



**INDIANA DEPARTMENT OF TRANSPORTATION
DIVISION OF MATERIALS AND TESTS**

**ASPHALT EMULSION SUPPLIER PROGRAM
ITM No. 593- 23**

1.0 SCOPE.

- 1.1** This procedure covers the requirements for participation in the Asphalt Emulsion Supplier (AES) program for supplying Asphalt Emulsions to Department projects.
- 1.2** This ITM may involve hazardous materials, operations or equipment and may not address all the safety problems associated with the use of the test method. The user of the ITM is responsible for establishing appropriate safety and health practices and determining the applicability of regulatory limitations prior to use.

2.0 REFERENCES.

2.1 AASHTO Standards.

M 140	Emulsified Asphalt
M 208	Cationic Emulsified Asphalt
M 316	Polymer-Modified Emulsified Asphalt
R 66	Sampling Asphalt Materials
R 77	Certifying Suppliers of Emulsified Asphalt
T 59	Emulsified Asphalts

3.0 TERMINOLOGY. Definitions for terms and abbreviations shall be in accordance with the Departments Standard Specifications, Section 101, and as follows:

- 3.1** Asphalt Emulsion. An undiluted, concentrate, asphalt-based emulsion that is composed of an intimate homogenous suspension of a base asphalt, an emulsifying agent, and water, meeting the requirements of 902.01(b) of the INDOT Standard Specifications or AASHTO M 140, M 208, or M 316.
- 3.2** Manufacture. The process in which the Asphalt Emulsion properties are obtained.
- 3.3** Production Batch. An entire batch of Asphalt Emulsion that is produced in a distinct manufacture operation.
- 3.4** Quality Control Plan (QCP). A document written by the Supplier that is site-specific and includes the production, policies, and procedures for the manufacture of the Asphalt Emulsion. The AES program allows the manufacture and shipment of Asphalt Emulsions within the guidelines of a QCP, as outlined in AASHTO R 77, without complete pre-testing of the Asphalt Emulsion.

The QCP shall be signed and dated by the manufacturer's representative at the time the QCP is submitted for acceptance. The QCP shall be maintained to reflect the current status and revisions shall be provided to the Division of Materials and Tests in writing.

- 3.5 Supplier.** A Supplier shall be one who produces the final product or who makes a blend or modification that alters the properties of the emulsified asphalt as specified. A Supplier can be a refinery, terminal, or paving contractor.
- 4.0 SIGNIFICANCE AND USE.** This ITM is used to supplement the requirements of AASHTO R 77 to guide Suppliers in the preparation of a QCP for the manufacture, storage, shipping, and handling of Asphalt Emulsions under the AES Program.
- 5.0 LABORATORY.** The Supplier shall conduct Asphalt Emulsion testing in a laboratory that has been accepted by the Department. Participation in the AASHTO re:source equipment inspection and proficiency sample programs with satisfactory ratings will be the basis for acceptance.
- 6.0 MATERIALS TESTING.**
- 6.1** 902.01(b) of the Standard Specifications, AASHTO M 140, AASHTO M 208, or AASHTO M 316 complete compliance testing shall be done at the frequency stated in the QCP per Asphalt Emulsion and at least once following feed stock changes. The minimum frequency for specification compliance testing shall be once per 14 calendar days. A type C certification in accordance with Section 916 of the Standard Specifications shall be prepared for all complete compliance testing.
- If the tests of the Supplier indicate that the Asphalt Emulsion is not within specification requirements, the Supplier shall cease shipment, immediately notify the Department and contractor, and take action to bring the material back into specification requirements. When the material is within specification requirements and is ready for shipment, the Supplier shall notify the Department.
- 6.2** The Supplier shall submit a monthly summary report to the Department of all QC tests for each Asphalt Emulsion supplied under the AES program.
- 6.3** The Supplier shall maintain detailed records of QC inspections, test results, type C certifications and shipments for the last three complete calendar years.
- 7.0 QUALITY CONTROL PLAN.** The Supplier shall submit to the Department a QCP covering each facility that manufactures or stores Asphalt Emulsion. The QCP shall include each Asphalt Emulsion to be supplied under the AES program. Typical testing and inspection procedures shall be included for each Asphalt Emulsion. The requirements stated in AASHTO R 77 will be required. The QCP shall include as a minimum the following:

- 7.1 The facility type
- 7.2 The facility location
- 7.3 The name, telephone number, and e-mail address of the person responsible for quality control at the facility
- 7.4 The quality control tests to be performed on each emulsified asphalt
- 7.5 The name and location of the laboratory performing quality control tests on the emulsified asphalt that is shipped
- 7.6 A statement that if the quality control tests to be performed on each emulsified asphalt indicate that a shipment of Asphalt Emulsion is not in compliance with the specifications, the Supplier shall:
 - a) Immediately notify the Department and contractor of the shipment in question
 - b) Identify the material
 - c) Cease shipment until material complies with the specifications
 - d) Notify the Department prior to resuming shipment
 - e) Implement procedures to dispose of the material
- 7.7 The method and frequency for initial testing, quality control testing, and specification compliance testing for emulsified asphalts.
- 7.8 A statement that the Supplier shall prepare monthly summary reports for all quality control and specification compliance tests performed during that period and shall submit the reports to the Department.
- 7.9 An outline of the procedure to be followed for checking transport vehicles before loading to prevent contamination of shipments. The outline shall include a statement that the transport vehicle inspection report, signed by the responsible inspector, shall be maintained in the Supplier's records and shall be made available to the agency on request.
- 7.10 A statement whether or not the refinery or terminal creates a diluted emulsion. If a dilution process is used, a description of the process to make the diluted emulsion and associated quality control procedures shall be included.
- 7.11 A statement whether or not the refinery or terminal utilizes polymer modifiers. If polymer is used, a description of the process to add the polymer and associated quality control procedures shall be included.

8.0 QUALIFICATION.

- 8.1** The Supplier shall submit a written request to the State Materials Engineer, Division of Materials and Tests to supply specific Asphalt Emulsion under the AES program
- 8.2** A Supplier will be considered fully qualified for the Department AES program when one non-polymer modified Asphalt Emulsion and one polymer modified Asphalt Emulsion allowed by the specifications have been qualified. When these conditions are not met, limited qualification will be designated for a Supplier for each Asphalt Emulsion qualified.
- 8.3** An Asphalt Emulsion will be qualified after three consecutive production batches are tested by the Department and are in full compliance with a complete series of related tests required for each emulsion type. All qualification samples will be witnessed by the Department, provided that the facility is not located more than 60 miles outside the Indiana State line. The Supplier and the Department Representative will sign the sampling form attesting that the sample was taken properly and is representative of the Asphalt Emulsion material.

Asphalt Emulsion testing conducted by other State DOT laboratories will be considered for use in AES qualification provided that a similar sampling and testing program was used by the other State DOT.

- 8.4** Full or limited AES qualification shall be Supplier specific and shall not be transferable.

9.0 MATERIAL SHIPMENT.

- 9.1** An AES who is fully qualified will be allowed to supply any Asphalt Emulsion for which the Department has an approved QCP.
- 9.2** An AES with limited qualification will be allowed to supply only the Asphalt Emulsion that have been qualified in accordance with 8.3.
- 9.3** The Supplier shall furnish with the shipping report for each load a statement certifying that the Asphalt Emulsion has been manufactured according to the AES program.
- 9.4** The Supplier shall furnish, with the shipping report for each load, a copy of the type C certifications prepared in accordance with 6.1
- 9.5** The Supplier shall furnish instructions with each Asphalt Emulsion on the proper storage and handling of the material.

10.0 DEPARTMENT RESPONSIBILITIES.

- 10.1 Qualified Products List.** The Department will maintain a Qualified Products List (QPL) of Asphalt Emulsion Suppliers that meet the requirements of the AES program.
- 10.2 Auditing.** The Department shall be allowed to visit the Supplier location for the purpose of conducting an audit to ensure compliance with the QCP.
- 10.3 Qualified Products List Removal.** Ability to supply under the AES program shall remain in effect until otherwise notified by the Department in writing. The removal of a Supplier from the QPL of Asphalt Suppliers will be the responsibility of the Director, Division of Materials and Tests. The Supplier shall have the right to appeal the removal from the QPL to the Chief Engineer of Construction.

Continued approval by the Department for a Supplier to supply under the AES program shall be contingent upon a record of satisfactory performance. Unsatisfactory performance shall be defined as three consecutive production batches delivered out of specification to Department contracts.

A Supplier that has been removed from the AES program for unsatisfactory performance will not be considered for AES approval for a period of three months after the written notification.

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