Asphalt Plant and QC Lab Site Visit Checklist

In an effort to provide a well-rounded quality assurance program for local agencies, it may be beneficial to visit the Contractor's plant and quality control laboratory during asphalt mixture production and testing. This document is to provide general guidance on what to look for while visiting an asphalt plant and quality control laboratory. These checks are in accordance with ITM 583 INDOT Certified Hot Mix Asphalt Producer Program and the full INDOT audit checklist. Prior to any site visit for verification of quality control procedures, a copy of the Contractor's Quality Control Plan should be obtained from the Contractor for that plant.

ASPHALT PLANT CHECK

- ☐ A general inspection of the plant site and observation of the plant should be performed to ensure the production process is in accordance with the QCP.
- ☐ The asphalt binder grade used in production is the same as the asphalt binder grade on the bill of ladings may be requested to verify the source of the asphalt binder and delivery date. The asphalt binder tanks are required to be labeled with the binder grade and can be checked while at the plant.
- ☐ The percent virgin asphalt binder being put in at the plant is within a *reasonable* range of what is listed as the virgin asphalt binder content on the DMF. There are several reasons why small adjustments may need to be made during production to this value. If there is a significant difference from the DMF target, discussion should occur to understand what might have changed.
- ☐ The aggregates and recycled material stockpiles are adequately spaced and have no indication of cross-contamination.
- ☐ The aggregates, recycled materials, additives, fibers, or other component materials listed on the DMF are located at the plant.
- ☐ The size and source of aggregates and recycled materials on the DMF are the same for what is being loaded at the plant for that day's production. The percentages for each component material should be within a *reasonable* range of what is listed on the DMF. There are several reasons why small adjustments may need to be made during production to these target percentages. If there are significant differences from the DMF targets, discussion should occur to understand what might have changed.
- ☐ The procedure for loading trucks is in accordance with the QCP.

ASPHALT QUALITY CONTROL LABORATORY CHECK

☐ The laboratory running the quality control test is in accordance with the QCP.

☐ The laboratory technician running the quality control tests is in accordance with the QCP.

☐ The facility is acceptable for testing materials and the laboratory equipment appears to be in good working order.

Obtain the total quantity of an asphalt mixture produced for a DMF to date on a project chosebn by the local agency. Perform calculations to determine the number of quality control tests needed for a mixture based on the Contractor's QCP. The frequency of testing shall not be less than the following per ITM 583:

1. The first 250 ton and each subsequent 1,000 ton of each DMF for base and intermediate mixtures.
2. The first 250 ton and each subsequent 600 ton of each DMF for surface mixtures.

Mix Code or DMF number _____

Project _____

Quantity of Mixture placed to date _____

Tests Required per Contractor's QCP _____

Tests Completed _____

☐ The sampling and testing frequency of the asphalt mixture for total asphalt binder content, coarse aggregate angularity (mixtures containing gravel), mixture gradation, and air voids are in accordance with the QCP.

☐ The calculated percent air voids are ± 2.0% from the DMF target.

☐ The total asphalt binder content for the mixture is ± 0.7% from the DMF target.

☐ Type D certifications reflecting the test results from the latest producer sample shall be provided with the first delivery per contract per DMF per day. The required Type D certifications were sent to the project and are on file at the laboratory.

☐ Test results shown on the Type D certifications match the quality control test results.

☐ The Diary shows the project, type of mixture produced, and daily quantity sent to the project.

☐ The time the sample was obtained, and tests completed (samples are required to be tested within two working days of the time the sample was taken. If all samples are tested the same day, a statement indicating that this occurred is acceptable).

☐ Any significant events or problems are noted in the Diary.

☐ Nonconforming test(s) are noted in the Diary.

- Air voids are ± 2.0% from the DMF target
- Binder content for the mixture is ± 0.7% from the DMF target
- Other quality control limits identified in the QCP for HMA mixtures are exceeded. These may include:
  - minimum V_{be}
  - minimum VMA
  - aggregate and recycled material gradation
  - mixture gradation
  - aggregate degradation for SMA is greater than 3.0%
  - dust/P_{be} is less than 0.6 or greater than 1.4 (or 1.0 to 2.0 for 4.75 mm mixtures)
  - moisture content of surface mixtures exceeds 0.30% at the plant or 0.10% behind the paver.

☐ Corrective action was taken or documented for nonconforming test results. Any corrective action should be discussed during the plant/laboratory visit.

Agency Representative _____

Contractor Representative _____

CORRECTIVE ACTION DOCUMENTATION

Problem Explanation:	
Corrective Action to be Taken:	
Follow Up:	

Problem Explanation:	
Corrective Action to be Taken:	
Follow Up:	

Problem Explanation:	
Corrective Action to be Taken:	
Follow Up:	

TEST RESULTS OUTSIDE OF CONTROL LIMITS DOCUMENTATION

Test Result outside of Control Limit:	
Target Value:	
Date and Test Result Value:	

Test Result outside of Control Limit:	
Target Value:	
Date and Test Result Value:	

Test Result outside of Control Limit:	
Target Value:	
Date and Test Result Value:	