

**FY 2011/2012 QC Category No. 7A
STATEWIDE INSPECTION GUIDELIST
Asphalt Plant / Lab**

General

1. Design Mixes have been verified and approved. When using a PG 76-22 Asphalt binder, limit the amount of RAP to a maximum of 20%. [Spec. 334-2 and 334-3].
2. Verify that viscosity samples have been obtained per 334-2.3.5 and submit the samples to the State Materials Lab in a timely manner. Insure that appropriate LIMS data has been entered. [Spec 334-2]
3. Plant scales are certified every six months and the required weekly weight comparison checks have been conducted and documented properly. Weight measurements should be documented on the "Asphalt Plant Weekly Truck Scale Check Worksheet," Form 675-030-27. [Spec 320-2]
4. The haul trucks have asphalt tight beds coated with acceptable asphalt release agent (not petroleum-based products such as diesel oil). Truck bed shall have a tarpaulin that can cover the entire load and holes in the side of the bed for checking load temperatures. [Spec 320-5, 330-6, and 330-7]
5. The stockpiles including RAP material are free from contamination, segregation and are separated and identified as shown on the mix design. [Spec 330-5]
6. When present at the plant, perform verification measurements of mix temperature to ensure that the temperature of the mix at the plant is checked and recorded in accordance with the procedures stated in the specifications. Reject a load or portion of the load of HMA, when a mix temperature exceeds the acceptance limits. [Spec. 330-6 and CPAM Sec. 5.10]
7. The maximum period that any mix may be kept in a hot storage or surge bin is 72 hours. For FC-5 the maximum storage time is one hour. [Spec. 330-6 and 337-7]
8. Do not transport asphalt mix from the plant to the roadway unless all weather conditions are suitable for the paving operations. [Spec. 330-3]
9. Perform verification test to ensure the Contractor's QC operations for asphalt rubber binder are conducted in accordance with the requirements of 336-5.1. [Spec. 336-5]
10. Ensure that mix is correctly sampled, split, boxed, identified (project number, lot and subplot, date, mix type, sample type), sealed with tape (and signed by VT when present), and properly stored in a secure location.
11. Ensure the Asphalt Mix Design Summary Report, Form 675-030-24 is maintained up-to-date and monitor trends/variations of the critical material characteristics.
12. Maintain good communication between Plant personnel, Roadway personnel, Project Administrator, IA/IV personnel, and the District Bituminous Engineer (DBE). Obtain IV/IA samples when requested by the DBE.
13. Randomly (minimum once per project) check/verify the Contractor's QC process control operations using this Statewide Inspection Guidelist and CPAM Section 5.10.

14. Ensure a copy of the approved Asphalt Producer's Quality Control Plan is available at the Plant. [Good Practice].
15. The Asphalt Producer's Quality Control Plan has been approved and the technicians performing Quality Control, Verification, and Resolution tests are CTQP qualified. All documents are adequately filed. [Spec. 105-4 and 330-2]
16. Testing Laboratory must be qualified under the Department's Laboratory Qualification Program. [Spec. 105-6 and 330-2]
17. The area of laboratory is a minimum of 180 square feet with a layout, which will facilitate multiple tests being run simultaneously by two technicians. [Spec. 330-2]
18. The lighting, temperature control, ventilation, equipment and supplies, personal computer, communication system shall be equipped in accordance with the specification requirements. [Spec. 330-2]
19. Calibration of the Superpave Gyratory Compactor is performed in accordance with manufacturer's recommendations at frequencies established in the Asphalt Producer's Quality Control Plan and the records are documented in the lab file. [Spec 330-2]
20. The laboratory is furnished with the necessary sampling and testing equipment and supplies for performing quality control, acceptance and verification sampling and testing. [Spec. 330-2]
21. The gradations of incoming aggregate (including RAP and each size fraction for fractionated RAP), aggregate moisture content from stockpiles and / or combined cold feed aggregate shall be tested by the Contractor for process control at a minimum frequency specified in his QC Plan. The testing of RAP material shall include A/C content and gradation of extracted aggregate. [Spec. 330-2]
22. The A/C content, mix gradation and volumetric properties of HMA shall be determined by the Contractor for daily process control at a frequency in accordance with the Asphalt Producer's QC Plan. [Spec. 330-2]
23. All QC sampling and testing are completed and the Control Charts are updated daily in accordance with the Asphalt Producer's QC Plan and the results are shown in a conspicuous place in the asphalt lab. The QC results shall be documented on the Asphalt Plant Worksheet, Form 675-030-25 and entered into LIMS daily. [Spec. 105 and 330-2]
24. The Contractor shall not use more than three mix designs per nominal maximum aggregate size per traffic level per binder grade per contract year. Exceeding this limitation shall result in a maximum Composite Pay Factor of 1.00 for all designs used beyond this limit. [Spec. 334-3]
25. Run the split sample verification testing in accordance with the requirements specified in 334-5.5.1 and the same sample verification testing as specified in 334-5.5.2 in order to determine the validity of the Contractor's QC test results for the LOT acceptance. Document the results in the Asphalt Plant Worksheet, Form 675-030-25 [Spec. 334-5]
26. In the event that any of the verification and/or resolution samples that are in the custody of the Contractor are lost, damaged, destroyed, or are otherwise unavailable for testing, the minimum possible pay factor for each quality characteristic as described in 334-8 will be applied to the entire LOT in question. If the LOT in question has more than two sublots, the pay factor of each quality characteristic will be 0.55. If the LOT has two or less sublots, the pay factor for each will be 0.80. In either event, the material in question will also be evaluated in accordance with 334-5.9.5. [Spec. 334-5].

27. In the event that an individual QC test result of a subplot for air voids, or the average subplot density for coarse graded mixes, do not meet the requirements of Table 334-5 (Master production range), the LOT shall be automatically terminated and the production of the mixture shall be stopped until the problem is adequately resolved to the satisfaction of the QC Manager(s) and/or the Asphalt Plant Level II Technician(s) responsible for the decision to resume production after a quality control failure. The material represented by the failing test result shall be evaluated in accordance with 334-5.9.5. [Spec. 334-5].
28. In the event that two consecutive QC tests for gradation (P-200 only), A/C content, or the average subplot density (for two consecutive sublots) for fine graded mixes do not meet the requirements of Table 334-5, or two individual core densities within a subplot are less than 91.00% of Gmm (for coarse mixes), the LOT will be automatically terminated and production of the mixture stopped until the problem is adequately resolved to the satisfaction of the QC Manager(s) and/or the Asphalt Plant Level II Technician(s) responsible for the decision to resume production after a quality control failure as identified in 105.8.6.4. In the event that it can be demonstrated that the problem can immediately be or already has been resolved, it will not be necessary to stop production. When a LOT is terminated, make all necessary changes to correct the problem. Do not resume the production until appropriate corrections have been made. Inform the Engineer of the problem and corrections made to correct the problem. After resuming production, sample and test the material to verify that changes have corrected the problem. Summarize this information and provide it to the Engineer prior to the end of the work shift when production resumes. In the event that a QC failure is not addressed as defined above, the Engineer's approval will be required prior to resuming production after any future QC failures. Address any material represented by a failing test result in accordance with 334-5.9.5. Any LOT terminated under this Sub-article will be limited to a maximum Pay Factor of 1.00 (as defined in 334-8.2) for each quality characteristic. [Spec. 334-5].
29. Double-check all the input data for the calculation of the Pay Factors and the correctness of the composite Pay Factor for each LOT in accordance with the Asphalt Plant – Pay Factor Worksheet, Form 675-030-25. Review and verify each LOT Submittal packet. [Spec. 334-8]
30. Take necessary actions for the materials with low Pay Factor or low Composite Pay Factor in accordance with the requirements of 334-5.9. The Contractor's evaluation of the defective material shall be performed in accordance with 334-5.9.5. [Spec. 334-5].
31. For FC-5 friction course, when an individual QC test result of a subplot for gradation (P-3/8, P-4, and P-8) does not meet the requirements of Table 337-2, steps shall be taken to correct the situation and actions taken shall be reported to the Engineer. In the event that two consecutive individual QC test results for gradation (P-3/8, P-4, and P-8) or an individual test result for A/C content do not meet the requirements of the Table 337-2, the LOT will be automatically terminated and production of the mixture shall be stopped. The material represented by the failing test result shall be evaluated in accordance with 334-5.9.5. [Spec. 337-6].
32. Ensure that QC personnel are recording raw test data on Department approved forms and that this data is transferred to the appropriate forms, database, and spreadsheet. Any corrections made to the raw data shall be made by striking through the incorrect data with a single line and writing the correct data above the struck through data. Erasing any data is prohibited.
33. When the total combined quantity of hot mix asphalt for the project, as indicated in the plans for Type SP and Type FC mixtures only, is less than 2,000 tons, the Engineer will accept the mix on the basis of visual inspection. [Spec. 334-5.1.2].

34. Use a liquid anti-strip additive at a rate of 0.5% by weight of the asphalt binder for mixtures containing limestone aggregate. Other rates of anti-strip additive may be used upon approval of the Engineer. [Spec 337-3.2.1.4].

35. Add the lime at a dosage rate of 1.0% by weight of the total dry aggregate to mixes containing granite. [Spec. 337-3.2.1.3].