State of Illinois Department of Transportation Bureau of Materials Springfield

POLICY MEMORANDUM

Revised: June 27, 2025 This Policy Memorandum supersedes number 2-08.3 dated May 8, 2024

2.08.4

TO: REGIONAL ENGINEERS AND HIGHWAY BUREAU CHIEFS, ASPHALT MANUFACTURERS & TERMINAL SOURCES

SUBJECT: CUTBACK ASPHALT AND ROAD OIL QUALIFICATION PROCEDURE

1.0 PURPOSE

To establish a procedure whereby Cutback Asphalt and Road Oil 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 cutback asphalt or road oil to **State** and **Local Agency** projects. A **Source** shall be a cutback asphalt or road oil manufacturing plant that stores large quantities of cutback asphalt or road oil in dedicated permanent storage tanks. The **Department** recognizes that certain **Sources** produce cutback asphalt or road oils by blending materials directly into transport vehicles without the use of permanent storage tanks. Such **Sources** shall be subject to the requirements of this procedure for qualification and **Specification** compliance. A **Source** shall be responsible for the quality and **Specification** compliance of the produced cutback asphalt or road oil.

3.0 REFERENCES

Cutback asphalt and road oil used on **Department** projects must meet the **Specification** requirements of the IDOT **Standard Specifications** for Road and Bridge Construction. Specifically, Articles 1032.07, 1032.08, 1032.09 and 1032.10.

4.0 DEFINITIONS

AASHTO – American Association of State Highway and Transportation Officials.

ASTM – American Society for Testing and Materials now recognized as ASTM International.

AASHTO RE: – 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 cutback asphalt or road oil 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.

CMMS – Construction and Materials Management System. A **Department**-wide database containing construction and materials inspection and test information.

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 Samples (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. The **Department** transitioned from **MISTIC** to **CMMS** in 2022 and is still in process.

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.

Qualification Samples - Annual split samples taken by the **Source** and tested by both the **Bureau Laboratory** and the **Source Laboratory** to evaluate test equipment, procedures and product acceptability.

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 – A 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

Tamper Proof Tape - Tamper Proof Tape is a security product designed to indicate unauthorized access to sealed items. It cannot be removed or reapplied without leaving evidence, such as a "void" or "opened" message. Other characteristics include tape fracturing or breaking when peeled off, preventing reapplication.

5.0 CUTBACK ASPHALT AND ROAD OIL 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, <u>BMPR 101 Acknowledgement by</u> <u>Company.</u>
 - b) A statement that the **Source** agrees to the terms, conditions and performance standards of the Bureau of Material's Policy Memorandum entitled "Cutback Asphalt and Road Oil 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 certification, a Source must have an acceptable quality history. The judgment 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. During this pre-qualification period, cutback asphalt or road oil 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 cutback asphalt or road oil shall accompany each load and shall be presented at destination. The bills of lading shall include information required in Article 5.3.7. The Source shall also note the CMMS (formerly assigned in 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 <u>Cutback Asphalt and Road Oil</u>.

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 types of cutback asphalt and road oil furnished. This certified statement shall include:
 - a. The Company Acknowledgement Statement, if not already on file with the **Department**. Click the following for a link to this statement <u>BMPR 101</u> <u>Acknowledgement by Company</u>.
 - 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 certification and subsequent 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 Submit Qualification Samples as follows: Prior to shipping in a calendar year, the Source shall submit sample(s) of the following to the Bureau Laboratory, if applicable to their certified production capabilities defined by the current Bureau of Materials Qualified Product List for Cutback Asphalt and Road Oil Sources:

One (1) Rapid Curing (RC) Liquid Asphalt defined in 1032.07

One (1) Medium Curing (MC) Liquid Asphalt defined in 1032.08 that utilizes flash point by Tag open cup (AASHTO T79) testing, i.e. MC-30 or MC-70.

One (1) Medium Curing (MC) Liquid Asphalt defined in 1032.08 that utilizes flash point by Cleveland open cup (AASHTO T48) testing, i.e. MC-250, MC-800, or MC-3000.

One (1) Slow Curing (SC) Asphalt defined in 1032.09

One (1) Road Oil Grade (E-#) defined in 1032.10

One (1) Cold Mix (CM) defined in 1032.14

The Qualification Samples shall be submitted to the Bureau Laboratory annually for product qualification and to determine test result correlation between the Source Laboratory and the Bureau Laboratory. The Source test data shall accompany all the Source's Qualification Samples submitted to the Bureau Laboratory.

The **Producer** submitted samples must be representative of each grade, avoiding formulations that are modified beyond the typical production specifications. Samples submitted should reflect materials that are regularly produced and certified for **Department** projects throughout the construction season.

- 5.2.5 Retain all samples taken for **Quality Control** testing for not less than 60 days. Maintain records of **Quality Control** tests 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 on the <u>CBM 3415 Bituminous Product Certificate of</u> <u>Analysis form</u>. 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.
- 5.2.6 Maintain copies of bills of lading and of quantities of cutback asphalt and road oil shipped for a period of at least three years.
- 5.2.7 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 cutback asphalt and road oil 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 AASHTO Re:source 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. 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, Qualification Samples, Random Split Samples, Retained Samples, and Investigative Samples will be conducted by the Bureau to verify the Source Laboratory testing and the materials' Specification compliance.
- 5.3.2 Unscheduled visits will be made to all Sources in person periodically by an Inspector from the Bureau. At this time, the Inspector shall obtain any of the following types of samples: Investigative, Independent Assurance/Random Split, or Retained. If one of these samples taken at Source fails to meet any Specification requirement then the sample will be considered failing. 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 There may be occasions where an in-person visit is not practical; in these cases, a remote inspection can be used at the discretion of the **Department**. If a remote inspection is requested, both the Bureau and Source must be equipped and capable of conducting the inspection virtually. A digital meeting will be initiated by the Bureau via a **Department** approved, secure platform to conduct the remote inspection in real time. Material **Producer** must ensure a stable connection throughout the material **Source** facility to allow for continuous video streaming. The Producer must have a device capable of live streaming the sampling process as it occurs. All sample collection must be conducted in the presence of the **Department** representative, via an uninterrupted video stream, from tank sampling to container sealing. Each sample container must be sealed immediately after collection and Tamper Proof Tape applied over the lid of the sample container. The container must be initialed by the sampling agent, with the date, tank, batch, lot number, and material type clearly labeled on the container. The material **Source** must include all necessary paperwork with the sample. The **Bureau** acknowledges certain materials and circumstances may not allow for remote sampling; the **Department** will determine on a case-by-case basis if remote sampling is appropriate for such materials.

5.3.4 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 cutback asphalt or road oil and the quantity shipped.
- c) Cease future shipments until the cutback asphalt or road oil 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.
- 5.3.5 After a failing test result, the **Source's** production of this recently failed type of cutback asphalt or road oil 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 compliant quality history, then the **Source** shall be removed from the Qualified Product List of Cutback Asphalt and Road Oil for that type of material.
- 5.3.6 The test results obtained on Qualification Samples by the Source Laboratory and the Bureau Laboratory shall be compared to determine differences in testing that may occur between the two laboratories. If it is found that the two laboratories differ significantly or by more than AASHTO's allowed precision for multiple laboratories, then this difference must be resolved to the mutual satisfaction of both laboratories.
- 5.3.7 A **Source** shall be removed from the Qualified Product List of Cutback Asphalt and Road Oil **Sources** if the test results obtained on cutback asphalt or road oil samples indicate a pattern of non-conformance to any **Specification** requirement.

- 5.3.8 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(s) from which material was drawn.
 - b) Sequence number identifying the Certificate of Analysis form.
 - c) Where used (section, county, contract number, etc.)
 - d) Consignee and destination.
 - e) Bill of lading number.
 - f) Date of shipment.
 - g) Type of material shipped.
 - h) Name and location of Source.
 - i) Specific gravity at 15.6° C (60° F).
 - j) Gross, tare, and net weights.
 - k) Specific identity of material last transported.

In addition to the above, the **Source's** copies of the bills of lading representing rack blended loads shall show the actual gallons or percent of each component material delivered.

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 its **Quality Control Plan** submitted and reviewed by the **Bureau**.
 - c) A qualified **Source** that fails to follow a routine procedure to inspect the transport tanks, trucks, or cars and does not make a reasonable attempt to prevent the contamination of materials.
- 5.4.2 The **Source** may re-apply for qualification status at the end of the revocation period. Reapplication 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 type and **Source**. This information will then be compared with data on the current Qualified Product List of Cutback Asphalt and Road Oil **Sources** to determine the acceptability of the cutback asphalt and road oil material.
 - a) If the bill of lading shows a **Source** location and qualified product which are on the Qualified Product List of Cutback Asphalt and Road Oil **Sources**, the cutback asphalt and road oil 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 Cutback Asphalt and Road Oil **Sources**, but the bill of lading does

contain the **CMMS** Test Identification approval number (formerly labeled **MISTIC** Test Identification approval number), the material shall be accepted and used.

c) If the bill of lading shows a Source location or product which is not on the Qualified Product List of Cutback Asphalt and Road Oil Sources and does not contain the CMMS Test Identification approval number (formerly labeled MISTIC Test Identification approval number), the cutback asphalt or road oil will <u>not be accepted</u> for use on State and Local Agency projects.

6.0 DOCUMENTATION

- 6.1 Test results of Qualification Samples, 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 current Qualified Product List of Cutback Asphalt and Road Oil **Sources** on the IDOT website. The list 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 list with any necessary changes. The approved Qualified Product List of Cutback Asphalt and Road Oil **sources** is available at <u>Cutback Asphalt and Road Oil</u>.
- 6.3 Personnel on projects receiving material from a **Source** whose qualification has been revoked will be notified immediately by the **Department** District office.
- 6.4 Copies of bills of lading shall accompany each load delivered to projects shall be maintained by the **Resident Engineer** in the project files.
- 6.5 When cutback asphalt or road oil 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**.