ALABAMA DEPARTMENT OF TRANSPORTATION

1409 Coliseum Boulevard, Montgomery, Alabama 36130-3050

Bob Riley
Governor

Joe McInnes
Transportation Director

May 7, 2003

TECHNICAL ADVISORY 2-03

TO: All Division Engineers

FROM: Larry Lockett
Materials and Tests Engineer

RE: Approved Water Meters and Calibrated Five Gallon Buckets

The attached list of Department approved in-line water meters are those meters for use in concrete transit mixers to measure the amount of water discharged into the concrete load. These meters meet the requirements of ALDOT Standard Specifications for Highway Construction, Item 501.03(b)2. The attached guidelines for calibrated five gallon buckets shall be followed in determining a suitable bucket for measuring the amount of water dischaged into the concrete load. This is in lieu of the required in-line water meter. These guidelines also cover the submittal, approval, and field use of calibrated five gallon buckets.

The requirements for approved meters and calibrated water buckets were first introduced in special provision 01-0702. This special Provision has been replaced by the 2002 Standard Specifications for Highway Construction. These requirements are effective for all projects let after January 1, 2002.

If further information is needed, please contact Mr. Sergio Rodriguez at (334) 206-2410.

LL/sr
Attachments
cc: Mr. Terry McDuffie
Mr. Pete Anderson
Mr. Lynn Wolfe
Mr. Sergio Rodriguez
All Division Materials Engineers
All Division Construction Engineers
FHWA (Attn. Mr. Joe Wilkerson)
ACIA (Attn. Mr. Otis Russell)
File

May 7, 2003

APPROVED IN-LINE TRUCK MOUNTED WATER METERS

The following is a list of truck mounted water meters that can be used on ready mix trucks delivering concrete to State projects.

MANUFACTURER	MODEL NUMBER	CONTACT No.	REMARKS
Hoffer Flow Controls	H01X1-3-30	1-800-628-4584	NONE
Hoffer Flow Controls	CB-1MX-NPT	1-800-628-4584	Requires an additional display unit
Blend-Rite Industries	BM-25	(973)763-0949	NONE
Blend-Rite Industries	600	(973)763-0949	Front-End Discharger
Alliant	NGN10FRG2N	1-800-845-2102	NONE
Schlumberger MD	600	1-800-833-3357	NONE
Fill-Rite	800C	(260)747-7524	Requires Niquel Plated. Primarily use is to measure fuels. Maximum range 20 GPM
Fill-Rite	901	(260)747-7524	Requires Niquel Plated. Primarily use is to measure fuels. Maximum range 20 GPM
GPI	03 Series Nylon 1" Model	1-800-835-0113	Field Calibration required prior to use. Range 3 to 50 GPM. Meter must be mounted in a fix position.

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CALIBRATED FIVE GALLON BUCKETS

The following are the guidelines for submittal, approval, and field use of calibrated five gallon buckets used to measure the amount of water discharged into the concrete. A calibrated five gallon bucket is an alternative method to the in-line water metering device required for concrete transit mixers.

BUCKET DESCRIPTION:

1. Clear or semi opaque plastic (water level shall be visible from the outside)
2. Graduations marks shall encircle bucket or be positioned at opposite sides of the bucket on four places to maintain water level.
3. Graduation marks shall be etched in the plastic or raised (marks from waterproof pens are not acceptable).

SUBMITTAL FOR APPROVAL:

1. The concrete supplier shall submit in writing a request for approval of a calibrated five gallon bucket to the Materials and Tests Engineer, attention Concrete Section.
2. The concrete supplier shall prove that the bucket is within the required calibration.

APPROVAL:

1. The Concrete Engineer will attach a traceable metal seal to the bucket for easy identification in the field.
2. The concrete supplier will be given a letter of approval.

FIELD USE:

1. Buckets without a seal shall not be used.
2. Water shall be measured with the bucket in the ground so inspector can verify the quantity and level.
3. A concrete supplier employee shall introduce the water into the concrete.
4. Department personnel shall not climb to the top of the truck to verify or deliver the amount of water introduced into the concrete. This is a safety requirement that if not followed may create a liability for the Department.
5. Calibration verification will be randomly performed by Division personnel following the same procedure described in ALDOT-407.