1. **SCOPE**

1.1. **General**

This method applies to the sampling of asphalt materials at points of supply, storage or delivery to determine whether the material meets specifications.

Whenever possible samples will be taken from the sampling device of the delivery unit immediately before or during unloading.

1.2. **Size of Sample**

For routine laboratory examinations take a one litre sample for asphalt cements and cutbacks, and for emulsions take a four litre sample.

From bulk storage take a four litre sample.

2. **APPARATUS AND MATERIALS**

2.1. **Containers**

Containers for cutback asphalts or asphalt cements will be wide-mouth cans with lined screw caps or triple seal friction-top cans.

Containers for emulsified asphalt materials will be wide-mouth jars or bottles made of plastic, or wide-mouth plastic lined cans with lined screw caps, or plastic lined triple-seal friction-top cans.

The size of the containers shall correspond to the amount of sample so that the container is full.

Sample containers for End Product Specification (EPS) contracts will be supplied by the Department.
2.2. **Sampling Devices**

2.2.1. **Tank Truck Submerged Sampling Device**

All tank trucks delivering asphalt materials to the department must be equipped with a submerged asphalt sampling device in proper operating condition. The device shall conform with the requirements of Table 1, except that devices similar in principle may be approved by the Department.

2.2.2. **In Line Sampling Device**

To take a sample from a discharge line, a detachable fitting with a valve that can be used to bleed off the sample must be used.

2.3. **Other Equipment**

Clean cloths or towels are required to wipe container clean.

A container larger than five litres is required to collect material drawn off from sampling device prior to taking sample.

Proper labels and markers are required to ensure the samples are adequately marked.

A pair of insulated gloves or mitts is required for handling most samples.

3. **PROCEDURE**

3.1. **General**

Sampling is as important as testing, and every precaution must be taken to obtain samples that show the true nature and condition of the materials. Samples should be taken to represent as nearly as possible an average of the bulk of the materials and to ascertain the variation in characteristics.

Sampling of asphalt materials should be done as soon as practicable after the material has arrived at plant site, storage site, job destination, or at the time of unloading.

3.2. **Sampling from Sampling Device**

Take the sample by bleeding through the sample valve during the unloading of the approximate middle third of the load.
Before the sample is taken, draw off a minimum of five litres from the sample valve and discard it or dump into storage tank. Ensure the material is flowing freely then collect the sample directly into the sample container.

3.3. **Duplicate Samples**

If two or more samples are to be taken from a sampling device, fill one half of each container in sequence. Complete filling each container in the same sequence.

If duplicate samples are required for lab exchange, obtain five 4-litre samples. The samples should be combined and thoroughly mixed by stirring.

4. **RESULTS AND CALCULATIONS**

Immediately after filling, sealing and cleaning, mark the sampling containers for identification with a suitable marking pencil on the container itself, not on the lid. Tags may also be used for identification if they can be securely fastened to the containers in such a manner that they will not be lost in transit. Do not attach tags to containers by using the lids to secure them.

5. **REPEATABILITY**

5.1. **Preventing Contamination**

Because of the numerous types and grades of asphalt materials that are alternately shipped and stored in the same or similar container, the opportunity for contamination with residual materials or cleaning solvents is always present.

Use new containers, do not wash, rinse or wipe with an oil cloth. If they contain evidence of solder flux, or if they are not clean and dry, do not use them. Make sure top and container fit together tightly.

Take care to prevent the sample from becoming contaminated. Immediately after filling the container tightly and positively, seal it. The filled sample container will not be submerged in solvent, nor will it be wiped with a solvent saturated cloth. If cleaning is necessary, use a dry clean cloth. Do not transfer samples from one container to another except where required by the sampling procedure.
6. **ADDED INFORMATION**

6.1. **Protection of Samples**

Emulsion samples can be damaged by freezing. Samples should be stored and shipped in such a way to prevent freezing.

6.2. **Proper Sample Identification**

The samples will be used for specification enforcement and pay adjustments if required. It is essential that the samples be properly identified. The required identification details are:

<table>
<thead>
<tr>
<th>Project</th>
<th>The Contract Number where applicable.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location</td>
<td>The 10 digits road name, storage tank site, Department yard site or the nearest town.</td>
</tr>
<tr>
<td>Type of Asphalt</td>
<td>e.g. MC30, HF-150S, AC200-300A, etc.</td>
</tr>
<tr>
<td>Asphalt Supplier</td>
<td>The asphalt supplier’s name.</td>
</tr>
<tr>
<td>Delivery No. or Invoice No.</td>
<td>The number found on the supplier’s bill of lading.</td>
</tr>
<tr>
<td>Location to be laid</td>
<td>Indicate the From km-To km location or the road name where the material will be applied if possible.</td>
</tr>
<tr>
<td>Date Sampled</td>
<td>The date the shipment was sampled.</td>
</tr>
<tr>
<td>Sampled by</td>
<td>The person that took the sample.</td>
</tr>
<tr>
<td>Report to</td>
<td>The name of the supervisor responsible for the material.</td>
</tr>
<tr>
<td>Remarks</td>
<td>Describe any special testing required, problems with the material or any concerns.</td>
</tr>
</tbody>
</table>

6.3. **Safety**

Care should be taken in handling hot asphalt materials to prevent serious burns. Fumes from asphalt materials could be explosive or dangerous if inhaled. Sampler should be aware of the Workplace Hazardous Materials Information System (WHMIS) and Dangerous Goods regulations for handling and shipping of the material.
6.4. **Sampler**

The sample should be taken or the sampling procedure supervised by department personnel or designates.

6.5. **References**

ASTM D140
NOTES:
1. Mount in lower half of the bulkhead at least 305mm from the shell and 508mm from bottom of tank.
2. At least 5 litres of asphalt shall be discharged through device prior to taking a sample.

Table 1

<table>
<thead>
<tr>
<th>Ref. No.</th>
<th>Description</th>
<th>No. Req.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>19mm(3/4&quot;) &quot;Vogt&quot; P-9844 Steel Angle Valve or similar, panel mounted</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>19mm(3/4&quot;) Steel or Mall. Iron 90 Elbow</td>
<td>1</td>
</tr>
<tr>
<td>3</td>
<td>19mm(3/4&quot;) Steel or Mall. Iron 45 Elbow</td>
<td>1</td>
</tr>
<tr>
<td>4</td>
<td>Asbestos Gaskets Snug on Thread or Wound with Yarn</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>19mm(3/4&quot;) 150# Screwed M.I. Locknut</td>
<td>2</td>
</tr>
<tr>
<td>6</td>
<td>19mm x 88mm (3/4&quot; x 3 1/2&quot;) +Parallel Threaded Steel Pipe Nipple (Cut From 19mm (3/4&quot;) Std. Tank Nipple If Otherwise Unobtainable)</td>
<td>1</td>
</tr>
<tr>
<td>7</td>
<td>19mm x 75mm (3/4&quot; x 3&quot;) Threaded Steel Pipe Nipple</td>
<td>2</td>
</tr>
<tr>
<td>8</td>
<td>19mm (3/4&quot;) Mall. Iron Pipe Cap</td>
<td>1</td>
</tr>
</tbody>
</table>