate of Conformance to see if the device was appropriate for the application. Has it been evaluated as a livestock scale?
- 2 We too would check the NTEP certificate to make sure it was appropriate for the application. If it wasn't evaluated as a livestock scale, then it can't be used as such.
- 3 The NTEP Certificate of Conformance would have to state that it was appropriate for livestock weighing.
- 4 We have some scales grandfathered into this kind of application. We would probably allow an older device if it met the requirements. If it were a new scale, it would have to show that it was appropriate for livestock weighing on the NTEP certificate.
- 5 We would make sure that it meets the applicable portions of Handbook 44 then it would be OK.
- 6 It would have to list livestock weighing on the NTEP certificate if it is a new scale.
- 7 It (livestock weighing) has to be on the NTEP Certificate of Conformance.
- 8 Local officials should generally test commercial livestock scales in accordance with Packers and Stockyards test procedure and the Notes contained in Handbook 44. Communication regarding service work or modification of a scale are required within 24 hours of completion. Information on the model and CC number should be know before arriving at the site.

## Southern Weights and Measures Association Responses

- 1 We'd check the NTEP Certificate of Conformance to see if the device was appropriate for the application. Has it been evaluated as a livestock scale? If not, we'd call NTEP.
- 2 The device must have an NTEP Certificate of Conformance appropriate for the application.
- 3 We would reject the device unless it had been evaluated as a livestock scale.
- 4 We too would reject the device if it had not been evaluated as a livestock scale. You should also be concerned about Packers & Stockyard requirements.
- 5 If all of the other device characteristics were acceptable (except the NTEP Certificate of Conformance) we would test it as a livestock scale and if it performed within tolerance we would allow its use. If it fell under Packers & Stockyard requirements and had not been evaluated as a livestock scale, we would reject it.
- 6 If the device had not been evaluated as a livestock scale we wouldn't approve it for that application.
- 7 If it performed within the appropriate tolerances and was not being used under Packers & Stockyard requirements, we would allow it. If a Packers & Stockyard application, we would reject it if it had not been evaluated as a livestock scale.
- 8 If a Packers & Stockyards application and it had not been evaluated as a livestock scale, we would reject it. If not subject to Packers & Stockyards regulations and if it performed within the applicable tolerances, we would allow its use.
- 9 If it conforms to H44, we would accept it.
- 10 If we found it being used as a farm scale, we would probably allow it. If it were in a Packers & Stockyard application, we would reject it.

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## SURVEY QUESTION

**Does your state or jurisdiction require registration of scale sales personnel?**

Alabama		Missouri	No
Alaska		Montana	
Arizona	Arizona does not require the registration of scale sales personnel unless they were to multi-task and do installation and or repair in addition to their sales responsibilities.	Nebraska	Our state statutes allow it but we have not implemented it
		Nevada	No
Arkansas		New Hampshire	No
California	No, we do not require registration of sales personnel, but the state requires all persons selling, renting, leasing, or loaning any weighing instrument to notify, within 24 hours, the local sealer of the county where the scale will be located.	New Jersey	No
		New Mexico	No
Colorado	We understood that we did have this requirement but in checking with our attorney general we find that our law had been misinterpreted.	New York	No
		North Carolina	No
Connecticut	No	North Dakota	
Delaware	No	Ohio	No
Florida	Our State does not register scale sales personnel, or any individual scale personnel for that matter. We register companies that service and install commercial scales, and have the name of one person in the company that is held responsible for their work.	Oklahoma	
		Oregon	No
Georgia	No	Pennsylvania	
Hawaii		Rhode Island	
Idaho	No	South Carolina	No
Illinois		South Dakota	No
Indiana		Tennessee	
Iowa	No	Texas	No
Kansas	No, but a licensed agency must do the installation.	Utah	No
Kentucky	No	Vermont	
Louisiana	No	Virginia	Yes
Maine		Washington	No
Maryland	No	West Virginia	
Massachusetts	No	Wisconsin	No
Michigan		Wyoming	
Minnesota	No	District of Columbia	
Mississippi	No	American Samoa	
		Federated States of Micronesia	
		Midway Islands	
		Puerto Rico	
		Guam	
		Commonwealth of the Northern Mariana Islands	
		US Virgin Islands	



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