

August 2005

Vehicle Scales and Remote Displays

By Steven Cook

WMD occasionally receives questions asking whether or not truck drivers at vehicle scale installations are required to have access to weight indications, and if so, are remote or "scoreboard" displays required. This article discusses how NIST Handbook 44 General Code paragraph G-UR.3.3. Position of Equipment applies to some typical vehicle scale applications and offers guidance to help weights and measures officials and vehicle scale owners/users determine if an installation is required to have weight displays visible to customers and when remote or "scoreboard" displays are required. (Note that some jurisdictions may have enacted laws, regulations, or policies different than what is specified in Handbook 44 or covered in this article.)

Handbook 44 applies to weighing and measuring devices used in commercial transactions to determine the payment of a commodity or service based on weight. Examples include the buying and selling of agricultural products, raw materials, refuse at landfills, etc., and the determination of service charges for moving, storage, and shipping. Handbook 44 General Code paragraph G-UR.3.3. Position of Equipment requires that commercial devices be positioned in such a way as to facilitate to the greatest practicable extent customer verification of the weight determination.

In 1996 the 81st National Conference on Weights and Measures (NCWM) Final Report of the Specifications and Tolerances (S&T) Committee Item 320-5 considered a proposed Scales Code User Requirement that would require the weight indication be visible from the driver's position. The Committee withdrew the proposal and stated that while they supported the intent of the proposal, they did not think it was necessary to create a new requirement to address the issue. The Committee further stated:

". . .General Code (user) requirement G-UR.3.3. Position of Equipment is applicable to vehicle scales and may be used to require the indicating element of a vehicle scale to be visible from a "reasonable" customer position. The customer position in most cases will be the driver's seat. Consequently, firms requiring the truck driver to remain in the truck during the weighing process and whose indicating element is not visible from the truck may be required to use a remote indicating element (e.g., a scoreboard display)."

The Committee was also asked "whether or not a truck stop scale used to determine axle-weights is a direct sale application and is required to have the indicating element visible to the driver during the weighing process." The Committee stated that they did not believe "this type of weighing operation is a **direct sale** because the weight of the truck is what is essentially being sold to the truck driver, and it is not feasible to require that the indicating element be visible (from the driver's position) during the weighing operation."

There are two parts to this interpretation: (1) The determination of whether or not such transactions are *direct sales*; and (2) the determination of whether or not it was possible or reasonable that weight indications must be visible from the driver's seat during the weighing operation. With regard to the question of whether or not these transactions are *direct or indirect sales*, please recall that Handbook 44 defines a direct sale as one in which both parties to the transaction are present. In reviewing the Committee's interpretation, WMD acknowledges that a number of weighing operations (e.g., those in which the driver represents a third party) are not direct sales. However, there are instances in these applications in which the driver is the customer and is paying for the determination of weight. (See the discussion below for examples of how the driver may be using the weight information.) Because the operator in these scenarios is selling the axle and/or vehicle weight to the driver (the customer), both parties are present and those scenarios constitute a *direct sale*.

For an *indirect sale*, only the scale owner/operator needs to view the weight indications and the customer receives a record of the weight(s) when they are billed, invoiced, or paid according to an agreement they should have with the owner/operator of the scale. Note that customers for *indirect sale transactions* must rely on the assumption that the scale has been tested for accuracy and is correctly maintained, and that the operator is properly using the scale and is correctly recording/representing an accurate weight. Many states have adopted weighmaster laws and regulations that require the operator to certify, under penalty of law, that they are correctly using a tested and sealed scale.

WMD agrees with the Committee that requiring the operator to provide a remote indicating element that is visible from the driver's position during the weighing operation is not feasible in these weight-for-service-fee applications because the driver may simply drive off without paying for the service of weighing the vehicle if a remotdisplay/scoreboard is provided. WMD wants to be sure that this is not misconstrued as implying the compliance with G-UR.3.3 is not required in these applications. The scale owner can always consider other procedural or physical solutions to prevent the driver from driving off without paying, such as requiring a driver to pay for the service before the vehicle is allowed onto the scale, or installing gates or barriers if weight indications were visible from the driver's position.

WMD also receives questions about the need for remote or "scoreboard" displays at vehicle scale locations that are open to the public where vehicle and/or axle-load weights are determined for a fee (e.g., truck stops). These applications typically charge a single fee to perform a weight determination, regardless of the weight of the vehicle or axles. Many jurisdictions, as well as WMD, consider these operations to be commercial *direct sale* transactions for the following reasons:

- The weight values may be used to verify highway vehicles comply with federally mandated gross and axle-load weight limits. However, if the vehicle is too heavy or light, there may be additional charges for reweighing the vehicle as drivers attempt to adjust their cargo weights or axle spacing to comply with gross or axle-load weight limits.
- The weight values may be used for vehicle registration purposes or "overweight" permits, where fees are frequently based on ranges of gross vehicle weights (GVW) and the driver may be responsible for paying the registration or the "overweight" permits.

- The weight values may be used by moving and shipping companies to invoice their customers for freight charges, based on weight of large objects or household articles. The customers of the moving or shipping company have the right to witness the weight determinations.
- The driver has a reasonable expectation that the weight for which the driver is paying is an accurate weight. Refuse collection sites and transfer stations are other types of vehicle scale applications that are open to the public where the customer's charges are based on the weight of the net load. These types of applications are also considered commercial *direct sale* applications where "reasonable" access must be provided to view the scale indications.

Alternatively, there are vehicle scale applications that are not open to the public. The weights from these scales may be used for both commercial transactions such as the buying and/or selling raw materials, agricultural product, etc., and for non-commercial applications such as inventory control or checking the scale owner's fleet of vehicles for compliance highway load limits. Most of the commercial transactions conducted over these scales are *indirect sales* since the customer is not present during the weight determination. *Direct sales* would only occur if the customer is present, such as occurrences in which the driver of the vehicle is the customer making a purchase over the scale.

In the above examples of typical applications, *remote displays would not be required* if the customer has "reasonable" access to view the scale indications, for example, if the primary indicating device is located in the same location as the place for payment or where the ticket is printed. The customer is given ample opportunity to observe the weight indication and the weighing transaction as required by GUR. 3.3.

However, a *remote display would be required* if a customer is not permitted to view the primary indicating element due to concerns such as liability, security, hazardous locations, or if the customer is required to remain in the vehicle during the weighing transaction. The determination of whether or not the customer is provided "reasonable" access to the scale indication must be assessed on a case-by-case basis. At a busy grain elevator, for example, the customer cannot "reasonably" be expected to leave the vehicle or walk to the location of the primary indicator if the vehicle or equipment traffic puts the customer in an unsafe situation, or if the customer is pressured to remain in the vehicle to avoid delaying or disrupting the weighing process for other customers and transactions.

If you have any questions about applications or examples not covered in this article, contact Steven Cook at 301-975-4003 or the WMD Legal Metrology Devices Group (LMDG) at 301-975-4004 or at owm@nist.gov.