

State of Illinois
Department of Transportation
Bureau of Materials
Springfield

POLICY MEMORANDUM

Revised: January 15, 2021

3-08.1

This Policy Memorandum supersedes number 3-08.0 dated January 1, 2008

TO: REGIONAL ENGINEERS AND HIGHWAY BUREAU CHIEFS
EMULSIFIED ASPHALT MANUFACTURERS

SUBJECT: EMULSIFIED ASPHALT QUALIFICATION PROCEDURE

1.0 PURPOSE

To establish a procedure whereby Emulsified Asphalt produced from a **source** may be qualified for use on **State** or **local agency** projects based on a uniform **quality control** program.

2.0 SCOPE

This procedure shall apply to all **sources** that supply Emulsified Asphalt to **State** and **local agency** projects. A **source** shall be an emulsified asphalt manufacturing plant that stores large quantities of asphalt emulsions in dedicated permanent storage tanks. A **source** shall be responsible for the quality and **specification** compliance of the produced asphalt emulsions.

3.0 REFERENCES

Emulsified asphalt used on **Department** projects must meet the **specification** requirements of the IDOT **Standard Specifications** for Road and Bridge Construction. Specifically, Article 1032.06, Emulsified Asphalts.

4.0 DEFINITIONS

AASHTO – American Association of State Highway and Transportation Officials.

AASHTO RE:SOURCE – Administrator of the Accreditation, Laboratory Assessment, and Proficiency Sample Programs for **AASHTO** (formerly the AASHTO Materials Reference Laboratory or AMRL). **Re:source** is part of the Engineering and Technical Services Division of **AASHTO**.

ACCEPTANCE SAMPLES (ACC) – Samples taken at the **source**, witnessed by **Department** representatives and tested by the **Bureau laboratory** to verify acceptability of unqualified material. Material acceptance is given to the quantity of emulsified asphalt in the tank, batch or lot.

BUREAU – Central Bureau of Materials (CBM), Illinois Department of Transportation, 126 East Ash Street, Springfield, Illinois 62704-4766.

BUREAU LABORATORY – The **Department's** central laboratory maintained and operated by the Central Bureau of Materials.

CONTRACTOR – The individual, firm, partnership, joint venture, or corporation contracting with the **Department** for performance of prescribed work.

DEPARTMENT - Illinois Department of Transportation (IDOT), including its **Districts** and Central Bureau offices.

ENGINEER – Chief Engineer of the **Department** of Transportation of the **State** of Illinois, or authorized representative as defined in Section 101 of the **Standard Specifications**.

INDEPENDENT ASSURANCE SAMPLE (IND) - A sample used to provide an independent check, or **quality assurance** on the reliability of the **Manufacturer's** or Supplier's **quality control** program.

INSPECTOR – The authorized representative of the **Engineer** assigned to make detailed inspection of any or all portions of the work, material, product, etc.

INVESTIGATIVE SAMPLES (INV) - Samples taken at the **source** or destination, witnessed by **Department** or **local agency** representatives, and tested by the **Bureau laboratory** to verify acceptability of **source** certified material.

LABORATORY – A testing laboratory of the **Department** or any other testing laboratory which may be designated by the **Engineer**.

LOCAL AGENCY - Municipality or City, County or Road District.

MANUFACTURER – A term synonymous with **Producer**.

MISTIC – Materials Integrated System for Test Information and Communication. A **Department-wide** database containing materials inspection and test information.

PRELIMINARY SAMPLES (PRE) – Samples taken by the **producer** or **Inspector** and tested in advance of the use of a material.

PROCESS CONTROL SAMPLES (PRO) - Samples taken and tested by the **source** for **quality control**.

PRODUCER – An individual or business entity producing materials and/or products for performance of prescribed work.

QUALITY ASSURANCE (QA) – All the planned and systematic actions necessary to provide adequate **Department** confidence that materials; manufactured, fabricated or constructed items; processes; products; designs; conducted test procedures; etc. will satisfy the requirements of the Specifications, Quality Control Plan, etc., as applicable.

QUALITY CONTROL (QC) - The sum total of activities performed by a **Source, Producer, Contractor, Manufacturer**, etc. to make sure materials; manufactured, fabricated or constructed items; processes; products; designs; conducted test procedures; etc. will satisfy the requirements of the **Specifications, Quality Control Plan**, etc..

QUALITY CONTROL PLAN (QC PLAN) – A document which details how a **Source, Producer, Manufacturer**, etc. will manage the equipment, materials, production, design, and testing methods, etc. to ensure the **Specifications** and other applicable requirements are met.

RANDOM SPLIT SAMPLES (IND) - **Independent assurance samples** taken at the **source**, witnessed by **Department** representatives, and tested by both the **Bureau laboratory** and the **source laboratory** to evaluate test equipment, procedures, and verify acceptability of **source** certified material.

RESIDENT ENGINEER (RE) – The authorized representative of the **Engineer** in immediate charge of the engineering details of a construction project.

RETAINED SAMPLES - Samples taken and held by the **Source** for **quality control**.

SOURCE – The name and location where a manufacturing process takes place such as a plant, refinery, or terminal. Generally used for cement, asphalt, and finely divided minerals.

SOURCE LABORATORY – An asphalt emulsion testing **laboratory** not operated by the **Department**.

SPECIFICATIONS - **Specifications** for materials; manufactured, fabricated or constructed items; processes; products; designs; conducted test procedures, etc. which includes the **Standard Specifications**, supplemental **specifications** and recurring special provisions, highway standards, shop drawings, contract plans, project special provisions, **AASHTO Specifications, ASTM Specifications**, etc., as applicable.

STANDARD SPECIFICATIONS – The **Department's** current book entitled "**Standard Specifications** for Road and Bridge Construction".

STATE – The state of Illinois.

5.0 EMULSIFIED ASPHALT QUALIFICATION PROCEDURE

5.1 REQUIREMENTS FOR INITIAL QUALIFICATION

5.1.1 **Sources** requesting qualified status for their facilities shall make application in writing to the **Bureau**. This application shall include the following.

- a) The Company Acknowledgement Statement, [BMPR 101 Acknowledgement by Company](#).
- b) A statement that the **Source** agrees to the terms, conditions and performance standards of the Bureau of Material's Policy Memorandum entitled "Emulsified Asphalt Qualification Procedure".
- c) A statement that a routine procedure will be followed that makes a reasonable attempt to prevent the contamination of the material to be loaded into tank trucks or cars by the material previously carried.
- d) A detailed **Quality Control Plan** as described in Article 5.2.2.
- e) Evidence that the **Source** primary testing **laboratory** is inspected by **AASHTO Re:source**. The **laboratory** must maintain accreditation through continued participation in the **AASHTO Re:source** audit and inspection program. If the proposed **laboratory** is not inspected, then a statement that inspection for the testing **laboratory** by **AASHTO Re:source** has been requested, must be provided.

5.1.2 To be considered for qualification, a **source** must have an acceptable quality history. The judgement of an acceptable quality history will be based upon the **Department's** historical data. In the event no quality history exists, one will be established by testing an adequate number of samples obtained from the **source** production and **random split sampling (IND)**. During this pre-qualification period, emulsified asphalt from a **source** seeking qualification will be accepted only if it is from a **Bureau** pre-tested tank. Copies of bills of lading indicating the **source** of the asphalt emulsion shall accompany each load and shall be presented at **destination**. The bills of lading shall include information required in Article 5.3.9. The **source** shall also note the **MISTIC** Test Identification approval number on each bill of lading.

5.1.3 When a satisfactory quality history has been determined; **source** production will be accepted on the **manufacturer's** certification. The **Department** will place the **source** and qualified product(s) on the Qualified Product List (QPL) of [Emulsified Asphalt](#).

5.2 QUALIFIED SOURCE'S RESPONSIBILITY

5.2.1 Submit, by mail or electronically, a certified statement to the **Bureau** by March 31st of each year. The certified statement shall affirm that all materials to be furnished to **State** and **local agency** projects shall be tested according to the **Source Quality Control Plan** before shipment and shall conform to the **Department's** latest **specification** requirements for the type of emulsified asphalt furnished. This certified statement shall also include:

- a. The Company Acknowledgement Statement, if not already on file with the **Department**. Click the following for a link to this statement [BMPR 101 Acknowledgement by Company](#).

- b. A statement that a routine procedure will be followed that makes a reasonable attempt to prevent the contamination of the material to be loaded into tank trucks or cars by the material previously carried.
 - c. Signature, including secure electronic signature, from a responsible officer of the **source** with authority to bind the **source** to the contract.
- 5.2.2 Submit, annually, a detailed **Quality Control Plan** to the **Bureau** for review. The plan shall identify the **Source** location, **Source Laboratory** names and locations, and a complete description of the types and frequencies of the **quality control tests** to be performed. The plan shall include the procedures in place to prevent contamination of materials when loading into transports and any procedures to address failing materials.
- 5.2.3 Be responsible for inspection costs associated with the initial plant qualification and subsequent sampling inspections. The **Source** is only responsible for payment if they are more than 50 miles outside the state line AND if the inspections cannot be completed within one day's normal work hours (7.5 hours). The **Source** shall pay for transportation, per diem (meals), lodging and incidental travel costs incurred by the **Bureau inspector**. The costs shall not exceed the limits established by the **Department's** travel regulations. At the **Bureau's** option, sampling arrangements may be made through an independent third-party inspection agency.
- 5.2.4 Retain all samples taken for **Quality Control** testing for not less than 30 days. Maintain records of **Quality Control** testing data for a period of at least three years. Furnish the **Bureau** reports of **specification** compliance test results. These test results shall be submitted within one week of completion and on the [BMPR 3555 Certificate of Analysis on Emulsified Asphalt](#) form. This form may be submitted by mail or electronically and must include a physical signature/secure electronic signature of the **source's** responsible officer with authority to bind the **source** to the authenticity of the test results. If the **quality control** testing is performed by a **laboratory** other than the **source**, a copy of the test report from that laboratory must also be provided.
- 5.2.5 Maintain copies of bills of lading and of quantities of emulsified asphalt shipped for a period of at least three years.
- 5.2.6 Have the **source** primary **laboratory** facility (test methods and equipment) regularly inspected by **AASHTO Re:source** in accordance with the **AASHTO Re:source** schedule (typically 18-24 months) The **laboratory** shall demonstrate all required tests for the emulsified asphalts produced. A copy of the **AASHTO Re:source** report on the lab inspection shall be provided to the **Bureau** upon request, accompanied by documentation of resolution of any discrepancies in the report. **Source** satellite **laboratory** equipment and procedures shall be inspected regularly by **AASHTO Re:source** or annually by the **source's** primary **AASHTO Re:source** inspected **laboratory** staff. A copy of the report of the satellite **laboratory** inspection shall be sent to the **Bureau** upon request. The cost of these inspections shall be borne by the source.
- 5.3 REQUIREMENTS FOR QUALIFIED SOURCES**
- 5.3.1 An evaluation of product uniformity based on the **manufacturer's process control samples, independent assurance samples, random split samples, retained**

samples, and **investigative samples** will be conducted by the **Bureau** to verify the **source's laboratory** testing and the emulsified asphalts' **specification** compliance.

- 5.3.2 Unscheduled visits will be made to all **sources** periodically by an **inspector** from the **Bureau**. At this time, the **inspector** shall obtain any of the following types of samples: **acceptance, investigative, independent assurance/random split, or retained**. If one of these emulsified asphalt samples taken at the **source** does not meet any **specification** requirement then it fails, and the **source** will be informed in writing of the failing test result. The **Bureau** and the **source** shall discuss the failure, the root cause of the failure, and determine the immediate actions that need to be taken.
- 5.3.3 The **source's Quality Control Plan** shall list the actions that are triggered by failing test results.
- a) Immediately notify the **Department** and **contractor** of the shipment in question.
 - b) Identify the material or type of emulsified asphalt and the quantity shipped.
 - c) Cease future shipments until the emulsified asphalt complies with the **specifications**.
 - d) Notify the **Department** prior to resuming shipments.
 - e) Implement any mutually agreed upon procedures for the disposition of the material
 - f) If a mutual agreement is not obtained, the **Department** shall have final authority in the decision on **specification** compliance.
- 5.3.4 After a failing test result, the **Source's** production of this recently failed type of asphalt emulsion will be monitored more closely to ensure a proper quality history is maintained. If it is determined that the **source** is not capable of maintaining a positive quality history, then the **source** shall be removed from the Qualified Product List (QPL) of Emulsified Asphalt for that type of asphalt emulsion.
- 5.3.5 A **source** shall be removed from the Qualified Product List (QPL) of Emulsified Asphalt **Sources** if the test results obtained on asphalt emulsion samples indicate a pattern of non-conformance to any **specification** requirement.
- 5.3.6 Copies of bills of lading shall accompany each load and be presented for filing at destination. The bills of lading shall contain the following information:
- a) **Source** tank number from which emulsified asphalt was drawn.
 - b) Sequence number identifying the Certificate of Analysis form.
 - c) Where used (contract number, section, county, etc.).
 - d) Consignee & destination.
 - e) Bill of lading number.
 - f) Date of shipment.
 - g) Particular type of emulsified asphalt.
 - h) Name and location of **source**.
 - i) Weight per gallon at 15.6°C (60°F).
 - j) Gross, tare and net weights.
 - k) Specific identity of material last transported.
- 5.3.7 For diluted asphalt emulsions the following must be included on the bill of lading: the percent asphalt residue of the certified asphalt emulsion, the weight of the undiluted asphalt emulsion and the weight of the additional added water

5.4 REVOCATION OF A SOURCE'S QUALIFICATION

5.4.1 The **Department** may revoke a **source's** qualification for any of the following reasons:

- a) A qualified **source** that fails to meet the **Department's** criteria for qualification status.
- b) A qualified **source** that fails to follow a routine procedure to inspect the transport tanks, trucks, or cars does not make a reasonable attempt to prevent the contamination of emulsified asphalt.
- c) A qualified **source** that fails to follow its **Quality Control Plan** submitted and reviewed by the **Bureau**.

5.4.2 The **source** may re-apply for qualification status at the end of the revocation period. Re-application shall be in writing to the **Bureau** and include the specific steps taken to correct the cause for loss of qualification.

5.5 ACCEPTANCE PROCEDURES

5.5.1 Material will be identified by the bill of lading accompanying the shipment. **Department** field representatives will check the bill of lading of each shipment to determine its identity and **source**. This information will then be compared with data on the current Qualified Product List of Emulsified Asphalt **Sources** to determine the acceptability of the emulsified asphalt.

- (a) If the bill of lading shows a **source** location and qualified product which are on the Qualified Product List of Emulsified Asphalt **Sources**, then emulsified asphalt shall be accepted for use on **State** and **local agency** projects.
- (b) If the bill of lading shows a **source** location or product which is not on the Qualified Product List of Emulsified Asphalt **Sources**, but the bill of lading does contain the **MISTIC** test identification approval number, then the emulsified asphalt shall be accepted and used.
- (c) If the bill of lading shows a **source** location or product which is not on the current Qualified Product List of Emulsified Asphalt **Sources** and does not contain the **MISTIC** test identification approval number, the emulsified asphalt will not be accepted for use on **State** and **local agency** projects.

6.0 DOCUMENTATION

6.1 Test results of **acceptance samples, random split samples, retained samples, independent assurance samples, investigative samples, and process control samples** shall be maintained at the Bureau and shall be made available to authorized agencies upon request and for review by the **source**.

6.2 The **Bureau** will maintain a Qualified Product List of Emulsified Asphalt **Sources** on the **Department's** website. The QPL will include the name of the **source**, the **source** number, the location of the **source**, and the **source's** qualified products. The **Bureau**

will update the QPL when the status of any **source** changes. The approved Qualified Product List of Emulsified Asphalt **Sources** is available at [Emulsified Asphalt](#).

- 6.3 Personnel on projects receiving emulsified asphalt from a **source** whose qualification has been revoked will be notified immediately by the district office.
- 6.4. Copies of bills of lading shall accompany each load. In the case of emulsified asphalts delivered to the project, the bills of lading shall be maintained in the project files.
- 6.5 When emulsified asphalt is used in bituminous plant mixtures, the bills of lading shall be maintained at the mix plant.

7.0 CLOSING NOTICE

- 7.1 Archived versions of this policy memorandum may be examined by contacting the **Bureau**.
- 7.2 The current **Bureau** Chief of Materials has approved this policy memorandum. Signed documents are on file with the **Bureau**.