Pay for Performance Dispute Resolution
Appendix E.5

Effective Date: April 1, 2010
Revised: October 1, 2017

A. Scope

This document describes the two methods for disputing PFP test results and the requirements for each. It also provides cost information for dispute testing and instructions for submitting dispute resolution samples to the Central Bureau of Materials.

B. Dispute Resolution

Dispute resolution testing will be permitted when the Contractor submits their split sample test results prior to receiving Department split sample test results. Dispute resolution testing shall be according to Method 1 (pay parameter dispute) or Method 2 (individual parameter dispute). If dispute resolution is necessary, the Contractor shall submit a request in writing within four working days of receipt of the results of the quality index analysis for the lot. The Engineer will document receipt of the request. The request shall specify Method 1 or Method 2. The Central Bureau of Materials (CBM) laboratory will be used for dispute resolution testing.

1. Method 1:

Method 1 dispute resolution will be allowed when Contractor and Department split test results exceed the precision limits shown in Table 1. Dispute resolution test results for G_{mm}, G_{mb}, and asphalt binder content will replace the original Department G_{mm}, G_{mb}, and asphalt binder content test results. Method 1 shall be used in cases where Department test results are outside acceptable limits shown in the Special Provision for "Hot Mix Asphalt - Pay For Performance Using Percent Within Limits - Jobsite Sampling (BDE).

Table 1

Test Parameter	Limits of Precision
Voids	1.0 %
Field VMA	1.0 %
Ratio - Dust / Asphalt Binder	0.2
Core Density	1.0 %

2. Method 2:

Method 2 dispute resolution will be allowed when: 1) the Contractor participates and complies with the AASHTO re:source Proficiency Sample Program testing protocol as specified herein and 2) the Contractor and Department **adjusted** split test results, as described herein, exceed the precision limits shown in Table 2. The dispute resolution test/s will only be performed for the parameter/s (G_{mm}, G_{mb}, or asphalt content) exceeding precision limits. The dispute resolution test result/s will replace the original Department result/s for the disputed parameters.

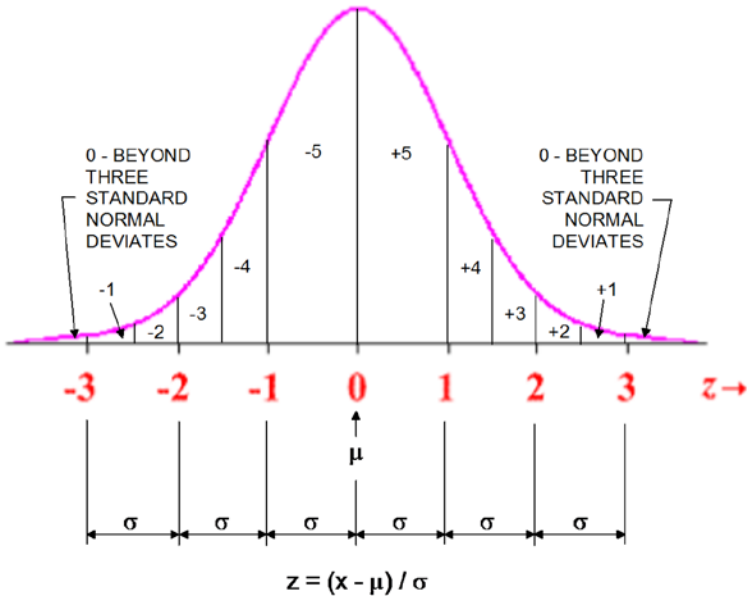
Table 2

Test Parameter	Limits of Precision
G_{mm}	0.008
G_{mb} 1/	0.012
Asphalt Binder	0.2

Note 1/ Both core G_{mb} and gyratory G_{mb}.

a. Proficiency Sample Testing

To qualify to dispute using Method 2, a QC laboratory must participate in the AASHTO re:source's (formerly AMRL) Proficiency Sample Program (PSP). PSP samples are distributed annually to federal, state, independent, commercial, and research testing laboratories. AASHTO re:source scores proficiency test samples by fitting a standard normal distribution to the data from all laboratories (with outliers eliminated). Laboratories whose results fall within one standard normal deviation from the mean are assigned a numerical score of "5." Laboratories whose results fall between 1 and 1½ standard normal deviations from the mean are assigned a score of "4," and the ratings are further decreased one point for each half standard normal deviate thereafter. A positive sign (+) indicates the lab result is above the population mean, and a negative sign (-) indicates the lab result is below the population mean. This system can be depicted graphically, as follows:



For the Contractor to dispute individual test results, G_{mm}, G_{mb}, and/or asphalt content, the following shall be met:

1) The Contractor's laboratory that conducts Quality Control testing shall participate in the appropriate AASHTO re:source PSP;

2) Within 60 calendar days of the date of issuance of a proficiency sample report, the Contractor shall submit each laboratory's proficiency sample report/s to the Department;

3) The Contractor's laboratory that conducts Quality Control testing received a proficiency score of 3 or better on the respective test; and

4) The adjusted split test results for the respective test, G_{mm}, G_{mb}, and asphalt content, exceed the precision limits listed in Table 2. The adjusted split test results account for any offset between

the Department and Contractor test results. The adjusted split test results will be determined for each lot by:

a) For each sublot, subtract the Department's result from the Contractor's result to determine the initial split;

b) For each lot, calculate the average initial split;

c) For each sublot, subtract the average initial split for the lot from the initial split result to determine the adjusted split.

d) Compare the adjusted split precision limits listed in Table 2 to determine whether sample qualifies for dispute testing.

Table 3.

EXAMPLE ADJUSTED SPLIT RESULTS CALCULATION

G_{mm}				
Sublot	Contractor	IDOT	Initial Split	Adjusted Split
1-1	2.456	2.454	0.002	-0.001
1-2	2.458	2.455	0.003	0.000
1-3	2.462	2.466	-0.004	-0.007
1-4	2.471	2.463	0.008	0.005
1-5	2.459	2.461	-0.002	-0.005
1-6	2.474	2.462	0.012	0.009
1-7	2.463	2.465	-0.002	-0.005
1-8	2.463	2.461	0.002	-0.001
1-9	2.472	2.468	0.004	0.001
1-10	2.466	2.464	0.002	-0.001
Average Initial Split			0.003	

If a Contractor laboratory receives a score of 2 or worse on a test, the Contractor shall in order to retain the ability to dispute individual test results, within 60 calendar days of the date of issuance of a proficiency sample report:

1) Conduct a root cause analysis to determine the possible reason(s) for the results;

2) Correct any issues that are uncovered in the investigation;

3) Document investigation and corrective actions; and

4) Submit AASHTO Accreditation Program (AAP) Proficiency Sample Corrective Action Report to the Department.

Consecutive occurrences of a laboratory receiving a score of 2 or worse on a test or nonparticipation in the most recent PSP shall result in the Contractor no longer being able to dispute individual test results until the Contractor receives a satisfactory score on the next regularly scheduled PSP or on an extra proficiency sample. Extra proficiency samples are surplus samples that were produced for a regularly scheduled round of testing and are available for purchase by contacting AASHTO re:source.

The Department will report laboratory scores for all participants for informational purposes.

Density cores for dispute resolution testing shall be taken simultaneously as the random density core. The density core for dispute resolution testing shall be taken within 1 ft (300 mm) longitudinally of the random density core and at the same transverse offset. Density dispute resolution will replace original density test results. For density disputes, the Contractor shall use the Department's running average for G_{mm} when determining compliance with the limits of precision.

If three or more consecutive mixture sublots or G_{mm} results are contested, corresponding density results will be recalculated with the new G_{mm}.

C. Dispute Testing Pay Schedule

The lot pay factor for the lot under dispute resolution will be recalculated. If the recalculated lot pay factor is less than or equal to the original lot pay factor, laboratory costs listed below will be borne by the Contractor.

Table 4

Test	Cost
Method 1 Mix Testing	$1000 / sublot
Core Density	$300 / core
G_{mm}	$200
G_{mb}	$500
Asphalt Content	$500

D. Dispute Submittal Instructions

When submitting HMA mix and/or core samples include the following:

1. All District and Contractor split sample test results on attached “PFP Dispute Resolution Form”,
2. Submit entire dispute resolution HMA mix split sample,
3. Cores must be split or sawed to lift testing thickness,
4. QC Package template and dailies sent electronically for mix being tested.

Send sample and requested documentation to:

Illinois Department of Transportation
Central Bureau of Materials
Hot Mix Asphalt Laboratory
126 E. Ash Street
Springfield, Illinois 62704-4766
Attention: Joe Rechner *Joseph.Rechner@illinois.gov*

Any sample sent to CBM without the above listed information will not be processed until all requested information is received.

Illinois Department of Transportation

PFP DISPUTE RESOLUTION

Method 1 ☐ Parameter Disputed: VMA ☐ Voids ☐ D/AC ☐

Method 2 ☐ Parameter Disputed: G_{mb} ☐ G_{mm} ☐ AC ☐

Contract # : _____

Dist. Lab ID # : _____

Mix Design # : _____

Mix Code #: _____

Producer #: _____

CBM Lab #: _____

Wt. for Gmb: _____

Sampled From: Truck ☐ MTD ☐ Road ☐

Sample Date: _____

Date Received: _____

Mix Lot _____ Sublot _____

Sieve Size	**District** % Passing	**Contractor** % Passing	**CBM** % Passing
1 ½ in (37.5 mm)			
1 in (25 mm)			
¾ in (19 mm)			
½ in (12.5 mm)			
3/8 in (9.5 mm)			
#4 (4.75 mm)			
#8 (2.36 mm)			
#16 (1.18 mm)			
#30 (.60 mm)			
#50 (.30 mm)			
#100 (.15 mm)			
#200 (.075 mm)			
Asphalt Binder %			
Dust/Asphalt Binder Ratio			
G_{mm}			
G_{mb}			
% Voids			
G_{sb}			
Field VMA			

CORES

	District	**Contractor**	**CBM**
Core #	Gmm†	Gmm	Gmm
Core #	Gmb	Gmb	Gmb
Core #	Density %	Density %	Density %

†This shall be the G_{mm} used for density calculation.

This Page Reserved