



CCRL
Cement and Concrete
Reference Laboratory

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October 23, 2012

Mr. Reynolds Toney, P.E.
Materials Division Engineer
Oklahoma Department of Transportation
200 Northeast 21st Street
Oklahoma City, Oklahoma 73105

Subject: Inspection of Cement, Pozzolan, and Concrete Testing Laboratories

Dear Mr. Toney:

Enclosed is a confirmatory report on Inspection Number R-766, which was completed in your testing laboratories at Oklahoma City, Oklahoma, on September 6, 2012, by representatives of the Cement and Concrete Reference Laboratory.

This letter, and the accompanying report, provide written evidence that your laboratories have been inspected during the 35th Inspection Tour.

CCRL has recently changed the report format. Attention is invited to the next page titled *Inspection Report Introduction*.

Very truly yours,

Steven E. Lenker, P.E.
Director, Construction Materials Reference Laboratories
Cement and Concrete Reference Laboratory

Enclosure

cc: J. Thomas
Division Administrator, FHWA



Inspection Report Introduction

This report covers the cement, pozzolan, and concrete inspection conducted in the laboratories of Oklahoma Department of Transportation, at Oklahoma City, Oklahoma. This inspection, designated as Inspection Number R-766, was completed in the laboratories on September 6, 2012.

Inspections generally cover three areas: quality systems; testing equipment; and procedures. Under all material types inspected there will be a Summary of Findings and a Footnote Section. The Summary of Findings will denote items examined, which may include: documents, equipment and procedures performed by the laboratory. Entries in the Summary of Finding Section cover availability, physical condition, and/or conformance to specification requirements. These items, when checked, will indicate whether the items conformed to the ASTM standard or will state briefly any deviation from the standard and will be listed in the Footnote Section. The Footnote Section is also used to convey observations, recommendations or explanations of conditions found. When a footnote of this nature appears in a report it is labeled as an "Informational Footnote" in bold font. These informational footnotes do not require deficiency corrections.

Corrections of minor deficiencies are encouraged during the course of each inspection. In the interest of brevity, any adjustments of this nature which may have been made have not been mentioned in the report.

Several pieces of apparatus in the laboratory have been assigned CCRL identification numbers. Some of these numbers are listed in the Summary and Footnote Sections.

For a more in-depth description of the scope of each inspection, please see www.ccrl.us/Lip/lip.htm. The inspection was conducted using the most recent version of the applicable Book of ASTM Standards available at the time of the inspection, unless otherwise indicated in the Footnote Section of this report.

This report confirms the condition of the laboratory on the inspection date noted above. It does not approve, certify or accredit this laboratory; therefore, publicizing the inspection without offering a review of this report is prohibited.

CEMENT SUMMARY OF FINDINGS

Quality System

<u>Inspection Item</u>	<u>Status</u>
<u>Quality System C1222-09</u>	
• Organization	<u>Satisfactory</u>
• Human Resources	
• Director of Testing	<u>Satisfactory</u>
• Training	<u>Satisfactory</u>
• Performance Evaluation	<u>Satisfactory</u>
• Personnel Records	<u>Satisfactory</u>
• Operations	
• Standard Operating Procedures	<u>Satisfactory</u>
• Final Report	<u>See footnote (a)</u>
• Quality	
• Technical Complaints	<u>Satisfactory</u>
• External Technical Services	<u>Satisfactory</u>
• Proficiency Sample Testing	<u>Satisfactory</u>
• Standard Test Methods	<u>Satisfactory</u>
• Internal Quality System Review	<u>Satisfactory</u>
• Equipment	
• Inventory	<u>Satisfactory</u>
• Equipment Calibration	<u>Satisfactory</u>
• Records	<u>Satisfactory</u>
• Calibration Procedures	<u>Satisfactory</u>

Qualification of Chemical Analysis C114-11a

• Frequency	<u>Satisfactory</u>
• Records:	

<u>Analyte</u>	<u>Method</u>	<u>*Qualified</u>
Silicon Dioxide	X-Ray	<u>Yes</u>
Aluminum Oxide	X-Ray	<u>Yes</u>
Ferric Oxide	X-Ray	<u>Yes</u>
Calcium Oxide	X-Ray	<u>See footnote (b)</u>
Magnesium Oxide	X-Ray	<u>Yes</u>
Sulfur Trioxide	Reference	<u>Yes</u>
Loss on Ignition	Reference	<u>Yes</u>
Sodium Oxide	X-Ray	<u>Yes</u>
Potassium Oxide	X-Ray	<u>Yes</u>
Titanium Dioxide	X-Ray	<u>Yes</u>
Phosphorus Pentoxide	X-Ray	<u>Yes</u>
Zinc Oxide	X-Ray	<u>Yes</u>
Manganic Oxide	X-Ray	<u>Yes</u>
Insoluble Residue	Reference	<u>Yes</u>

*Entry covers conformance to permissible variations in data results as listed in Table 1 of C114.

Apparatus

<u>Inspection Item</u>	<u>Status</u>
<u>Storage Facilities for Test Specimens C511-09</u>	
• Moist Air Storage Facilities	<u>Satisfactory</u>
• Water Storage Facilities	<u>Satisfactory</u>
<u>Autoclave Soundness Apparatus C151-09 and C490-10</u>	
• Autoclave(s):	
• Maker: <u>Boekel</u> Serial Number: <u>1011-24</u>	<u>Satisfactory</u>
• Length Comparator(s)	Number Checked: <u>1</u> <u>Satisfactory</u>
• Bar Mold(s)	Number Checked: <u>4</u> <u>Satisfactory</u>
<u>Graduates C1005-10</u>	
• Capacity: <u>500 mL</u> CCRL Number: <u>J-237</u>	<u>Satisfactory</u>
• Capacity: <u>250 mL</u> CCRL Number: <u>R-1761</u>	<u>Satisfactory</u>
<u>Flow Table C230-08</u>	
• Flow Table(s):	
• Maker: <u>Humboldt</u>	<u>Satisfactory</u>
• Accessory Apparatus	<u>Satisfactory</u>
<u>Compression Test Apparatus C109-11 and E4-10</u>	
• Compression Testing Machine:	
• Maker: <u>Tinius Olsen</u>	
• Serial Number: <u>322424</u> Capacity: <u>60,000 lbf</u>	
• Accuracy of Indication:	
• Range: <u>60,000 lbf</u> From: <u>10,000</u> to <u>40,000 lbf</u> ..	<u>Satisfactory</u>
• Mechanical Condition	<u>Satisfactory</u>
• Design	<u>Satisfactory</u>
• Bearing Blocks	<u>Satisfactory</u>
• Cube Molds: Number Checked: <u>12</u>	<u>Satisfactory</u>
• Tampers	<u>Satisfactory</u>
<u>Mix Balance(s) C1005-10</u>	
• Maker: <u>Mettler</u>	
• Capacity: <u>3,100 g</u> CCRL Number: <u>M1142</u>	<u>Satisfactory</u>
<u>Vicat Apparatus C187-11, C191-08, and C451-08</u>	
• Vicat Apparatus(es):	
• CCRL Number: <u>P-280</u>	<u>See footnote (c)</u>
• CCRL Number: <u>U-2450</u>	<u>See footnote (d)</u>
• Additional Vicat Rings: Number Checked: <u>6</u>	<u>Satisfactory</u>
<u>Gillmore Needles C266-08</u>	
• Initial Needles:	
• CCRL Number: <u>T-3011</u>	
• Final Needles:	
• CCRL Number: <u>T-3012</u>	<u>Satisfactory</u>
• Mountings:	<u>Satisfactory</u>
<u>Mechanical Mixing Apparatus C305-11</u>	
• Mixer(s):	
• Maker: <u>Hobart</u> Serial Number: <u>31-391-318</u> ..	<u>Satisfactory</u>
• Accessory Apparatus:	<u>Satisfactory</u>

<u>Inspection Item</u>	<u>Status</u>
<u>Air Content Apparatus C185-08</u>	
• 400 mL Measure(s)	<u>Satisfactory</u>
• Accessory Apparatus	<u>Satisfactory</u>
<u>Air Permeability Apparatus C204-07</u>	
• Blaine Meter(s):	
• CCRL Number: <u>K-1620</u>	<u>Satisfactory</u>
• Accessory Apparatus	<u>Satisfactory</u>
<u>Standard Sands C778-06 and E11-09</u>	
• Sand Verification	<u>Satisfactory</u>
• Sample Splitter	<u>Satisfactory</u>
• Sieves	<u>Satisfactory</u>
<u>Miscellaneous</u>	
• Temperature of Air in Laboratory	<u>Satisfactory</u>
• Relative Humidity of Air in Laboratory	<u>Satisfactory</u>
• Temperature of Mixing Water	<u>Satisfactory</u>
• Miscellaneous Accessory Testing Apparatus	<u>Satisfactory</u>

Procedures

<u>Test</u>	<u>Method Reference</u>	<u>Technique in Exact Agreement With Standard Practice</u>
Normal Consistency Test	C187-11 and C305-11	<u>Yes</u>
Vicat Time of Set Test (Method A)	C191-08 and C305-11	<u>Yes</u>
Preparation of:		
Gillmore Pat	C266-08 and C305-11	<u>Yes</u>
Autoclave Bars	C151-09 and C305-11	<u>See footnote (e)</u>
Mortar Cubes	C109-11, C305-11, and C1437-07	<u>See footnote (f)</u>
Testing of Autoclave Bars	C151-09	<u>Yes</u>
Testing of Mortar Cubes	C109-11	<u>See footnote (g)</u>
Air Content Determination	C185-08 and C305-11	<u>Yes</u>
Air Permeability Fineness Test	C204-07	<u>See footnote (h)</u>
Handling of Samples	C183-08	<u>Yes</u>

CEMENT FOOTNOTE SECTION

Quality System (C1222-09):

(a) Operations: The final test report or associated test records did not include the standard test methods used as required by Section 10.2.8 of C1222.

Qualification of Chemical Analysis (C114-11a):

(b) Records: In the qualification of calcium oxide by Rapid Test Method using Certified Reference Material (CRM) samples, less than 77% of the samples were within the tolerance, listed in Table 1, Column 2 of C114, specified for the difference between duplicate tests. Also, the difference between duplicate tests exceeded twice the tolerance allowed in Column 2 of Table 1 of C114. Attention is invited to Table 1 Note A of C114 which requires that all qualification testing be within twice the tolerance.

Vicat Apparatus (C187-11, C191-08, and C451-08):

(c) **Informational Footnote:** It was understood that the Vicat apparatus bearing CCRL Number P-280, was only used to determine the Vicat time of set; therefore, no check of the attached plunger was made.

(d) **Informational Footnote:** It was understood that the Vicat apparatus bearing CCRL Number U-2450, was only used to determine the normal consistency; therefore, no check of the attached needle was made.

Procedures:

(e) Preparation of Autoclave Bars (C151-09 and C305-11): It was understood that the gage studs used in the autoclave bar molds were not kept free of oil as required.

(f) Preparation of Mortar Cubes (C109-11, C305-11, and C1437-07): It was understood that the halves of the molds were not sealed with a light cup grease and the excess removed as is required in Section 9.2 of C109.

(g) Testing of Mortar Cubes (C109-11): Prior to testing the mortar cubes, the contact surfaces of the cubes were not checked for curvature with a straightedge as required by Section 10.6.2 of C109. In addition, prior to testing each cube, it was not ascertained that the upper block was free to tilt as required by Section 10.6.3 of C109.

(h) Air Permeability Fineness Test (C204-07): It was understood that the sample weight of cement used for this test was not the most current sample weight calculated.

POZZOLAN SUMMARY OF FINDINGS

Apparatus

<u>Inspection Item</u>	<u>Status</u>
<u>Storage Facilities for Test Specimens C511-09</u>	
• Moist Air Storage Facilities	<u>Satisfactory</u>
• Water Storage Facilities	<u>Satisfactory</u>
<u>Sieves C441-05 and E11-09</u>	<u>Satisfactory</u>
<u>Wet Sieving Apparatus C311-11a and C430-08</u>	
• 45-µm (No. 325) Sieve(s)	<u>See footnote (a)</u>
• Accessory Apparatus	<u>Satisfactory</u>
<u>Autoclave Soundness Apparatus C151-09 and C490-10</u>	
• Autoclave(s):	
• Maker: <u>Boekel</u> Serial Number: <u>1011-24</u>	<u>Satisfactory</u>
• Length Comparator(s)	<u>Satisfactory</u>
Number Checked: <u>1</u>	
• Bar Mold(s)	<u>Satisfactory</u>
Number Checked: <u>4</u>	
<u>Graduates C1005-10</u>	
• Capacity: <u>500 mL</u> CCRL Number: <u>J-237</u>	<u>Satisfactory</u>
• Capacity: <u>250 mL</u> CCRL Number: <u>R-1761</u>	<u>Satisfactory</u>
<u>Flow Table C230-08</u>	
• Flow Table(s):	
• Maker: <u>Humboldt</u>	<u>Satisfactory</u>
• Accessory Apparatus	<u>Satisfactory</u>
<u>Compression Test Apparatus C109-11 and E4-10</u>	
• Compression Testing Machine:	
• Maker: <u>Tinius Olsen</u>	
• Serial Number: <u>322424</u> Capacity: <u>60,000 lbf</u>	
• Accuracy of Indication:	
• Range: <u>60,000 lbf</u> From: <u>10,000</u> to <u>40,000 lbf</u> ..	<u>Satisfactory</u>
• Mechanical Condition	<u>Satisfactory</u>
• Design	<u>Satisfactory</u>
• Bearing Blocks	<u>Satisfactory</u>
• Cube Molds: Number Checked: <u>12</u>	<u>Satisfactory</u>
• Tampers	<u>Satisfactory</u>
<u>Mix Balance(s) C1005-10</u>	
• Maker: <u>Mettler</u>	
Capacity: <u>3,100 g</u> CCRL Number: <u>M-1142</u>	<u>Satisfactory</u>
<u>Mechanical Mixing Apparatus C305-11</u>	
• Mixer(s):	
• Maker: <u>Hobart</u> Serial Number: <u>31-391-318</u> ..	<u>Satisfactory</u>
• Accessory Apparatus:	<u>Satisfactory</u>
<u>Air Content Apparatus C185-08</u>	
• 400 mL Measure(s)	<u>Satisfactory</u>
• Accessory Apparatus	<u>Satisfactory</u>

<u>Inspection Item</u>	<u>Status</u>
<u>Vicat Apparatus C187-11</u>	
• Vicat Apparatus(es):	
• CCRL Number: U-2450	<u>Satisfactory</u>
• Additional Vicat Rings: Number Checked: <u>7</u>	<u>Satisfactory</u>
<u>Density C188-09</u>	
• Density Equipment	<u>Satisfactory</u>
• Accessory Apparatus	<u>Satisfactory</u>
<u>Loss on Ignition C114-11a and C311-11a</u>	
• Crucible	<u>Satisfactory</u>
• Muffle Furnace	<u>Satisfactory</u>
• Miscellaneous	<u>Satisfactory</u>
<u>Standard Sands C778-06 and E11-09</u>	
• Sand Verification	<u>Satisfactory</u>
• Sample Splitter	<u>Satisfactory</u>
• Sieves	<u>Satisfactory</u>
<u>Miscellaneous</u>	
• Temperature of Air in Laboratory	<u>Satisfactory</u>
• Relative Humidity of Air in Laboratory	<u>Satisfactory</u>
• Temperature of Mixing Water	<u>Satisfactory</u>
• ASTM Standards	<u>Satisfactory</u>

Procedures

<u>Test</u>	<u>Method Reference</u>	<u>Technique in Exact Agreement With Standard Practice</u>
Normal Consistency Test	C187-11 and C305-11	<u>Yes</u>
Preparation of:		
Autoclave Bars	C151-09, C305-11, and C311-11a	<u>See footnote (b)</u>
Mortar Cubes	C109-11, C311-11a, and C1437-07	<u>See footnote (c)</u>
Testing of Autoclave Bars	C151-09	<u>Yes</u>
Testing of Mortar Cubes	C109-11	<u>Yes</u>
No. 325 Sieve Fineness Test	C311-11a and C430-08	<u>See footnote (d)</u>
Moisture Content	C311-11a	<u>Yes</u>
Loss on Ignition	C114-11a and C311-11a	<u>Yes</u>
Density	C188-09 and C311-11a	<u>See footnote (e)</u>

POZZOLAN FOOTNOTE SECTION

Wet Sieving Apparatus (C311-11a and C430-08):

(a) It was noted that the sieve cloth on one of the five sieves examined was damaged, and it was recommended that a new sieve cloth be installed.

Procedures:

(b) Preparation of Autoclave Bars (C151-09, C305-11, and C311-11a): It was understood that the gage studs used in the autoclave bar molds were not kept free of oil as required.

(c) Preparation of Mortar Cubes (C109-11, C311-11a, and C1437-07): It was understood that the halves of the molds were not sealed with a light cup grease and the excess removed as is required by Section 9.2 of C109.

(d) No. 325 Sieve Fineness Test (C311-11a and C430-08): After washing the sample, the bottom of the sieve was not blotted with a damp cloth, as is required by Section 5.1 of C430.

(e) Density (C188-09 and C311-11a): It was noted that the procedure used to free the entrapped air from the cement was different than that specified by Section 4.3 of C188.

CONCRETE SUMMARY OF FINDINGS

Quality System

<u>Inspection Item</u>	<u>Status</u>
<u>Quality System C1077-11a</u>	
• Organization	<u>Satisfactory</u>
• Human Resources	<u>Satisfactory</u>
• Operations	<u>Satisfactory</u>
• Quality Assurance	<u>See footnote (a)</u>
• Equipment	<u>Satisfactory</u>

Apparatus

<u>Curing Facilities C511-09</u>	
• Moist Air Storage Facilities	<u>Satisfactory</u>
• Water Storage Facilities	<u>Satisfactory</u>

Cylinder Type(s) Presented for Inspection: 4" x 8"

<u>Compression Test Apparatus C39-10 and E4-10</u>	
• Compression Testing Machine:	
• Maker: <u>Forney</u>	
• Serial Number: <u>06129</u> Capacity: <u>400,000 lbf</u>	
• Accuracy of Indication:	
• Range: <u>400,000 lbf</u> From: <u>40,000</u> to <u>150,000 lbf</u> ..	<u>Satisfactory</u>
• Mechanical Condition	<u>Satisfactory</u>
• Design	<u>Satisfactory</u>
• Bearing Blocks for Cylinders	<u>See footnote (b)</u>

<u>Molds for Concrete Testing C31-10 and C470-09</u>	
• Cylinder Molds	<u>Satisfactory</u>
• Beam Molds	<u>Satisfactory</u>

<u>Specimen Shipping Containers C31-10</u>	<u>See footnote (c)</u>
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<u>Capping Equipment and Materials C617-10</u>	
• Capping Equipment	<u>Satisfactory</u>
• Capping Material	<u>Satisfactory</u>
• Conditions of Caps	<u>Satisfactory</u>
• Qualification for Design Strengths Greater than 7000 psi	<u>Satisfactory</u>

<u>Unbonded Caps C1231-10a</u>	
• Retaining Rings	<u>Satisfactory</u>
• Pads	<u>Satisfactory</u>
• Accessory Apparatus	<u>Satisfactory</u>

<u>Slump Cone(s) C143-10a</u>	<u>Satisfactory</u>
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<u>Tamping Rod(s) C31-10</u>	<u>Satisfactory</u>
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<u>Concrete Vibrators C31-10, C138-10b, and C231-10</u>	<u>Satisfactory</u>
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<u>Temperature of Concrete C1064-08</u>	<u>Satisfactory</u>
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<u>Inspection Item</u>	<u>Status</u>
<u>Reference Temperature Measuring Devices C511-09 and C1064-08</u>	
• Reference Thermometer(s) - C511	<u>Satisfactory</u>
• Reference Thermometer(s) - C1064	<u>Satisfactory</u>
<u>Unit Weight Apparatus C138-10b</u>	
• Unit Weight Measure(s)	<u>Satisfactory</u>
• Accessory Apparatus	<u>Satisfactory</u>
• Scale or Balance	<u>Satisfactory</u>
<u>Air Content Apparatus (Volumetric) C173-10b</u>	
• Air Meter(s)	<u>Satisfactory</u>
• Accessory Apparatus	<u>Satisfactory</u>
<u>Air Content Apparatus (Pressure) C231-10</u>	
• Air Meter(s)	<u>Satisfactory</u>
• Accessory Apparatus	<u>Satisfactory</u>
• Aggregate Correction Factors	<u>Satisfactory</u>

Procedures

<u>Test</u>	<u>Method Reference</u>	<u>Technique in Exact Agreement With Standard Practice</u>
Slump of Concrete	C143-10a	<u>Yes</u>
Unit Weight of Concrete	C138-10b	<u>Yes</u>
Air Content (Volumetric Method)	C173-10b	<u>Yes</u>
Air Content (Pressure Method)	C231-10	<u>See footnote (d)</u>
Fabrication of Cylinders	C31-10	<u>Yes</u>
Fabrication of Beams	C31-10	<u>See footnote (e)</u>
Sampling Freshly Mixed Concrete	C172-10	<u>Yes</u>
Measuring Temperature of Concrete	C1064-08	<u>Yes</u>
Curing of Cylinders	C31-10	<u>Yes</u>
Bonded Caps:		
• Capping of Cylinders	C617-10	<u>Yes</u>
• Cylinder and Cap Checks	C617-10	<u>Yes</u>
Unbonded Caps:		
• Cylinder and Pad Cap Checks	C1231-10a	<u>Yes</u>
• Alignment Checks	C1231-10a	<u>Yes</u>
Cylinder Measurements	C39-10	<u>Yes</u>
Compressive Strength of Cylinders	C39-10	<u>Yes</u>

Additional Test Methods

	<u>Status</u>
<u>Obtaining and Testing Drilled Cores and Sawed Beams of Concrete C42-10a</u>	
• Equipment	<u>See footnote (f)</u>
• Procedure	<u>Satisfactory</u>
<u>Flexural Strength of Concrete (Using Simple Beam with Third-Point Loading) C78-10</u>	
• Equipment	<u>Satisfactory</u>
• Procedure	<u>Satisfactory</u>

Status

Measuring Thickness of Concrete Elements Using Drilled Concrete Cores C174-06

- Equipment Satisfactory
- Procedure See footnote (g)

Making and Curing Concrete Test Specimens in the Laboratory C192-07

- Equipment Satisfactory
- Procedure Satisfactory

Fundamental Transverse, Longitudinal and Torsional Resonant Frequencies of Concrete Specimens C215-08

- Equipment Satisfactory
- Procedure Satisfactory

Resistance of Concrete to Rapid Freezing and Thawing C666-03

- Equipment Satisfactory
- Procedure Satisfactory

CONCRETE FOOTNOTE SECTION

Quality System (C1077-11a):

(a) Quality Assurance: Records of the laboratory's investigation and corrective action taken when receiving low proficiency sample ratings were not maintained by the laboratory as required by Section 9.2.5 of C1077.

Compression Test Apparatus (C39-10 and E4-10):

(b) The bearing surface of upper spherically seated bearing block with which the machine was equipped did not conform to the planeness requirement specified by Section 5.2 of C39.

Specimen Shipping Containers (C31-10):

(c) **Informational Footnote:** It was understood that, normally, laboratory personnel did not fabricate cylinders outside the laboratory; therefore, containers for transporting cylinders from the field to the laboratory were not maintained.

Procedures:

(d) Air Content (Pressure Method) (C231-10): It was noted that air was pumped into the chamber prior to injecting water through the petcocks.

(e) Fabrication of Beams (C31-10): After the completion of vibration, the outside of the mold was not tapped with a mallet to close the holes left by vibrating and to release entrapped air voids as required by Section 9.4.2.2 of C31.

Additional Tests:

(f) Obtaining and Testing Drilled Cores and Sawed Beams of Concrete (C42-10a): With reference to the upper spherically seated bearing block, which is required for this test, attention is invited to footnote (b).

(g) Measuring Thickness of Concrete Elements Using Drilled Concrete Cores (C174-06): It was understood that the measurements taken were recorded to the nearest 0.1 inches, rather than the nearest 0.05 inches as required by Section 6.1 of C174.

CLOSURE

This inspection was performed by Megan Karr and Jordan Beckler. While the work was in progress, many of the details covered by this report were discussed with laboratory personnel. At the conclusion of the inspection the special work sheets, on which all observations were recorded, were made available for review by members of the laboratory staff, and all of the entries thereon were discussed in detail.

Identification of the testing equipment used by the CCRL inspector during the inspection can be found on the CCRL website at www.ccrl.us under the heading of traceability.

It is recommended that this report be compared with the report of the preceding inspection which was made in October 2009. For further reference the CCRL laboratory number is 35.

This report does not approve, certify or accredit this laboratory. Publicizing the inspection without full disclosure of this report is not permitted.

Cement and Concrete Reference Laboratory



Jordan C. Beckler
Inspector

Report Approved By:

