Equipment Checklist
ASTM C-31 Making and Curing Concrete Test Specimens in the Field

		P	F	N/A
Cylinder Molds				
1.	Molds shall be constructed in the form of right circular cylinders which stand with the cylindrical axis vertical and the top open to receive the concrete.			
2.	Molds shall be made of materials that do not react with concrete containing portland or other hydraulic cements			
3.	Molds shall be watertight and sufficiently strong and tough to permit their use without tearing-crushing- or deforming			
4.	For reusable molds, coat sides with Mineral Oil or suitable non-reactive form release material before use.			
5.	Molds for casting concrete test specimens shall conform to the requirements of Specification ASTM C-470.			
Tamping Rod				
6.	Verify the tamping rod is a round, smooth, straight, steel rod and has the tamping end or both ends rounded to a hemispherical tip of the same diameter as the rod.			
7.	If the diameter of the cylinder is 6 inch. [150 mm] or larger verify the rod has a diameter of 5/8 inch +/- 1/16 inch. [16 mm +/- 2 mm] and at least 4 inch greater than the depth of mold being rodded, but not greater than 24 in. [600 mm] in overall length.			
8.	If the diameter of the cylinder is less than 6 inch. [150 mm] verify the rod has a diameter of 3/8 in. +/- 1/16 inch. [10 mm +/- 2 mm] and at least 4 inch greater than the depth of mold being rodded, but not greater than 24 in. [600 mm] in overall length.			
Vibrators				
9.	Internal vibrators shall be used. The vibrator frequency shall be at least 9000 vibrations per minute [150 Hz] while the vibrator is operating in the concrete. The diameter of a round vibrator shall be no more than one-fourth the diameter of the cylinder mold or one-fourth the width of the beam mold. Other shaped vibrators shall have a perimeter equivalent to the circumference of an appropriate round vibrator. The combined length of the vibrator shaft and vibrating element shall exceed the depth of the section being vibrated by at least 3 in. [75 mm]. The vibrator frequency shall be checked periodically with a vibrating-reed tachometer or other suitable device. **(For information on size and frequency of various vibrators and a method to periodically check vibrator frequency see ACI 309R).**			
Mallet				
10.	Rubber or Rawhide head weighing 1.25 ±0.50 lbs [0.6 ±0.2 kg]			
Placement Tool				
11.	A size large enough so each amount of concrete obtained from the sampling receptacle is representative and small enough so concrete is not spilled during placement in the mold. For placing concrete in a cylinder mold, the acceptable tool is a scoop. For placing concrete in a beam mold, either a shovel or scoop is permitted.			
Finishing Tools				
12.	A handheld float or a trowel.			
Slump Apparatus				
13.	The apparatus for measurement of slump shall conform to the requirements of Test Method C-143.			

Sample Receptacle				
14.	The receptacle shall be a suitable heavy gauge metal pan, wheelbarrow, or flat, clean nonabsorbent board of sufficient capacity to allow easy remixing of the entire sample with a shovel or trowel.			
Air Content Apparatus				
15.	The apparatus for measuring air content shall conform to the requirements of Test Methods C-173 or C-231.			
Temperature Measuring Device				
16.	The temperature measuring devices shall conform to the applicable requirements of Test Method C-1064.			

Remarks:

Date: _____ Technician: _____IA Observer: _____

Technician's E-mail Address: _____

Employer's/ Supervisor's E-mail Address: _____