INDIANA DEPARTMENT OF TRANSPORTATION
OFFICE OF MATERIALS MANAGEMENT

VERIFYING SLUMP CONES
ITM No. 911-15T

1.0 SCOPE.

1.1 This test method covers the procedure for verifying the critical dimensions of slump cones.

1.2 This ITM may involve hazardous materials, operations, and equipment and may not address all of the safety problems associated with the use of the test method. The user of the ITM is responsible for establishing appropriate safety and health practices and determining the applicability of regulatory limitations prior to use.

2.0 REFERENCES.

2.1 AASHTO Standards.

T 119 Slump of Hydraulic Cement Concrete

3.0 TERMINOLOGY. Definitions for terms and abbreviations shall be in accordance with the Department's Standard Specifications, Section 101.

4.0 SIGNIFICANCE AND USE. This ITM is used by laboratory personnel to verify the critical dimensions of slump cones used in AASHTO T 119.

5.0 APPARATUS.

5.1 Calipers, readable to .0004 in. and at least 12 in. in length

5.2 Ninety degree square, with one edge longer than the height of the slump cone

5.3 Ruler, readable to .04 in. and longer than the height of the slump cone

5.4 Straight edge, at least 12 in. in length

6.0 PROCEDURE.

6.1 Visually inspect the slump cone for roundness of openings, overall condition of handles and footpegs, and general cleanliness

6.2 Measure the inside diameter of the base and top of the slump cone using the calipers. Take two reading to the nearest .0004 in. 90° apart from each other, and average the readings.

6.3 Verify the wall thickness of the slump cone using the calipers. Take two readings to the nearest .0004 in. 90° apart from each other and average the readings.

6.4 Verify the height of the slump cone using the ruler. Place the slump cone on a level surface. Insert the ruler in the top opening, lower the ruler until the ruler rests on the surface and while keeping the ruler vertical measure the height.

6.5 Verify that the base and top of the slump cone are parallel by placing the straightedge across the top opening. Measure the distance from the level surface to a reference point on the straightedge. Measure the distance from the level surface to the straightedge again 4 in. from the reference point.

6.6 Verify that the base and top openings of the slump cone are perpendicular to the cones vertical axis by using the 90° square. Place the square so that one side is flat along the level surface and the other edge is butted up against the base of the cone and parallel to the axis of the cone. Using the ruler, measure the distance from the outside of the top of the cone to the square. Repeat the procedure on the other side of the slump cone.

7.0 TOLERANCE.

7.1 The inside diameter of the base of the slump cone shall be 8 in. ± 0.125 in. The inside diameter of the top of the slump cone shall be 4 in. ± 0.125 in.

7.2 The thickness of the slump cone wall shall be a minimum of 0.045 in.

7.3 The height of the slump cone shall be 12 in. ± 0.125 in.

7.4 Measurements to verify that the base and top of the slump cone are parallel shall not differ by more than .08 in.

7.5 Measurements to verify that the base and top of the slump cone are perpendicular to the cones axis shall not differ by more than .08 in.

SLUMP CONE VERIFICATION
ITM 911

Slump Cone Identification: _____

General Physical Condition	
Are openings round? (Yes/No)	
Are handles and pegs in good condition? (Yes/No)	
Is slump cone clean? (Yes/No)	

Dimensions			
Inside diameter of base, in.			Avg. =
Inside diameter of top, in.			Avg. =
Wall thickness, in.			Avg. =
Height of cone, in.			
Parallel Openings			
Reference point to flat surface, in.			
4 in. (100 mm) from reference point to flat surface, in.			
Measurement difference, in.			
Openings Perpendicular to Axis of Cone			
Horizontal distance from top to square, in.			
Horizontal distance from top to square rotated 180°, in.			
Measurement difference, in.			

Remarks: _____

_____

Calipers used: _____

Verified by: _____

Date: _____ Next Due Date: _____