



****THIS IS A NEW IM. – PLEASE READ CAREFULLY.****

PCC PLANT MONITOR

GENERAL

The following instruction is to be used when monitoring the operation of a ready mix concrete plant or a central batch plant. The plant monitor is responsible for monitoring the plant operation, quality control procedures performed by the plant inspector, and ensure that proper concrete mix is being batched and delivered.

DUTIES

The following duties are performed by the plant monitor for structural and paving concrete. If non-structural concrete is being produced during the time that structural or paving concrete is produced, no additional plant site visits are required. When non-structural concrete is the only concrete being placed, perform monitor duties at least once per project.

Duty	Task	Minimum Frequency
1. Inspect stockpiles	<ul style="list-style-type: none">•Observe stockpiling procedures.•Check for segregation.•Check for contamination.•Check for degradation.•Check for proper storage and handling of aggregates per Article 2301.13 and IM 527.	Observe during startup and during visits
2. Maturity Curve and Validation	<ul style="list-style-type: none">•Witness curve development or beam break.•Verify that a valid maturity curve exists and has been signed by the DME.•Check for monthly validation in accordance with Materials IM 383.	When available Observe each occurrence
3. Test Equipment	<ul style="list-style-type: none">•Inspect test equipment to ensure in good working order and lab has been qualified.	During startup
4. Material certifications	Check certifications for cement, fly ash, slag, aggregates, admixtures	During visits
5. Observe aggregate moisture and specific gravity testing	<ul style="list-style-type: none">•Observe test performed in accordance with Materials IM 307 and IM 308.	Central Batch– once during first week Ready Mix 1/ project (structural or paving)

6. Plant proportion control	<ul style="list-style-type: none"> •Observe delivery tolerance. •Observe scale sensitivity. •Observe admixture dispenser operation. •Check for proper batch proportions on computer generated or hand written batch tickets 	Central Batch– once during first week
7. Observe mix times for central batch plant	•Per Article 2001.21 .	During visits
8. Audit Checks and Test results in Plant Book	<ul style="list-style-type: none"> •Check for proper completion of Daily Plant Checklist and Plant Site Inspection List. •Observe record of test results for moistures and specific gravities. 	During visits
9. Audit Daily Diary	•Review for proper recording of events.	During visits
10. Plant Reports	<ul style="list-style-type: none"> •Check for proper project and mix identification. •Check for dates and report number. •Review batch weights and aggregate gradations. •Check materials brands and sources. •Check for correct concrete and cement totals (daily, weekly, and to date). •Check for appropriate Plant Inspector signature or initials. •Sign report after review. •Check for hard copy or electronic backup of files 	Daily / Weekly
11. Inspect Transit Mixers	<ul style="list-style-type: none"> •Inspect for buildup in drum per Article 2001.21 B. •Inspect for fin wear or broken fins per Article 2001.21 B. •Check for current truck certification per Article 2001.21 B. 	1/Month
12. Monitor agitators & dump trucks	•Check for properly cleaned dump box.	During visits
13. Inspect plant facility	<ul style="list-style-type: none"> •Observe plant calibration to assure compliance with Materials IM 527. •Check lab qualifications. •Inspect test equipment. 	Central Batch - startup Ready Mix - Yearly

SAMPLING & TESTING

AGGREGATES

Verification Gradation – One sample for each aggregate per lot in accordance with [IM 527](#) for paving or IM 528 for all other concrete.

The engineer will split samples obtained with the plant inspector, or observe splitting by the plant inspector, and immediately take possession of the agency sample. Report test results to producer in a timely manner.

Testing and sampling for non-structural concrete is based on that being the only concrete being produced. If structural or paving concrete is being produced, no additional gradation sampling and testing is required for non-structural concrete produced from the same plant, since the sampling and testing frequency for structural and paving concrete is greater. If multiple projects are being supplied by the plant, one representative gradation sample for the lot covers sampling and testing for all of the projects.

Example 1: If a sample was obtained for a footing and the ready mix produces concrete for a sidewalk project the next week, the gradation sample for the footing can be used for the sidewalk project.

Example 2: If a sample was obtained for a paving project and the ready mix produces concrete for a patching and a bridge pier, the gradation sample for the paving can be used for all projects.

Non Complying Gradation

When a verification gradation test does not comply with the gradation requirements of [Article 4109](#), the Engineer will contact the contractor, producer and the District Materials Engineer. The District Materials Engineer may investigate sampling and testing procedures, stockpiling, source material, etc. After corrections have been made, the Engineer will obtain and test another verification sample.

Acceptance of lots will be based on complying verification test results. The engineer will retain all samples representing the lots until the lots have been accepted. Since the contracting authority tests are verification, correlation with [IM 216](#) is not required, but may be performed as a check of sampling and testing procedures.

REPORTS & REPORTING

Enter monitor checks on plant monitor workbook for structural or paving. Report gradations on gradation verification form 821283.