

Tennessee Department of Transportation Division of Materials and Tests

Ready Mix Concrete Plant Certification Procedures (SOP 4-3)

Purpose: The purpose of this document is to outline the process of certification of ready mix concrete plants providing concrete for State projects. These inspections standardize certification throughout the regions, improve concrete quality, assure consistency of product, support quality control, and assure adherence to Tennessee Department of Transportation (TDOT) Standard Specifications for Road and Bridge Construction dated January 1, 2015.

This Standard Operating Procedure (SOP) applies to ready mix plants in Tennessee and out-of-state that provides concrete for TDOT projects.

Discussion: Ready mix concrete suppliers must undergo a complete inspection of processes, plant equipment, trucks, laboratory equipment, materials, and technician qualifications. A satisfactory plant inspection is required to become an approved producer and these inspections must be repeated annually at a minimum to remain on the Producer/Supplier List.

Procedure:

- 1.0 To become a producer/supplier for the TDOT, the Producer must contact **the appropriate Regional Materials and Tests office**. Once approved, Regional Materials and Tests personnel will randomly visit the Producer at a minimum of once per year. **However, Construction personnel can request additional visits be completed in the event of issues on TDOT project sites**. All inspections will be carried under the following guidelines:
 - 1.1 **Plant Inspection:** The Regional Materials and Tests Inspector will visit the plant to check the overall condition of the plant and mixers. The inspection shall include an overall review of weighing devices, admixture dispensers, stockpile maintenance, bins, and evidence of laboratory inspection. Process control plans and aggregate quality testing reports shall be made available for evaluation. The results of the plant inspection will be documented on Form [DT-1479](#), Ready Mix Concrete Plant Inspection Report.
 - 1.2 **Laboratory Equipment Inspection:** The Regional Materials and Tests Inspector will review all laboratory equipment to ensure that it meets the requirements for a Type A laboratory, as stated in TDOT Standard Specification Section 106.06. Each review will include an inspection of weighing devices; stoves; sampling, reducing, and shaking equipment; thermometers; and other apparatus necessary to perform standard tests and practices. The inventory of equipment will be documented on Form [DT-0309](#), Equipment Inspection for Concrete Plant Laboratories and Jobsites. [SOP 1-4](#) (Laboratory Qualification Requirements) documents the minimum qualifications for field laboratories and concrete testing equipment.

- 1.3 Concrete Truck Inspection: The Regional Materials and Tests Inspector or **TDOT Project Construction Inspector** will inspect all available trucks for data plates, revolution counters, mixer-blade wear, water gauges, axle configuration, tare weight, and allowable gross weights. The inspection is documented on the [Concrete Truck Checklist](#).
- 1.4 Technician Qualifications: The plant shall have personnel certified according to TDOT Standard Specifications Sections 501.03, 604.03, and [SOP 1-3](#) (Field Technician Certification Requirements). All certified technicians are to be listed on the [Certified Technician Form](#) and shall be made available to the TDOT Inspector.
- 1.5 Materials: All materials shall meet the requirements outlined in [SOP 4-4](#) (Submittal and Approval of Concrete Mixture Designs). All constituent materials and admixtures shall be listed on the [Constituent Materials Form](#) and made available upon inspection at the ready mix facility.
- 1.6 Process Control Plan: The Producer must develop a [Batch Plant Process Control Plan](#) annually and submit for approval to Regional Materials and Tests that outlines the steps or procedures that will ensure that the concrete meets the minimum TDOT Standard Specification requirements. The approved Process Control Plan shall be submitted at the preconstruction conference of each project.
- 1.7 Process Control Inspection: On a regular basis, the batch plant process control procedures will be inspected by representatives from Headquarters Materials and Tests and Regional Materials and Tests as stated on the [Process Control Inspection Checklist](#).
- 1.8 Documentation: [Concrete Plant Records Minimum Requirements](#) must be kept and made available for inspection **at all times**. These documents may be reviewed during the process control inspections.
- 1.9 Certification: Upon completion and documentation of initial inspection, Regional Materials and Tests will approve the ready mix producer to be placed on the Producer/Supplier List. If the producer does not pass a random inspection from the Regional Materials and Tests, **Headquarters Materials and Tests, or Project Construction Inspector**, the producer may be removed from the Producer/Supplier List until the issue has been resolved.
- 1.10 Mix Designs: Each plant shall have an approved concrete mix design as outlined in [SOP 4-4](#) (Submittal and Approval of Concrete Mixture Designs).
- 1.11 Delivery Ticket: Form [DT-1756](#), Concrete Delivery Ticket must accompany each load to the placement site. The ticket must have all the required information according to TDOT Standard Specifications Sections 501.03 and 604.03.

2.0 Quality Monitoring:

- 2.1 **A ready mix concrete plant's approval is contingent upon continuous, satisfactory field performance as well as periodic inspections of material. In addition to the quality monitoring outlined below, a ready mix concrete plant's**

approval may also be rescinded if there is any concern for safety that may be related to the approved material as determined by a visual inspection.

- 2.2 At a minimum of once a year, an inspection shall be completed by Regional Materials and Tests personnel and reported to Headquarters Materials and Tests for review of the quality control procedures.
 - 2.3 If any portion of the quality monitoring fails to meet the requirements set forth in this or any SOP, the ready mix concrete plant's approval for production shall be immediately rescinded and mix production shall cease.
 - 2.4 Regional Materials and Tests shall notify the producer of any failing inspection results as soon as possible; at which time a representative from the producer, Regional Materials and Tests, and Headquarters Materials and Tests will hold a conference to identify the location/distribution of the failing material and to develop a plan for both the utilization of any existing material and the acceptance of newly produced material.
 - 2.5 Once it has been demonstrated that the ready mix concrete plant meets TDOT specifications, Headquarters Materials and Tests shall notify both Regional TDOT personnel and the producer.
- 3.0 Facility Removal:

If a facility is removed from the Producers/Suppliers List, TDOT shall notify the Producer/Supplier in writing within seven days. This notification shall direct the supplier(s) they shall not supply any material(s) to a TDOT project. Upon such notice, the Producer/Supplier shall immediately cease production, shipment, and placement of such material(s) that is to be supplied to TDOT projects and products. After such notice is issued, the Producer/Supplier reserves the right to enter into the appeals process requesting an informal meeting to discuss the cease of material(s) for TDOT projects.

4.0 Constituent Materials and Installed Material(s):

- 4.1 Producers shall provide TDOT with a list of material(s) supplied to TDOT projects from the date of the last passing inspection that will include contract numbers.
- 4.2 Constituent materials on the producer's yard utilized during production from the date of the last passing test until the date of the failing test may not be acceptable for further use on TDOT projects. All cost incurred will be the responsibility of the producer.

5.0 Time of Facility Removal:

- 5.1 First finding will result in the facility being removed for a minimum of 4 months.
- 5.2 Any offense in a two year period which will begin from the date the producer was placed back on the PSL from the **first** offense will result in the facility being removed for a minimum of 8 months.

- 5.3 Any offense in a two year period which will begin from the date the producer was placed back on the PSL from the **second** offense will result in the facility being removed for a minimum of 12 months.
- 5.4 Any more than 3 findings and TDOT will make a determination of any additional appropriate actions.
- 5.5 After the minimum time has passed, a letter must be submitted to Headquarters Materials and Tests stating the appropriate material(s) that will be provided to TDOT projects. No product shall be accepted until a formal response has been given by the Department. Also, before any producer may resume shipping material to TDOT projects, they must provide a Quality Control Plan addressing actions taken resolving any issues of non-compliance.

6.0 Appeals Process:

- 6.1 If a producer disagrees with the removal of a ready mix concrete facility from the Producer/Supplier List, the producer, upon complying with Section 3.0, shall provide such disagreement in writing within seven (7) days.
- 6.2 The producer must request a meeting with the Materials & Tests Division Coordinator/Director to discuss the disagreement in detail.
- 6.3 TDOT will meet with the producer within fourteen (14) days of receiving this request. Upon the completion of this meeting, TDOT shall provide the producer the written intent whether to proceed with the removal for the remainder of the time, to include all time not in production.
- 6.4 If the removal is not lifted the producer may choose to continue the appeals process. The producer shall provide such written notice to TDOT Chief Engineer (who has the authority to resolve disagreement) within thirty (30) days of the initial notification of removal from the Producer/Supplier List.
- 6.5 TDOT Chief Engineer or delegated designee will meet with the producer within fourteen (14) days of receiving this request to provide final resolution within forty five (45) days of the initial removal.