Concrete Masonry Unit Samples 31 & 32

Please Note:

- The CMU specimens are contained in a total of four boxes.
  - Two boxes for Sample 31 and two boxes for Sample 32.
  - DO NOT mix samples. Each unit is labeled, and the units for Sample 32 have a paint strip on one end.

- Please allow until July 22th for receipt of samples.

- Compressive strength specimens should be tested on August 24, 2011.

- Closing date for test results is September 2, 2010

How to Submit Test Results:

- On the CCRL home page, enter your lab number and PIN and click on 'login'.
- Click on 'CMU Comp. Units' or 'CMU Abs. Units'.
- Make sure the information at the top of the screen is accurate.
- Carefully enter your data. Round data properly. Data that is not rounded correctly cannot be submitted until correction is made.
- DO NOT enter 'N/A' or zeros for data that you are not reporting, leave this data area blank. Zeros will be interpreted as data.
- Once all data has been entered click on the 'Submit' button.
- You should see a confirmation screen and receive a confirmation email. Print the confirmation screen for your records.
- If you have trouble entering or do not receive confirmation visit 'Data Entry Trouble Shooting' or contact CCRL.
- **Sign out of the website and login again to check that your data was submitted properly.** Your may add data or make corrections up to the closing date.
- The closing date for test results is September 2, 2011.

CCRL
Cement and Concrete Reference Laboratory

www.ccrl.us

July 6, 2010

TO: Participants in the CCRL Concrete Masonry Units Proficiency Sample Program

SUBJECT: Concrete Masonry Units Samples No. 31 and No. 32

The current pair of Concrete Masonry Units Proficiency Samples were sent by way of Federal Express Ground on June 30, 2011. Please allow until July 22, 2011 for receipt of these samples. If these samples have not been received on this date or if the samples you receive are damages, notify us by calling 301-975-6704. There are six units for each sample. Each sample is packaged in two separate boxes each containing three units. These boxes are labeled on the outside as to which sample they contain. Sample No. 32 specimens have a paint strip on one end to aid in specimen identification. **An effort is made to label each specimen during packaging. However, laboratory personnel must make sure specimens are identified before removal from its box.** The two samples were produced using different concrete proportions and must not be mixed.

Tests are to be conducted separately on each sample. Read the enclosed instructions before proceeding with any testing. It is mandatory that these instructions and ASTM standard C140-09a be followed. These tests should be conducted as soon as possible after the samples are received, and the test results should be promptly reported to CCRL upon completion of testing. Test results should be entered at our website: http://www.ccrl.us/. **Note: Compressive strength specimens should be tested on or about August 24, 2011.** The closing date for submitting test results is September 2, 2011.

Additional samples of this sample pair and past CCRL samples are available for sale. These samples can be used for research, technician training, and test equipment verification. Contact us for availability and pricing.

Sincerely,

Robin K. Haupt

Robin K. Haupt
Supervisor CCRL Proficiency Sample Program
Cement and Concrete Reference Laboratory

CEMENT AND CONCRETE REFERENCE LABORATORY
CONCRETE MASONRY UNITS PROFICIENCY SAMPLE PROGRAM
Samples No. 31 and No. 32

Instructions

INSTRUCTIONS FOR TESTING

1 CCRL Concrete Masonry Units Proficiency Samples Number 29 and Number 30 were distributed June 30, 2011. You should receive four boxes, with each box containing three 4x8x8" concrete masonry units. These specimens were manufactured to comply with ASTM C90 Loadbearing Concrete Masonry Units. **If you have not received four boxes by July 22, 2011**, please notify CCRL Proficiency Sample Program, phone 301-975-6704.

2 Each box should be labeled as Sample No. 31 or Sample No. 32. When packaged each specimen was also identified with small labels. In addition to the sample number these labels also contain additional information used during packaging and have no other significance. **Each specimen should be checked for proper labeling with its identity before removal from its box.** In addition, specimens for Sample No. 32 have a paint strip on one end to aid in specimen identification. The two samples are produced using different concrete proportions and **must not be mixed**.

3 Verify that you have received a total of 12 units, six units of Sample No. 31 and six of Sample No. 32, and that they are in good condition. Notify CCRL of any damaged or missing samples.

4 Immediately after receiving and unpacking the units, determine and record the received weight (W_r) for each unit.

5 For each sample divide the six units into two groups of three units so that the average received weight (W_r) of each group of three is approximately equal. The first group of three units (units #1, #2, #3), referred to as "Compression Units" on the reporting form, will be used for compressive strength testing. The second group (units #4, #5, #6), referred to as "Absorption Units" on the reporting forms, will be used for dimensional evaluation , and absorption testing by water immersion.

6 Perform all testing in accordance with ASTM Standard C 140-09a. A copy of this edition of the standard, may be obtained directly from ASTM, phone: 610-832-9585.

6.1 Testing Compression Specimens: Test specimens on or about August 24. Note date tested on reporting form.

6.2 Orientation of Specimens for Testing: Compressive strength specimens are to be tested with their cores in a vertical direction.

6.3 Calculation of Area and Strength: Area of “Compression Units” shall be calculated as **net area**. Compressive strength shall be calculated using net area and reported as net area compressive strength.

INSTRUCTIONS FOR REPORTING

1 Report test results on the reporting forms provided, being sure to complete all three pages.

2 Test results must be reported in the units and to the nearest significant number indicated for each test on the reporting forms.

3 The closing date for test results is September 2, 2011.

CCRL PROFICIENCY SAMPLE PROGRAM
CONCRETE MASONRY UNITS - SAMPLES NO. 31 & NO. 32

RETURN TO: R. K. Haupt, Supervisor, PSP
Cement and Concrete Reference Laboratory
National Institute of Standards and Technology
100 Bureau Drive, Stop 8618
Gaithersburg, Maryland 20899-8618
FAX: 301-975-2243

FROM: _____
_____
_____
_____
e-mail: _____

Test Results
Report Results as Indicated in ( )

Check here if name or Address has changed _____

COMPRESSION UNITS (units #1, #2, and #3)

		Sample 31	Sample 32	Sample No. 31	Sample No. 32	
RECEIVED WEIGHT (W_r)	Unit 1					
lb (*nearest 0.1 lb*)	Unit 2					
	Unit 3					
Average Received Weight (W_r), lb (*nearest 0.1 lb*)						[500]
		Sample 31	**Sample 32**			
MAXIMUM COMPRESSIVE	Unit 1					
LOAD (P_{max})	Unit 2					
lb (*nearest 10 lb*)	Unit 3					
Average Maximum Compressive Load (P_{max}), lb (*nearest 10 lb*)						[550]
		Sample 31	**Sample 32**			
NET AREA COMPRESSIVE	Unit 1					
STRENGTH	Unit 2					
psi (*nearest 10 psi*)	Unit 3					
Average Net Area Compressive Strength, psi (*nearest 10 psi*)						[560]

See Instructions 6.1. Date compression specimens tested: _____

Tests performed by _____ Date _____
Tests reported by _____ Title _____
Phone _____ FAX _____ CCRL laboratory number

CCRL PROFICIENCY SAMPLE PROGRAM
CONCRETE MASONRY UNITS - SAMPLES NO. 31 & NO. 32

RETURN TO: R. K. Haupt, Supervisor, PSP
Cement and Concrete Reference Laboratory
National Institute of Standards and Technology
100 Bureau Drive, Stop 8618
Gaithersburg, Maryland 20899-8618
FAX: 301-975-2243

FROM: _____
_____
_____
_____
e-mail: _____

Test Results
Report Results as Indicated in ( )

Check here if name or Address has changed _____

ABSORPTION UNITS (units #4, #5, and #6)		**Sample 31**	**Sample 32**	**Sample No. 31**	**Sample No. 32**	
RECEIVED WEIGHT (W_r)	Unit 4					
lb (*nearest 0.1 lb*)	Unit 5					
	Unit 6					
Average Received Weight (W_r), lb (*nearest 0.1 lb*)						[600]
		Sample 31	**Sample 32**			
WIDTH (*W*)	Unit 4					
inch (*nearest 0.1 inch*)	Unit 5					
	Unit 6					
Average Width (*W*), inch (*nearest 0.1 inch*)						[510]
		Sample 31	**Sample 32**			
HEIGHT (*H*)	Unit 4					
inch (*nearest 0.1 inch*)	Unit 5					
	Unit 6					
Average Height (*H*), inch (*nearest 0.1 inch*)						[520]
		Sample 31	**Sample 32**			
LENGTH (*L*)	Unit 4					
inch (*nearest 0.1 inch*)	Unit 5					
	Unit 6					
Average Length (*L*), inch (*nearest 0.1 inch*)						[530]
		Sample 31	**Sample 32**			
MINIMUM FACE SHELL	Unit 4					
THICKNESS (*min. FST*)	Unit 5					
inch (*nearest 0.01 inch*)	Unit 6					
Average Min. Face Shell Thickness (*min. FST*), inch (*nearest 0.01 inch*) . .						[532]
		Sample 31	**Sample 32**			
MINIMUM WEB	Unit 4					
THICKNESS (*min. WT*)	Unit 5					
inch (*nearest 0.1 inch*)	Unit 6					
Average Min. Web Thickness (*min. WT*), inch (*nearest 0.1 inch*)						[533]
		Sample 31	**Sample 32**			
IMMERSED WEIGHT (W_i)	Unit 4					
lb (*nearest 0.1 lb*)	Unit 5					
	Unit 6					
Average Immersed Weight (W_i), lb (*nearest 0.1 lb*)						[610]

Tests performed by _____ Date _____
Tests reported by _____ Title _____
Phone _____ FAX _____ CCRL laboratory number

CCRL PROFICIENCY SAMPLE PROGRAM
CONCRETE MASONRY UNITS - SAMPLES NO. 31 & NO. 32

RETURN TO: R. K. Haupt, Supervisor, PSP
Cement and Concrete Reference Laboratory
National Institute of Standards and Technology
100 Bureau Drive, Stop 8618
Gaithersburg, Maryland 20899-8618
FAX: 301-975-2243

FROM: _____
_____
_____
_____
e-mail: _____

Test Results
Report Results as Indicated in ( )

Check here if name or Address has changed _____

ABSORPTION UNITS (units #4, #5, and #6) - continued

		Sample No. 31	Sample No. 32	
		Sample 31	**Sample 32**	
SATURATED WEIGHT (W_s) lb (*nearest 0.1 lb*)	Unit 4			
	Unit 5			
	Unit 6			
Average Saturated (W_s), lb (*nearest 0.1 lb*)				[620]
		Sample 31	**Sample 32**	
OVEN-DRY WEIGHT (W_d) lb (*nearest 0.1 lb*)	Unit 4			
	Unit 5			
	Unit 6			
Average Oven-Dry Weight (W_d), lb (*nearest 0.1 lb*)				[630]
		Sample 31	**Sample 32**	
NET AREA (A_n) inch^2 (*nearest 0.1 inch^2*)	Unit 4			
	Unit 5			
	Unit 6			
Average Net Area (A_n), inch^2 (*nearest 0.1 inch^2*)				[635]
		Sample 31	**Sample 32**	
ABSORPTION lb/ft^3 (*nearest 0.1 lb/ft^3*)	Unit 4			
	Unit 5			
	Unit 6			
Average Absorption, lb/ft^3 (*nearest 0.1 lb/ft^3*)				[640]
		Sample 31	**Sample 32**	
DENSITY (D) lb/ft^3 (*nearest 0.1 lb/ft^3*)	Unit 4			
	Unit 5			
	Unit 6			
Average Density (D), lb/ft^3 (*nearest 0.1 lb/ft^3*)				[650]
		Sample 31	**Sample 32**	
EQUIVALENT THICKNESS (T_e) inch (*nearest 0.1 inch*)	Unit 4			
	Unit 5			
	Unit 6			
Average Equivalent Thickness (T_e), inch (*nearest 0.1 inch*)				[660]

Tests performed by _____ Date _____
Tests reported by _____ Title _____
Phone _____ FAX _____ CCRL laboratory number