



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
DIVISION OF MATERIALS AND TESTS
 6601 CENTENNIAL BLVD.
 NASHVILLE, TENNESSEE 37243-0360

Process Control Inspection Checklist
 Quality Audit Checklist
 Ready-Mix Concrete Plant

Date _____ Time _____

Producer _____ Location _____ Region _____

Plant Representative _____ Plant Manager _____

Plant Address _____

Phone/Email _____

Regional M&T Inspector _____ HQ M&T Inspector _____

Prior to Visiting Plant

1. Print Map and Directions
2. Does the plant have an approved mix design? (If so, print and take with)
3. Are all products used in approved mix still on QPL or Producer/Supplier List?
 - a. Cement
 - b. Fly Ash
 - c. GGBFS
 - d. Admixtures
 - e. Coarse Aggregate
 - f. Surface Aggregate
 - g. Fine Aggregate
4. Have they poured approved mix on a project? (What was last design we had breaks for? Look at break reports. Are there 28 day breaks?) Yes No
5. Check with Region Inspector to confirm last/next inspection date. (Do not visit plant if it has been or will be inspected within 3 months.)
6. Are there deficiencies noted on the last Region Inspection Report? Yes No
7. Are there deficiencies noted on the last HQ Audit? Yes No

Paperwork to Get From Plant

1. Batch Plant Process Control Plan is posted in plain site at the plant.....
2. Records of all tests and inspections performed at plant are kept current and readily available?..... Yes No
3. Does Process Control Plan include all TDOT or ACI qualified technicians (Concrete Level 2 or higher) who are involved in the process of concrete testing, plant operations or any changes involving concrete mixing?..... Yes No
4. Is Certified Technician Form completed, current and readily available?..... Yes No
5. Are certificates for qualified technicians posted or readily available and current?..... Yes No
6. Regional Laboratory Inspection is completed and reported on DT-0309 (posted)?.....
7. Regional Plant Inspection is completed and reported on DT-1479 (posted)?.....
8. Is a list posted at the plant of approved concrete trucks?..... Yes No
9. Is Constituent Materials Form completed and readily available for review?..... Yes No
10. Are records of delivery tickets of all materials such as coarse and fine aggregates, cement, fly-ash and all other admixtures and additives used for state projects kept in the plant files until the project is complete?..... Yes No
11. Does the concrete supplier keep a record of all tests and inspections performed at the plant by QC personnel?..... Yes No
12. Are Aggregate Quality Testing Reports readily available?..... Yes No
13. Are gradations on fine and coarse aggregate being run according to the requirements in SOP 1-1, Part Two: Acceptance Samples and Tests?..... Yes No

Project Specific Checks

1. Are calculated corrections recorded for adjustments made when water is withheld or added on the delivery ticket? (ice should also be shown in adjustments)..... Yes No
2. Look at Batch Tickets and Delivery Tickets (501.03.B.12) and pick a random sample:
 - a. Date _____
 - b. Contract Number _____
 - c. County _____
 - d. Class of Concrete _____
 - e. Concrete Design Number _____
 - f. Number of Cubic Yards _____ c.y.
 - g. Load Number _____
 - h. Truck Number _____
 - i. Maximum water allowed by design _____ gal
 - j. Actual Water Added on Project _____ gal
 - k. Actual water \leq Maximum Water? Yes No
 - l. Number of Revolutions at Mixing Speed at Plant (70-100) _____
 - m. Number of Revolutions at Mixing Speed at Project (300) _____

- n. Time Loaded _____ a.m. / p.m.
- o. Time Discharged _____ a.m. / p.m.
- p. Time Discharged – Time Loaded < 90 minutes (Class D&L < 60)?
_____ minutes Yes No
- q. Actual and target batch weights of each component recorded?
(including each aggregate, chem. admixture and mineral admixture
used)..... Yes No

3. Contractor Daily Reports

- a. Date _____
- b. Contract and Project _____
- c. Item Number(s) _____
- d. Batch Weights _____
- e. Moisture Corrections _____
- f. Admixtures _____
- g. Slump _____
- h. Air Content _____
- i. Temperatures _____
- j. Gradations _____
- k. Other Pertinent Information _____

- 4. Are the initial slump, air and temperature tests being performed from the first concrete delivery truck for a particular pour and is this information being recorded?..... Yes No
- 5. When Self-Consolidating Concrete (SCC) is being batched, are the slump flow, visual stability index (VSI), T50 and passing ability falling within the specifications?..... Yes No

Notes: _____

Laboratory Equipment (SOP 4-3:1.1, SOP 1-4, & 106.07)

- 1. All lab equipment easily fits in space and is accessible..... Yes No
- 2. Space is floored, roofed, sealed inside, weather-tight, and furnished with electricity.... Yes No
- 3. Laboratory is equipped with an oven capable of maintaining a temperature of 230°F +/- 9°F Yes No
- 4. Appropriate lights, electrical outlets, and HVAC is provided for tests being performed. Yes No
- 5. Scales sensitive to within 0.2% of sample to be weighed are available..... Yes No
- 6. Appropriate size and mesh screens are available to perform gradations Yes No
- 7. Mechanical shaker has been approved by engineer..... Yes No
- 8. Adequate and suitable water supply is available to perform wash tests in accordance with AASHTO T 11, if necessary..... Yes No

Notes and Comments (Include Item No. if commenting on deficiency): _____

Plant Equipment (SOP 4-3:1.1, DT-1479)

1. Material scales (to weigh materials for batching) calibrated? Date: _____
2. Weighing devices/platform scales (to determine interstate weight) functioning? Yes No
3. Admixture dispensers calibrated? Date(s): _____
4. Stockpile maintenance (labeled/overflowing/partitions) _____

5. Bin maintenance (no blending): _____

Trucks (SOP 4-3:1.3, 501.04.B)

1. Check trucks against truck list.....
2. Does the concrete truck have a working revolution counter?..... Yes No
3. Do the concrete trucks have weight limits marked on the driver's side of the truck and visible at a distance of 50 feet? (A minimum of 2 inch lettering is recommended.)..... Yes No
 - a. Tare _____
 - b. Maximum interstate weight limit _____
 - c. Maximum non-interstate weight limits _____
- d. Does the concrete truck have a manufacturer's identification plate?
 - a. Gross Volume of Drum _____
 - b. Min/Max Speed of rotation of drum or blades for
 - Charging _____
 - Mixing _____
 - Agitating _____
- e. Does the concrete truck have a working water meter?..... Yes No
- f. How often is blade wear checked? _____
- g. How often are blades replaced? _____

Materials (SOP 4-3:1.5, SOP 4-4, 901.01)

1. Does Plant use municipal or non-municipal water?.....Municipal Non-municipal
2. If non-municipal water, are test records kept in Process Control Plan?
(Every 3 months per 921.01)..... Yes No
3. Check against approved mix design (ask plant rep for supplier info):
 - a. Cement _____

- b. Fly ash _____
- c. GGBFS _____
- d. Chemical admixtures _____
- e. Coarse Aggregate _____
- f. Surface Aggregate _____
- g. Fine Aggregate _____

General Questions for Plant Rep

1. Is the wash water being dumped from all trucks before batching operations begin? ... Yes No
2. Are aggregate stockpiles being kept cool on hot days and warm on cold days by an approved method? Yes No
 Cooling method: _____
 Heating method: _____
3. Is there a qualified technician at the plant to do the QC testing as concrete is being batched? Yes No

If Concrete is Being Batched for a TDOT Project

1. Is adverse weather affecting the pour? Yes No
2. Are temperature limitations being followed? Yes No
3. Are admixtures being introduced into the concrete trucks at the correct time and in the correct dosage? Yes No

Date _____ Time _____

Producer _____ Location _____ Region _____

Plant Representative _____ Plant Manager _____

Plant Address _____

Phone/Email _____

Regional M&T Inspector _____ HQ M&T Inspector _____

Discussion of Findings

Discuss summary of findings with plant representative.

1.

2.

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TDOT Auditor Signature _____

Plant Representative Signature _____

Follow up needed? _____ Follow Up Date Scheduled _____