UPC/PLU Inspector Training

Presented by:
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UPC/PLU Devices

Universal Product Code (UPC): A unique symbol that consists of a machine readable code and human-readable numbers which are printed on package labels or are applied with tags or labels.

Price Look-Up Code (PLU): A pricing system where numbers are assigned to items or commodities, and the price is stored in a database for recall when the numbers are manually entered. PLU codes are used with scales, cash registers, and point-of-sale systems.

History

The first patent for a bar code type product was issued on October 7, 1952 (Woodland and Silver). However it would be many years until sufficient technology would be available for it to be used practically in the marketplace. The bar code's first commercial use wasn't until 1966 but went unrealized until an industry standard could be developed and adopted. By 1970, the Universal Grocery Products Identification Code or UGPIC was written. UGPIC evolved into the U.P.C. symbol set or Universal Product Code (George Laurer, 1973), which is still used in the United States.

In June of 1974, the first U.P.C. scanner was installed at a Marsh's supermarket in Troy, Ohio. The first product to have a bar code included was a packet of Wrigley's Gum.
Pennsylvania Regulates UPC/PLU

Pennsylvania’s oversight of UPC and PLU devices is conducted by the Bureau of Ride & Measurement Standards, Division of Weights & Measures. The Bureau conducts its activities in accordance with the following:

- Pennsylvania’s Title 70, Weights, Measures and Standards (Chapters 1 - 110) (Chapter 5 included in course material)

Pennsylvania's UPC/PLU Mandate

The Bureau of Ride & Measurement Standards will:

- Establish specifications, tolerances and procedures with respect to the inspection of UPC scanning systems and PLU devices.
- Identify the minimum level of training necessary for a person to be qualified to inspect UPC scanning systems and PLU devices.
- Establish a procedure by which a person may apply to become a certified UPC/PLU inspector.
- Prescribe a procedure under which the Department can review inspections performed by certain certified UPC/PLU inspectors and revoke or suspend certification.
- Establish minimum requirements for the "private certification program".

Cited Title 70, Chapter 5, Section 5.1

Approved Training

Pennsylvania's Title 70, Section 5.7 Training courses, generally approves any National Institute of Standards and Technology (NIST) or National Conference of Weights and Measures (NCWM) price verification training course that utilizes the "Examination Procedure for Price Verification".

The Bureau has Incorporated the NIST/NCWM "Examination Procedure for Price Verification" into this training course. (Examination Procedure for Price Verification is Chapter V of Handbook 130, current revision is 2012, pages 189 - 220, included as part of the course material)
Bureau of Ride & Measurement Standards

Examination Procedures for Price Verification

This Begins
The slides detail Section 1 through Section 14 of NIST Handbook 130 2012 edition, Chapter V pages 189 -220
(Included as a part of the course material)

NIST has developed procedures to conduct price verification inspections in any type of stores including those that use UPC scanners and price-look-up codes at the check-out counter as a means for pricing. The purpose of the procedure is to ensure that consumers are charged the correct price for the items they purchase. The "randomized" and "stratified" sampling procedure are intended for use in routine inspections to determine how well a store is maintaining price accuracy.

NIST Handbook 130 – 2012, Part V. Examination Procedure for Price Verification

Definitions

- Area
- Cents-off Representation
- Direct-Store-Delivery (DSD)
- Displays
- Hand-held Scanning Device
- Enforcement Levels
- Inspection Types
- Inspection Frequency
- Inspection Lot
- Merchandise Group
- Not-on-File Items
- Notification of Noncompliance
- Price Look-Up Code (PLU)
- Price
- Pricing Coordinator
- Pricing Integrity
- Sample
- Scanner
- Stock-Keeping Unit (SKU)
- Store-Coded Item
- Stop-Sale Order
- Ticketed Merchandise
- Universal Product Code (UPC)
Test Notes

Safety and Health: Practice safe work habits to avoid personal injury or property damage.
  • Follow all safety and sanitation rules at inspection site
  • Handle perishable, dairy, or frozen products properly

Confidentiality of Findings: Inspection findings should be discussed only with an authorized store representative and released only in accordance with store policy or state/federal guidelines.

Materials and Equipment

Inspection Report:
  • Copy of laws or regulations
  • Hand-held counter or Price Verification Tally Sheet
  • 1 lb test standard
  • Merchandise cart

Other Material & Equipment:
  • Current newspaper advertisement or store sales brochure
  • Hand-held scanning device(s) [stores are not required to have this equipment or to provide it for your use]

Pre-Inspection Tasks

Prior to conducting an inspection it is recommended that you contact the store management, identify yourself, and explain the purpose of your visit. Be prepared to provide information on the regulations/law for the inspection.

Note: When conducting an inspection store management is typically not notified of the test until the inspection is completed.
  • Notify store representatives that they are invited to participate
  • Ensure you receive proper instruction for any equipment used (i.e. hand-held scanners)
  • Manually inspected items will be returned to the display upon completion of the inspection by the inspector unless other arrangements are made with the store
  • Conduct inspections as not to disrupt normal business
Inspection

Position of Equipment: Determine if the customer indications on the point-of-sale systems meet NIST Handbook 44, GCUR 3.3 which requires a device equipped with a primary indicating element and used in direct sales shall be so positioned that its indications may be accurately read and the weighing and measuring operation may be observed from some "reasonable" customer position.

NIST Handbook 44 defines "point-of-sale system" as an assembly of elements including a weighing element, indicating element, and a recording element (and may be equipped with a scanner) used to complete a direct sale transaction.

- If a cash register is used, verify the accuracy and legibility provided on the register receipts.
- Conduct inspections to enforce local requirements including laws or regulations related to price marking, shelf labels or unit pricing.

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These procedures shall be used to conduct inspections in any type of store, whether the store uses scanners or automated price look-up registers, or where a clerk manually enters the prices.

7.1 Application of Sampling Plans
(a) For normal or increased frequency inspections, follow the procedures referred to in Columns 1, 2, and 3 in Table 1. Samples, Sample Collection, and Accuracy Requirements.
(b) For special inspections, use the test procedures in Section 7.2. Table 1. Samples, Sample Collection, and Accuracy Requirements or 7.4. Procedure for Test Purchases and for Verifying Manually Entered Prices.

7.2. Table 1. Samples, Sample Collection, and Accuracy Requirements

7.2.1. How to Use the Table:
(a) Look in Column 1 for the type of store you are inspecting; select the appropriate sample size from Column 2; then refer to Column 3 for the type of sample collection plan to use.
(b) Follow the single-stage or two-stage sampling plans to conduct the inspection and collect the samples using either the "randomized" or "stratified" sample collection procedures described in Section 7.3. Sample Collection Procedures or the procedure in Section 7.4. Procedure for Test Purchases and for Verifying Manually Entered Prices.
(c) Apply the accuracy requirements for the appropriate sample size in Column 4.
7.2.2. Samples. - Refer to Column 2 in Table 1. Samples, Sample Collection, and Accuracy Requirements to determine how many items to select for the store type and whether to use the single-stage or two-stage sampling plan. You may use either:

(a) Single-Stage Sample. - A single-stage sample is typically used for, but is not limited to, stores where a hand-held scanner device is available for the inspection; or

(b) Two-Stage Sample. - A two-stage sample saves time. If the sample (usually one-half the total sample size) taken in the first-stage meets the accuracy requirements specified in Column 4 in Table 1. Samples, Sample Collection, and Accuracy Requirements, the inspection is complete. However, if the errors in the first-stage sample fall within the limits set in Column 4, the second-stage of the sample is taken.

7.3. Sample Collection Procedures (for use with either manual or automated inspection procedures). - These sample collection procedures may be used to conduct either manual or automated inspections with a single-stage or two-stage sample. That is, you can either use a hand-held scanning device to verify the price of an item (automated), or you can remove the items from display and take them to a check-out location to verify the price of the item (manual) regardless of which sample collection procedure is used. No sample collection procedure is ideal for all retail store arrangements. You can modify the procedure to fit each store, but you should adhere to the sample size and sample collection procedures described in Table 1. Samples, Sample Collection, and Accuracy Requirements. When using any of the procedures, test the store as a whole unit by taking samples from all parts of the store, or divide the store into "areas" and select samples from several "areas" (e.g., at least 10 areas, or one-third or one-half of the "areas").
7.3.1. Randomized Sample Collection. - In "randomized" sample collection, all items in an "area" have an equal chance of being included in the sample. This test procedure has several benefits, including: (1) having more effective coverage and being simpler to conduct because you select items by count following a systematic pattern throughout the store, and (2) ensuring that a wider range of items are verified, which increases scrutiny; therefore, there is greater confidence in the results. With most samples, several items will be verified in each "area" of the store. Since store sizes differ, this number will vary, but samples should be taken from a wide variety of items (and merchandise groups) from locations throughout the store or "area."

The steps of the randomized sampling collection procedure are as follows:

(a) Count the number of "areas" in the store which have products to be verified:

(1) Stand-alone counters and displays or whole departments (e.g., bakery or seafood, or "men's clothing" or "sporting goods" department, etc.) are considered and counted as individual "areas" to be sampled.

(2) End of aisle displays may be considered as a single, distinct "area" and either verified separately or included as part of one side of an aisle.

(b) The sample size (e.g., 100 items) is divided by the number of "areas" to determine the number of items to be sampled from each "area." Depending on the number of areas in the store, you may calculate a fractional number of items per area. In this case, round off the sample size.

7.3.1.1. Example 1. Illustrations of the Randomized Sampling Procedure.

(a) Figure 1 illustrates how the randomized sampling procedures are used in a food store. This example is based on a 100-item sample. To simplify the selection process, simply divide the store into 4 major "areas" and select samples as follows:

Examples:

- Select 5 items from all of the shelves and displays in the produce section which are grouped as a single "area."
- Select 85 items by choosing 5 items from either side of several of the 13 aisles (e.g., there are 26 rows of shelves from which samples may be selected. To select 85 items, select 5 items from 17 of the 26 rows of shelves).
- Select 5 items from the counters along the back of the store, and
- Select 5 items from the deli-bakery and the cash register areas which are grouped as a single "area."
(b) Figures 2 and 3 illustrate how the randomized sampling procedures may be used in any store. The examples are based on a 100-item sample for stores that have a total of 30 "areas" to sample. The procedure allows the flexibility needed to adjust the sample to fit the store layout. To simplify the selection process, the stand-alone displays may be grouped together as an "area" to be sampled.

The following breakdown of "areas" is illustrated in Figure 2; the same approach is used in Figure 3. Figure 4 illustrates an example of sampling 100 items by selecting 20 items from 5 different areas in a department store.
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(c) Start in any "area" in the store at any shelf, rack, or display (top, bottom, front, back; anywhere on a circular rack or display). Begin with the first, second, or third item and count either 5, 10, or 15 items along the shelf (varying the number of items counted depending on how many items are available on the shelf) or along the aisle. Select the 5th, 10th, or 15th item as appropriate (See Figures 5, 6, and 7). Only select one item from each brand or product (if they are the same price) from a display that has two or more items of the same product size and price displayed side by side. You can change the number of items you count off as often as necessary during the inspection.
(d) Either verify the price with a hand-held scanning device or take the item (along with the other items you select) to the check-out location to verify the price, keeping count of the items using a hand counter or tally sheet. If the price of an item is incorrect, record the item’s name, description, and price along with other information (e.g., whether the product is on sale, aisle location so you can easily find the items again to verify the error, etc.).

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(e) From the first item sampled, move down (or up) one shelf to the item most directly below (or above) and count 5, 10, or 15 items in the same direction and sample the 5th, 10th, or 15th items, as appropriate. After the number of items to be verified in each "area" have been selected, go to the next "area" and start on the next shelf (either down or up) from where the previous sample was selected, count 5, 10, or 15 items and select the appropriate item using the count system until the required number of samples is selected. If you have sampled an item on the bottom (or top) shelf and have more items to test in the "area," simply go up (or down) one shelf. This will create a "zigzag" trail up and down the display.
(f) This procedure is repeated for all "areas" until you complete the sample.

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(g) This procedure is repeated for all "areas" until you complete the sample.
7.3.2 Stratified Sample Collection. – Stratified sample collection (i.e., selecting samples from specific merchandise groups) of items on sale, specials, seasonal items, or items on end-of-aisle displays is typically used (e.g., if a store has failed an inspection based on the randomized sample collection procedures) to focus on specific merchandise groups that appear to have more errors than others (e.g., you find that many of the errors found in the randomized sample were in "advertised specials" or with "discontinued items"). You can also combine sample collection procedures by using a "randomized/stratified" approach. The "stratified" approach may be used the first time you inspect a store, in stores that have just implemented scanning, in stores that have high error rates on particular groups of items in past inspections, or in responding to consumer complaints involving a particular group of items.

For stratified sample collection, items are randomly selected from different "merchandise groups" in a store. They are tested in the first stage of the two-stage manual sampling plan to determine if (1) any group has more errors than any other and (2) the sample taken in the first stage meets accuracy requirements. This method should be modified depending on the marketing practices of the store in which it is used (e.g., if you are in a department store, there may be fewer groups to sample from, or the list provided below may not include the types of groups typically encountered in a hardware superstore). The next example shows how to conduct a stratified sample and how it is used, but it should not be the sole basis for sample collection because a specific list of items does not look at the store as a whole. Focusing on specific merchandise groups takes time, but this may be necessary when investigating a complaint or following up on a prior noncompliance. Select only one item from each brand or product from a display that has two or more items of the same product, size, and price displayed side by side if they are the same price.
Sample Size. – In this example, a large food store is inspected using a two-stage sampling plan (50 items/100 total items). The inspection begins with an initial sample of 50 items (see Column 1. Type of Store for All Other Retail Stores and Column 2. Sample Sizes in Table 1).

Stratified Sample Collection. – Select 50 items from the merchandise groups listed below (provided as examples only; stores may have other groups that should be included). This procedure allows you to focus on specific merchandise groups to determine if errors are indeed occurring in groups where they are thought to occur most frequently (e.g., sale and direct delivery items).
7.3.2.1. Example 2. Two-Stage Manual Inspection using the Stratified Sampling Procedure.

If there is an insufficient number of items in any merchandise group, or if the group of items is not available, increase the number of ‘randomized’ items selected from the overall inspection lot to obtain a total of 50 items. As marketing practices evolve, these groups may change as well. You may substitute ‘other’ or new merchandise groups for any of those listed below (e.g., you may have identified errors in the ‘health and beauty aids’ section or on ‘manager specials’ during a previous inspection, so samples from these groups may be substituted for any of the groups listed below). Model ‘Price Verification Tally Sheets’ in Section 14. Model Forms for Price Verification Inspections are provided for your use with the test procedures to keep track of the number of items selected.

First-Stage: 50 items. Use the ‘randomized’ sample collection procedures described in 7.3.1. Randomized Sample Collection to select the following items. These sample collection procedures simplify the inspection process and ensure that samples are collected as randomly as possible.

Examples:

- Twenty-five ‘Regular Priced’ items. Select one or two items at random from different shelves in each ‘area’ or limit your sampling to shelves in one-half the ‘areas’ in the store, and
- Twenty-five Items. Select a total of 25 items. Include several items from any of the following merchandise groups:
  - ‘Direct-Store-Delivery (DSD)’ items. If the store allows vendors to price DSD items, include those items in the sample.
  - ‘End-of-Aisle’ or ‘Tie-In-Display’ items. This group can include both regular and sale-priced items.
  - ‘Advertised Sale’ items. Use the store’s sales brochure or newspaper advertisements to identify sale items.
  - ‘Special’ items. This includes any item with a reduced price (e.g., items on ‘special’ including ‘cents-off’ or ‘percentage-off’ items, 2-for-the-price-of-1 specials, manager and in-store specials, or discontinued items). Items typically discounted on a percentage basis include a manufacturer’s product line, greeting cards, magazines, or books.
  - ‘PLU’ items. This includes both regular and sale priced items offered in the produce, bakery, or bulk food departments and over scales at the direct sale counters. For direct service departments (e.g., produce, deli, specialty meats, etc.), select products at random (include some sale or special prices) and enter the code in the scale [NOTE 1, page 206] to verify that the coded price matches the advertised price [NOTE 2, page 206].
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- "Store-coded" items. This includes items offered in the produce, bakery, or meat departments that have labels with the UPC symbol generated by scales and printers in the store. For store coded items, scan the item and determine if the total price and identity on the label are accurately read by the point-of-sale system. When checking "store-coded" items from the meat or other departments, remember that a "UPC symbol" on a random weight label is read by a scanner to obtain the total price and identity. The price is not stored in the point-of-sale database.

- "Other" items. This category is included to provide flexibility in selecting a sample so that "seasonal" items, or products unique to the store or local market, can be included. Both regular and sale-priced items can be included in this category.
Identify the item on an inspection report (e.g., record a brief description, item number, shelf, or advertised price and aisle location. The aisle location makes it easy to find the product if errors are found and to re-shelve the items). As items are selected, use the "Price Verification Tally Sheet," or other means, to keep track of the number of items collected. (See Section 14. Model Forms for Price Verification Inspections. The "Model Price Verification Reports" in this proposal were developed with the assumption that it is only necessary to record information of items found with price errors, not all items verified. This reduces paperwork and saves time.) Either use a hand-held scanning device or take the items to a cash register, verify the prices by scanning the items or entering a PLU code into the register and printing a receipt. The prices "charged" at the register are then compared to the advertised price of each item. For large or perishable items, record the identity, UPC Code, location, and price and manually enter the UPC number into the register to verify the price. However, this method is subject to recording and key entry errors.

Evaluation of Results on First-Stage.
See Section 9. Evaluation and Inspection Results for guidance on which errors are considered violations. One error in a 50-item sample is permitted. If not more than one error is found and verified, the store passes; if 3 items are found in error in the first 50 items, the store fails and the inspection is complete.

If two errors are found, collect 50 more items using the randomized sampling procedures and verify a total of 100 items. If errors were found in any specific merchandise group (or groups) of items (e.g., direct-store-delivery items, PLU codes, or specials), the additional 50 items should include items from those merchandise groups.

Accuracy: Refer to Column 4 in Table 1. Samples, Sample Collection, and Accuracy Requirements. The required accuracy is 98% on the 100-item sample (that is, at most two errors are permitted on a 100-item sample). If more than two errors are found and verified, the store does not meet the accuracy requirement.
Test Procedures

7.4. Procedures for Test Purchases, Investigation of Consumer Complaints, and for Verification of Manually Entered Prices.

7.4.1. Procedure. This procedure may be used to (1) investigate consumer complaints, (2) determine if a store has corrected a pricing error after being notified that an error occurred, or (3) determine if manually keyed-in prices or PLU codes are accurate.

(a) Do not alert the clerk to the fact that the test purchase procedure is being conducted. Do not ask questions concerning any errors that you observe or offer any information if asked the price of an item, in cases where the item price is illegible, or where the item is not on file.

(b) Use the "randomized" sampling procedures to select a sample of 10 to 50 items that includes regular and sale priced items, PLU items, and advertised specials from various "areas." It is acceptable to purchase only one or just a few items if you are investigating a complaint on a specific item. Record the name and identity of the product, as well as the labeled or advertised price, for each item.

(c) Proceed through a check-out as if you were a customer and pay for the purchase. Obtain the original sales receipt, and compare the price charged with the labeled or advertised price for each item. Record the time of day, lane number, and the identity of the checker. Before leaving the store, determine if any errors have occurred. Identify yourself and inform the store management that a test purchase was conducted and report the results. (In many instances, the store will credit back all of the items and refund the test purchase money.) Record the information on the test report form and determine the cause of the error (e.g., operator error, mislabeling, or incorrect price sign).

7.4.2. Alternative Procedure - Consumer Complaints. Complaints can be investigated by using any of the test procedures described above or by verifying only the price of the item or items subject to the complaint. If the complaint is valid, you can limit your inspection to the items described in the complaint or you may conduct a complete inspection.

7.4.3. Evaluation of Results. The errors for items verified using these procedures should be evaluated according to Sections 9. Evaluation of Inspection Results and 10. Accuracy Requirements.

Document Findings

Section 8. Documentation of Findings

Several examples of Model Price Verification Reports are contained in pages 214 to 219. These forms were developed so that you only have to record the items found with price errors.

(a) Record errors and provide information on the cause, if determined.

(b) Notices of violations or other significant comments (e.g., warnings or violations ordered corrected) should always be included on the test form.

(c) Cash register receipts on verified items should be retained and attached to the inspection report as evidence.

(d) Printed advertisements and sales flyers should be retained and attached to the inspection report when errors are found in these categories.
Evaluation of Inspection Results

9.1. Definition of Errors. - An error found to result from any of the following causes should not be considered a violation for enforcement purposes:

(a) An intentional undercharge if documentation or confirmation of the date and time of the price change is provided at the time of the inspection.

(b) An error caused by a mistake made in any kind of advertisement (e.g., newspaper, printed brochure, or radio or television advertisement) if the store has placed a notice adjacent to the item indicating that a mistake occurred in the advertisement.

(c) An error obviously caused by a price label that is missing or that has fallen off the shelf, or the item or the price label or sign has obviously been relocated by an unauthorized person.

(d) A "not-on-file" item is not an error unless you determine that the price "charged" for the item is incorrect (e.g., by conducting a test purchase or by asking the check-out clerk to determine the price of the item using the store's documented or customary procedures. If the price determined is incorrect, it is considered an error.)

9.2. Computing Sample Errors. - The following formulas are used to determine sample error and the overcharge to undercharge ratio:

(a) Adjust the total sample by subtracting any items or errors specified in 9.1. Definition of Errors.

(b) To compute the sample error, divide the number of errors by the total sample size to obtain the error in percent.

For example: a sample of 100 items is verified; 3 overcharges and 1 undercharge are found for a total of 4 errors:

\[ \frac{4}{100} = 4 \% \text{ sample error.} \]

(c) To compute the ratio of overcharges to undercharges (used on large samples and in follow-up activities), total the overcharges/undercharges and compare the numbers:

3 overcharges/1 undercharge = a 3 to 1 ratio.

Accuracy Requirements

10.1. Accuracy Requirements. - Accuracy information, based on a percentage of errors found in a sample and the ratio of overcharges to undercharges, constitutes useful criteria for evaluating the "pricing integrity" of the store. Both overcharges and undercharges should be considered as errors in taking lower level enforcement actions since (1) either type of error misrepresents the price of the item; and (2) the occurrence of any error in a randomized sample may indicate poor pricing practices that would result in errors where additional items were sampled. For higher levels of enforcement only overcharges are considered.

10.2. Accuracy. - The accuracy requirement for a sample must be 98 % or higher to "pass" a single inspection. See Column 4, Accuracy Requirements, in Table 1. Samples, Sample Collection, and Accuracy Requirements.

10.3. Ratio of Overcharges to Undercharges. - With large sample sizes, overcharges should not exceed the undercharges. A high rate of overcharges to undercharges (2 to 1, or 3 to 1) may indicate systemic problems with a store's pricing practices.
Enforcement Procedures

11.1. Enforcement Steps.
(a) Compliance is based on the accuracy found on a sample collected according to this procedure.
(b) Errors should be corrected immediately, or if the correction cannot be made immediately, a stop-sale order shall be issued before you leave the business. If the errors are not corrected in your presence, a follow-up inspection may be made later in the day or the following day to ensure the store has corrected the error. If a store fails to correct the error by that time, higher level enforcement action should be taken.
(c) Enforcement action for large monetary errors on individual items, confirmed overcharges on items verified in response to complaints, or errors found on follow-up inspection of items ordered corrected, should be taken independently from any sample, giving consideration to the magnitude of the violation, corrective action by the establishment, and any other relevant information. Action may be initiated at any time in the inspection process based on the facts of the individual case.

11.2. Model Enforcement Levels.
These recommendations do not modify the enforcement policy of any jurisdiction unless adopted by that jurisdiction.
(a) Ninety-Eight Percent or Higher.
- If price accuracy is 98% or higher on a sample of 50 or more items, and if overcharges do not exceed undercharges on sample sizes of 100 or more items, and the store is on a normal inspection frequency:
  1) a notice of noncompliance is issued on violations, and the store is maintained on a normal inspection frequency; or
  2) if the store is on an increased inspection frequency, it remains on this frequency until inspection results conform to Terms of Increased Inspection Frequency.
(b) Less Than 98 Percent. – If price accuracy is less than 98 % on a sample of 50 or more items and if overcharges do not exceed undercharges on large sample sizes, and the store is on normal inspection frequency:

(1) A notice of noncompliance is issued and the store is placed on an increased inspection frequency.

(2) A second inspection should be conducted within 30 business days. If the price accuracy then is not 98 % or higher, a warning is issued.

(3) A third inspection should be made within 60 business days. If the price accuracy is again less than 98 %, higher level enforcement action should be taken.

If the store is on increased inspection frequency, a warning should be issued and the store re-inspected within 30 business days. If price accuracy is less than 98 %, higher levels of enforcement action should be taken.

Examples for the 100-item sample size:

• If 100 Items are verified and 3 overcharges are found in the sample, the error rate is 3 %. In this example, higher levels of enforcement action should be taken.

• If 100 Items are verified and 3 overcharges and 2 undercharges are found, the error rate on the sample is 5 %, but overcharges are 3 %. In this example, higher levels of enforcement action should be taken.

• If 100 Items are verified and 2 overcharges and 3 undercharges are found, the error rate is still 5 %, but overcharges are only 2 % of the sample. In this example, a lower level enforcement action would be taken.

(c) Terms of Increased Inspection Frequency. – When a store is on an increased inspection frequency, it shall remain at that frequency until two consecutive inspections reveal an accuracy of 98 % or higher.

(d) Higher Levels of Enforcement Action. – Overcharges and undercharges are used to determine lower levels of enforcement actions, but higher levels of enforcement action (e.g., fines or penalties) are taken only on overcharges. A store's history of error rates, the time it takes a store to correct the errors, the difference in inaccuracy rates found between "regular" and "sale" priced items, the ratio of overcharges to undercharges, a record of valid consumer complaints, and the magnitude of the error(s) may be used to support enforcement action.
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Post Inspection Tasks
(a) You should meet with the store representative to review your findings. Have the inspection report completed prior to the meeting and be prepared to briefly summarize your findings and recommended actions, and provide a copy of the report to the store representative.
(b) Return borrowed safety, sanitation, and/or test equipment.
(c) If you removed items from display, ensure that the items are returned to their proper location on the store shelves unless the representative requests to have the items returned by a store employee, which is permitted.
(d) Advise the representative of your findings. Explain any violations and errors. Explain any orders issued and be sure the individual acknowledges understanding of what corrective action is expected, if any.
(e) If necessary, describe the implications of the inspection results and advise the store of the action that you intend to take. If an increased inspection frequency is called for due to the accuracy level found during the inspection, advise the firm that re-inspections will be made, but do not indicate when they may occur.

Supervisory Activities
13.1. Baseline Surveys. - Price verification programs require management support so that the program's objectives and desired benefits can be incorporated into the enforcement agency's work plans and budgets. Surveys to measure pre- and post-implementation accuracy should be used to establish a base from which to measure whether a cost/benefit has been obtained.
13.2. Follow-up Inspections. - Inspections that reveal errors exceeding the accuracy requirements recommended above must include follow-up action to ensure that the store fulfills its obligations regarding accurate prices.
13.3. Management Information Systems. - To ensure adequate control and follow-up, a database should be established in each jurisdiction to provide information on every store.

Model Forms For Price Verification Inspections
(a) Sample Tally Sheets: These forms can help you keep track of the number of items verified. They provide spaces to record the item's display location (e.g., aisle or department), a description of the item, and the shelf or advertised price. The worksheets are set up for the stratified sample collection described above to help identify the types of products to select.
(1) Price Verification Tally Sheet - Food Stores. (See page 215.)
(2) Price Verification Tally Sheet - Department Stores. (See page 216.)
(b) Model Inspection Form I: This can be used to document violations and record findings. A completed sample is provided.
(1) Price Verification Report I - sample blank form. (See page 217.)
(2) Price Verification Report I - completed sample form. (See page 218.)
Model Forms For Price Verification Inspections

(c) Model Inspection Form II: This can be used in stores where a hand-held scanning device is not available, or when it is inconvenient to take items (e.g., a large ladder in a hardware store) to a check-out register to verify the price. You can record an identity, the UPC or PLU code, and advertised price so that you can manually enter the codes to verify the price. The form can also be used to record findings. A completed sample is provided.

(1) Price Verification Report II - sample blank form. (See page 219.)
(2) Price Verification Report II - completed sample form. (See page 220.)

Examination Procedures for Price Verification

This Ends
the slides detailing Section 1 through Section 14 of NIST Handbook 130 2012 edition, Chapter V pages 189 - 220
(Included as a part of the course material)

UPC SCANNING SYSTEMS AND PLU DEVICES

This Begins
the slides detailing Pennsylvania's Title 70 Chapter 5, Section 1 through 23
(Included as a part of the course material)
§ 5.1. Purpose

Section 4112(c) of the act (relating to general testing and inspections) requires the inspection of all commercially used UPC scanning systems and PLU devices within this Commonwealth by June 30, 1999, and thereafter at intervals of no greater than 12 months. It is the purpose of this chapter to accomplish the following:

1. Establish the Department's specifications, tolerances and procedures with respect to the inspection of UPC scanning systems and PLU devices, and supplant Chapter 39 (Reserved) as authorized in section 4112(d) of the act.

2. Identify the minimum level of training necessary for a person to be qualified to inspect UPC scanning systems and PLU devices.

3. Establish a procedure by which a person may apply to the Department to become a certified UPC/PLU inspector.

4. Prescribe a procedure under which the Department can review inspections performed by certain certified UPC/PLU inspectors and revoke or suspend certification.

5. Establish minimum requirements for the "private certification programs" referenced in section 4112(c) of the act.

6. Otherwise comply with section 4112(d) of the act.

§ 5.2. Requirement of annual testing and inspection

(a) General requirement. The Department will, by June 30, 1999, and within every 12-month period thereafter, inspect and test each commercially used UPC scanning system and PLU device in this Commonwealth to ascertain if it is correct, unless the system or device is inspected by a city or county sealer, as described in subsection (b), or the system or device is exempt from inspection, as described in subsection (c).

(b) Delegation of inspection responsibilities. The Department may assign responsibility for conducting the testing and inspections described in subsection (a) to a city or county by a memorandum of understanding between the Department and the city or county entered into in accordance with section 4125 of the act (relating to division of responsibilities).
§ 5.2. Requirement of annual testing and inspection (cont.)

(c) Exemption for UPC scanning systems and PLU devices inspected by a private certification program. A commercially used UPC scanning system or PLU device shall be exempt from the annual testing and inspection described in subsection (a) if all of the following occur:

1. The system or device is inspected at intervals of no greater than 1 year.
2. The inspection is unannounced.
3. The inspection is conducted as part of a private certification program.
4. The private certification program has registered with the Department in accordance with § 5.21 (relating to registration).
5. The certified UPC/PLU inspector conducting the inspection on behalf of the private certification program files a price verification inspection report with the Department in accordance with the procedure described at § 5.12 (relating to inspections: reporting procedures).
6. The private certification program meets the requirements of this chapter.

§ 5.3. Testing and inspection standards

(a) Standards. The "Examination Procedures for Price Verification" adopted by NCWM in Publication No. 19 (August 1995), or any subsequent amendment thereof, are hereby adopted as the specifications and tolerances of the Department with respect to commercially used UPC scanning systems and PLU devices.

Example: A certified UPC/PLU inspector shall evaluate "errors" and the "accuracy" of UPC scanning systems and PLU devices in accordance with the "Examination Procedure for Price Verification" in NCWM Publication No. 19 (August 1995), which requires that a UPC scanning system or PLU device have an accuracy rate of 99% or higher to "pass" an inspection.

Example: A certified UPC/PLU inspector shall verify the price of sale items by allowing the sales clerk to determine the price of the item using the store’s customary procedures, including manually entering discounts, in accordance with Paragraph 7.3, Note 3, of the "Examination Procedure for Price Verification" in NCWM Publication No. 19 (August 1995).

(b) Applicability. The standards described in subsection (a) will be used by any person conducting testing and inspection of a commercially used UPC scanning system or PLU device in the capacity of a certified UPC/PLU inspector.

(c) Obtaining Publication No. 19. The Department will provide a copy of NCWM Publication No. 19 (August 1995), or any subsequent amendment thereof, at cost to any person requesting a copy.
§ 5.4. Certified UPC/PLU inspector

A person shall be a certified PLU/UPC inspector to conduct an inspection of a commercially used UPC scanning system or PLU device described in section 4112(c) of the act (relating to general testing and inspections), regardless of whether the inspection is performed by a State inspector of weights and measures, an employee of a city or county acting in accordance with a memorandum of understanding entered into with the Department, or a person acting as part of a private certification program. A person may apply to the Department to become a certified UPC/PLU inspector.

§ 5.5. Authority of a certified UPC/PLU inspector

(a) General. A certified UPC/PLU inspector is qualified to perform the annual testing and inspection of a commercially used UPC scanning system or PLU device which is required under section 4112(c) of the act (relating to general testing and inspections). A certified UPC/PLU inspector—including a certified UPC/PLU inspector acting as part of a private certification program—may inspect UPC scanning systems or PLU devices owned, used or leased by a person with respect to which the certified UPC/PLU inspector is an employee or agent if the inspection is conducted on an unannounced basis under section 4112(c) of the act.

(b) Limitation on authority. A certified UPC/PLU inspector may exercise authority only in one of the following contexts:

(1) The certified UPC/PLU inspector is an employee of a city or county acting in accordance with a memorandum of understanding entered into with the Department, or a person acting as part of a private certification program.

(2) The certified UPC/PLU inspector is acting as part of a private certification program.

(3) The certified UPC/PLU inspector is an employee of a city or county, and is acting in accordance with a memorandum of understanding entered into with the Department.

(c) Fees. A certified UPC/PLU inspector may not charge a fee for inspection and testing services, unless that person is acting as part of a private certification program, or that person is an employee of a city or county and is acting in accordance with a memorandum of understanding entered into with the Department.
§ 5.6. Certification requirements

(a) General. A person seeking to become a certified UPC/PLU inspector shall do the following:
1. Successfully complete a training course in examination procedures for price verification as adopted by NIST/NCWM, and as described in § 5.7 (relating to training courses).
2. Comply with the application requirements and other requirements of this chapter.

(b) Persons certified under interim guide/interim. A UPC/PLU Inspector’s certificate issued in accordance with Chapter 39 (relating to Reserved) authorized by section 4112(d) of the act (relating to general testing and inspections) shall be considered a UPC/PLU Inspector’s certificate issued under this chapter.

§ 5.7. Training courses

(a) General approval of NIST/NCWM training courses. The Department has approved any NIST/NCWM price verification training course utilizing the “Examination Procedure for Price Verification” set forth in NCWM Publication No. 19 (August, 1995), or a subsequent successor publication thereof, as an approved training course for certified UPC/PLU inspector candidates.

(b) Current approved NIST/NCWM training courses. The current approved NIST/NCWM training courses are the “NIST/NCWM Price Verification Training” course and the “NIST/NCWM Price Verification Instructor’s Training” course. An approved training course may be conducted by a person who has successfully completed the NIST/NCWM price verification instructor’s training course.

(c) New or additional training courses. The Department will update or revise the list of approved NIST/NCWM training courses in subsection (b) by publishing notice describing this update or revision in the Pennsylvania Bulletin.

(d) Effect of addition of a course to list of approved courses. If the Department approves a new or additional training course for certified UPC/PLU inspector candidates, a person who has successfully completed that course within 2 years prior to its approval will be deemed to have completed an approved course.

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§ 5.8. Applying for certification

(a) Application required. A person who is at least 18 years of age and has successfully completed an approved training course (as described in § 5.7 (relating to training courses)) within 2 years of the date of application may apply to be certified as a UPC/PLU Inspector. Certification is granted through issuance of the certificate described in § 5.9 (relating to UPC/PLU Inspector's certificate).

(b) Form of application. A person seeking to become a certified UPC/PLU Inspector may obtain an application form from the Department at the address in § 2.2 (relating to contacting the Department). The applicant shall complete the form and return it to that same address. The application form shall require the following information:

1. The name, mailing address and birth date of the person seeking a UPC/PLU Inspector's certificate.
2. Whether the applicant seeks to conduct UPC/PLU inspections as a State Inspector of weights and measures, an employee of a city or county acting in accordance with a memorandum of understanding with the Department or as part of a private certification program.
3. The name, location and date of completion of any approved training course completed by the person seeking a UPC/PLU Inspector's certificate.
4. A copy of any certificate of completion with respect to the approved training course.
5. Two identical 1-inch square color photographs (front facial view) of the person seeking a certificate.
6. The date of the application.
7. Other information the Department might reasonably require to determine eligibility for certification.

(c) Departmental action on application. The Department will, within 30 days of receiving an application, mail the applicant a UPC/PLU Inspector's certificate, a disapproval notice or a request for additional clarification or documentation. If the Department requests additional clarification or documentation, its review and consideration of the application will cease until the requested material is received, at which time the 30-day review period will begin again.
§ 5.9. UPC/PLU inspector’s certificate

(a) Form of certificate. The Department will format the UPC/PLU Inspector’s certificate into an identification card sized document, so it may be carried conveniently on a certified UPC/PLU Inspector’s person while performing inspections or tests under authority of that certificate.

(b) Contents of UPC/PLU inspector’s certificate. A UPC/PLU Inspector’s certificate will bear the following information:

(1) The name of the person to whom it is issued.
(2) The expiration date of the certificate, which, in accordance with § 5.10 (relating to expiration of UPC/PLU inspector’s certificate), shall be 3 years from the date of issuance.
(3) A unique identification number.
(4) A photograph of the person to whom it is issued.
(5) A statement that the Department has determined the person identified on the certificate to be a “certified UPC/PLU Inspector” in accordance with section 4112 of the act (relating to general testing and inspections).

(c) Ownership of UPC/PLU inspectors certificate. A certificate issued by the Department will remain the property of the Department. A certified UPC/PLU Inspector or other person having physical possession of a certificate shall, upon written notice from the Department, surrender and return the certificate to the Department.

(d) Obligation to produce certificate for inspection. A certified UPC/PLU inspector shall have his UPC/PLU Inspector’s certificate with him whenever performing inspections or tests under authority of that certificate, and shall produce the certificate for inspection upon demand by the Department or a person on whose behalf the certified UPC/PLU inspector is performing the inspection or test.

§ 5.10. Expiration of UPC/PLU inspector’s certificate

A UPC/PLU Inspector’s certificate is valid for 3 years from the date it is issued, unless it is suspended or revoked earlier in accordance with the procedures in § 5.15 (relating to suspension or revocation of certificates).
§ 5.11. Obtaining a new UPC/PLU inspector's certificate

(a) No renewals: new certificate required. The Department will not renew a UPC/PLU inspector's certificate or extend the expiration date of a certificate. A person shall, instead, apply for and obtain a new certificate in accordance with § 5.8 (relating to applying for certification) in order to remain a certified UPC/PLU inspector.

(b) Training course. A person who is applying for certification shall have successfully completed an approved training course as described in § 5.7 (relating to training courses) within 2 years of the date of the application form.

(c) Timing of application. A person may apply for certification at any time. A current certified UPC/PLU Inspector who seeks to avoid a lapse in certification is encouraged to apply for a new UPC/PLU inspector's certificate at least 60 days in advance of the expiration date of the current certificate.

§ 5.12. Inspections: reporting procedures

(a) Inspection report form required. A certified UPC/PLU Inspector shall prepare and submit to the Bureau a price verification inspection report form with respect to any inspection the certified UPC/PLU Inspector conducts. A copy of this price verification inspection form is set forth in Appendix A. The form is substantively identical to the "Appendix A Model Form—Price Verification Report" form in NCWM's Examination Procedure for Price Verification.

(b) Acquiring forms. The Department will provide a sample price verification inspection report form upon the request of a certified UPC/PLU inspector. This sample form may be copied at the certified UPC/PLU inspector's expense.

(c) Distribution of forms. A completed price verification inspection report form shall be distributed as follows:

1. The certified UPC/PLU inspector shall distribute the original of this form to the owner of the systems and devices inspected, or to a responsible person at the site where the inspection occurred.

2. The certified UPC/PLU inspector shall forward a copy of this form to the Department by mailing or delivering it to the Department by the 10th day of the month immediately following the month the inspection was conducted. Delivery may be accomplished by electronic means such as modem transmission/ e-mail or fax machine. If delivery is accomplished by fax machine, the certified UPC/PLU inspector shall retain the transmittal receipt as proof of compliance with this requirement.

3. The certified UPC/PLU inspector shall retain a copy of this form and any transmittal receipt evidencing delivery of the form to the Department for at least 3 years from the date the testing and inspection services are performed.
§ 5.13. Inspections: enforcement levels

The "Model Enforcement Levels" in Section 11, Paragraph 11.2 of NCWM's Examination Procedure for Price Verification, or any subsequent revision thereto, are adopted as the enforcement levels to be applied by the Department and certified UPC/PLU inspectors.

§ 5.14. Inspection and testing by the Department

(a) Inspections generally. The Department may evaluate the performance of a certified UPC/PLU inspector who conducts inspections for a private certification program by conducting a follow-up inspection of any UPC scanning system or PLU device that has been inspected and tested by the certified UPC/PLU inspector.

(b) Time lapse and other factors affecting results. In evaluating the inspection and testing performed by a certified UPC/PLU inspector as described in subsection (a), the Department will consider any factor that might reasonably account for a variance between the Department's inspection results and those of the certified UPC/PLU inspector, including a lapse of time between an inspection performed by the Department and the inspection performed by the certified UPC/PLU inspector.

(c) Reporting of results. Within 30 days following a follow-up inspection, the Department will mail the certified UPC/PLU Inspector written notice of the Department's inspection and the results of that inspection.

(d) Use of results. The Department may use the results of its follow-up inspection to suspend or revoke a UPC/PLU Inspector's certificate, as described in subsection (a), in accordance with § 5.15 (relating to suspension or revocation of certification), or as the basis for a warning or instruction directed to the certified UPC/PLU inspector.
§ 5.15. Suspension or revocation of certification

(a) Basis for action. The Department may suspend or revoke a UPC/PLU Inspector's certificate if the certificate holder conducts inspections for a private certification program and does one or more of the following:

(1) Violates a provision of this chapter.
(2) Violates a provision of the act.
(3) Violates an applicable standard prescribed by NCWM's Examination Procedure for Price Verification, unless that standard is inconsistent with the act or this chapter.
(4) Intentionally or fraudulently reports inaccurate information on a price verification inspection report form.
(5) Is found, following inspection and testing by the Department in accordance with § 5.14 (relating to inspection and testing by the Department), to have inaccurately, improperly or incompetently performed an inspection of a UPC scanning system or PLU device.

(b) Notice. The Department will provide a certified UPC/PLU inspector with written notice of its intention to suspend or revoke certification, which will afford that person notice and opportunity for an administrative hearing before the Department prior to the effective date of the suspension or revocation.

(c) Delivery of notice. The Department will deliver the notice described in subsection (b) to the affected certified UPC/PLU Inspector by personal service or by regular mail to the address provided by the certified UPC/PLU Inspector on the most recent application for a certificate, or to the address most recently provided to the Department in writing by the certified UPC/PLU Inspector as the address to which notices should be sent.

§ 5.16. Certified UPC/PLU inspector list

(a) List to be maintained. The Department will maintain a current list containing the following information with respect to each certified UPC/PLU inspector:

(1) The name and address.
(2) The telephone number.
(3) The fax number, if available.
(4) The expiration date of certification.
(5) The unique identification number of the UPC/PLU inspector's certificate.

(b) Distribution of copies. The Department will provide a copy of the current certified UPC/PLU inspector list upon request.
Private Certification Program
§ 5.21. Registration

(a) General requirement. A person who owns or operates a commercially used UPC scanning system or PLU device may avoid the requirement of annual State or local inspection described in section 4112(c) of the act relating to general testing and inspection by having the inspection performed by a private certification program. A private certification program shall meet the requirements of this chapter and shall, prior to commencing testing and inspection of commercially used UPC scanning systems or PLU devices, file a written statement with the Department at the address in § 2.2 relating to contacting the Department.

(b) Contents of written statement. The written statement referenced in subsection (a) shall contain the following:

1. The name, business address and telephone number of the private certification program.
2. The name of the certified UPC/PLU Inspector who will be conducting UPC scanning system or PLU device inspections on behalf of the private certification program, together with the unique identification number appearing on that person’s UPC/PLU Inspector’s certificate.
3. The signature, printed name and title of the person making the statement.

(c) Action by Department. Within 30 days of receiving a written statement as described in subsection (b), the Department will mail the applicant a copy of the written statement bearing a legible stamp or seal indicating that the original document has been filed with the Department.

(d) Updating the written statement. A private certification program shall, within 30 days of a change affecting the accuracy of a written statement it has filed with the Department, provide the Department an update of its written statement.

Private Certification Program
§ 5.22. Requirements and fees

(a) Unannounced inspections required. A certified UPC/PLU Inspector conducting an inspection on behalf of a private certification program shall conduct that inspection as an unannounced test.

(b) Fees permitted. A private certification program may charge a fee for its services—whether a per-inspection fee, a flat annual fee, a membership fee in an organization that conducts a private certification program for its members, or some other fee arrangement.
Private Certification Program
§ 5.23. Program list

(a) List to be maintained. The Department will maintain a current list of private certification programs. The list will contain the name, business address, telephone number and fax number (if available) of each private certification program.

(b) Distribution of copies. The Department will provide a copy of the current private certification program list upon request.

Reporting Requirements

Certified inspectors are required to:

(1) Distribute the original copy of the completed inspection report (signed by both the inspector and the representative) to the store representative.

(2) Send a copy of the completed (signed) inspection to the Department by the 10th day of the following month (e-mail or fax is preferred, see contact info on last slide)

(3) Retain a copy of the inspection form and delivery receipt for a minimum of 3 years from the date of inspection

*Please review section 5.12 of Title 70 for the specific language regarding reporting requirements.
Bureau of Ride & Measurement Standards

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