



FHWA Update

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Quality Assurance Program

Definition:

- 1) All those planned and systematic actions necessary to provide confidence that a product or facility will perform satisfactorily in service

- 2) Making sure the quality of a product is what it should be



Quality Assurance Program





Quality Assurance Program

Acceptance Procedures

- Once the material is in place it stays in place
 - Price adjustments
 - Rejection removal and replacement is difficult

- Performance risk when we accept and pay for marginally acceptable material



Quality Assurance Program

Regulatory requirement, but why is materials testing important?

Assures that materials meet specifications

Approximately 50% of the construction dollar is spent for the PURCHASE of materials

Reduces risk of fraud - Protects public interest



Quality Assurance Program

- 1960s Blatnick Investigations
 - Early Interstate Construction Issues
 - Fraud/corruption
 - Procedures not followed
 - NBC Nightly news
 - Proposed to give interstate program administration to USACE
 - Questioned Oversight of Federal Taxpayers Money



Quality Assurance Program

Representative John A. Blatnik (D-Mn.)

"Congressman after Congressman got up on the floor of the House and made wild speeches, frightening speeches . . . saying we had a shortage of funds because the States were playing fancy-free and foot-loose with the taxpayers' dollars."



Quality Assurance Program

- FHWA regularly reviews QA Program

- Continual improvement
 - QV sampling frequency
 - Validation of QC test results
 - PWL specifications

- Adequate, qualified staff required to administer



Compliance Assessment Program

 <p>U.S. Department of Transportation Federal Highway Administration</p>		<h2>Material Quality Review Guide</h2> <p>FHWA Compliance Assessment Program</p>	
FHWA DIVISION	PMI TEAM ID#	DATE OF REVIEW	FEDERAL PROJECT # [REDACTED]
	[REDACTED]	[REDACTED]	STATE PROJECT # [REDACTED]
<input type="checkbox"/> INTERSTATE <input type="checkbox"/> NHS <input type="checkbox"/> NON-NHS		<input type="checkbox"/> STATE ADMINISTERED <input type="checkbox"/> LOCALLY ADMINISTERED	
PROJECT DESCRIPTION			
[REDACTED]			
INDIVIDUAL (S) CONDUCTING REVIEW			
[REDACTED]			
SUPERVISOR REVIEW			
NAME: [REDACTED]			
DATE: [REDACTED]			
ADDITIONAL CAP REVIEW GUIDE(S) USED ON THIS REVIEW (LIST ALL)			



Quality Assurance Program





Quality Assurance Program

- Regulatory Requirement 23 CFR

- Quality Assurance Program Requirements
 - Acceptance Program
 - Independent Assurance Program



Acceptance Program

- Regulatory Requirement 23 CFR
- Frequency Schedules Required
- Random Sample Locations Required
- Attributes To Be Tested/Inspected

- Use of Contractor QC Tests (WI)



Acceptance Program

Decision to Use Contractor Test Results

Requires:

- Random Sample Locations (Both QC & QV)
- Qualified Personnel (HTCP)
- Validated by Independent QV Tests
- QC Sampling/Testing Evaluated by IA Program



Acceptance Program

Decision to Use Contractor Test Results

- Basis for Acceptance for Pay
- Non-Performance of Testing
- Missed Tests not Acceptable



CMM 8-30.13

Table 2 General QMP – QC Testing Problems Encountered

Problem Encountered	Action Taken
<p>Non-random tests. Moving of test location.</p>	<p>Administer a pay reduction using the Non-performance of QMP administrative item, based on historical costs of QMP sampling and testing or the contractor's documented costs. Require resampling and testing of the material in a random location. If random sampling cannot be done, deduct 10% of the material bid item price for the amount of material represented and allowed to remain in-place.</p>
<p>Improper: Sampling, testing, or documentation methods. Testing equipment.</p>	<p>Require resampling and testing using proper methods. If retesting cannot be done, administer a pay reduction equal to 10-100% of testing costs using the Non-performance of QMP administrative item, based on historical costs of QMP sampling and testing or the contractor's documented costs. Also, deduct 10 –50% of the material bid item price for the amount of material represented and allowed to remain in-place.</p>
<p>Calculation error.</p>	<p>Correct the calculation. Address non-conforming material separately.</p>
<p>Tester not certified. ACT certified w/o direct supervision. Laboratory not qualified. Too few tests. Tester not present.</p>	<p>Administer a pay reduction using the Non-performance of QMP administrative item, based on historical costs of QMP sampling and testing or the contractor's documented costs. Require resampling and testing using a certified tester and a qualified laboratory. If retesting cannot be done, deduct 10 –50% of the material bid item price for the amount of material represented and allowed to remain in-place.</p>
<p>No tests.</p>	<p>Administer a pay reduction using the Non-performance of QMP administrative item, based on historical costs of QMP sampling and testing or the contractor's documented costs. Require removal and replacement of the material unless the contractor can demonstrate, in a manner acceptable to the engineer, that the material complies with the specification. If compliance cannot be demonstrated and the engineer allows the material to remain in-place, deduct 50% of the represented material bid item.</p>



Independent Assurance Program

- Regulatory Requirement 23 CFR
- Unbiased & Independent Evaluation of all Sampling & Testing procedures
- Both Equipment & Personnel Evaluated
- Project Basis or System Basis
- Annual Report Required



Summary





Summary

Regulatory requirement, but why is materials testing important?

Assures that materials meet specifications

Approximately 50% of the construction dollar is spent for the PURCHASE of materials

Reduces risk of fraud - Protects public interest



FHWA

www.fhwa.dot.gov

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FHWA National Quality Assurance Assessment 2014: The responses for this Assessment will be based on the standard practices used by a State DOT on a majority of work on Federal-aid projects that are let by the State DOT

Question #	Question	Weight			State WI	
	Level (A=Advanced, I=Intermediate and O=Opportunity)			2012 Results		2014 Update
	Total Rating (Total Score / Total Potential Score)				78.2%	
	Total Score				52.4	
	Total Potential Score (67 if Question 9 is Y, 56 if Question 5 is Y, else 54)	67			67	67
1	Does the State use an electronic materials management system that includes all test results (State and/or Contractor) used in the acceptance process?	3	Y	3	Y	3
2	Does the State have a documented process for controlling the location of random sampling?	7	Y	7	Y	7
3	Does the State control the locations for verification testing and take immediate possession of samples?	7	Y	7	Y	7
Quality Characteristics used in Acceptance						
4	Which of the following does the State use for Hot Mix Asphalt (HMA) pavement acceptance? (Total weight 2)	2				
	Asphalt Binder Content, Pb	0.3	N	0.0	N	0.0
	Voids in Total Mix, Va	0.5	Y	0.5	Y	0.5
	Voids in Mineral Aggregate, VMA	0.2	Y	0.2	Y	0.2
	In-place density	0.5	Y	0.5	Y	0.5
	Smoothness (ex. IRI)	0.5	Y	0.5	Y	0.5
5	Which of the following does the State use for Concrete pavement acceptance? (Total weight 2)	2				
	Strength (either compressive or flexural)	0.4	Y	0.4	Y	0.4
	Pavement Thickness	0.4	Y	0.4	Y	0.4
	Entrained Air Content	0.4	Y	0.4	Y	0.4
	Permeability	0.4	N	0.0	N	0.0
	Smoothness (ex. IRI)	0.4	Y	0.4	Y	0.4
6	Which of the following does the State use for Concrete Bridge Deck acceptance? (Total weight 2)	2				
	Strength (either compressive or flexural)	0.5	Y	0.5	Y	0.5
	Entrained Air Content	0.5	Y	0.5	Y	0.5
	Permeability	0.5	N	0.0	N	0.0
	Smoothness (ex. IRI)	0.5	N	0.0	N	0.0
7	Are the payment lot sizes between 7 and 20 tests for HMA?	1	N	0.6	N	0.6
	Are the payment lot sizes between 7 and 20 tests for PCCP?		Y		Y	
8	Does the State use PWL/ PD type specifications for payment for HMA?	3	N	2	N	2
	Does the State use PWL/ PD type specifications for payment for PCCP?		Y		Y	
9	Does State include contractors tests in acceptance decision for HMA? (Total weight 7 - if applicable)	7	Y	0	Y	0
	Does State include contractors tests in acceptance decision for PCCP? (Total weight 7 - if applicable)		Y		Y	
	If the State uses contractor tests in the acceptance decision does the State verify the contractor test results with F& t tests for HMA using a minimum of five (5) State results to 7 -20 contractor results?		N		N	
	If the State uses contractor tests in the acceptance decision does the State verify the contractor test results with F& t tests for PCCP using a minimum of five (5) State results to 7 -20 contractor results?		N		N	
10	Has the State performed a risk analysis on the PWL acceptance program?	1	N	0	N	0
11	Does the State use continuous equations for payment adjustments for HMA?	3	N	2	N	2
	Does the State use continuous equations for payment adjustments for PCCP?		Y		Y	
12	Has the State used data from the National Transportation Product Evaluation Program (NTPEP) when developing qualified product lists?	1	Y	1	Y	1
13	Does your State sample material at the closest point to incorporation into the project for HMA?	1	N	0.5	N	0.5
	Does your State sample material at the closest point to incorporation into the project for PCC?		Y		Y	
14	Are 75% or more of the materials utilized on the NHS accepted using the State's standard QA system verses a small quantity system?	3	Y	3	Y	3
15	What type of approach is used by your State for Independent Assurance?	5		3		3
	Does the State use a System approach with an Annual Report that shows that the Agency covered at least 90 percent of the technicians once a year?		N		N	
	Does the State use a System approach with an Annual Report that shows that the Agency covered at least 75 percent of the technicians once a year?		Y		Y	
16	Does the State have a formal dispute resolution process that includes samples that are in the custody of the State and are analyzed in an unbiased manner?	7 if Question 9 is Yes 3 if Question 9 is No	Y	7	Y	7
17	Are the personnel that review and approve the State and Contractor field laboratories approved by a higher accreditation program?	5	Y	5	Y	5
18	Does the State qualify sampling and testing personnel through a program that includes formal classroom training of sampling and testing procedures and a written examination along with testing to demonstrate proficiency in the following areas?	7		7		7
	HMA		Y		Y	
	Concrete		Y		Y	
	Soils		Y		Y	
Unrated questions						
19	How many Design-Build projects have been under construction in your state within the past 3 years?					
20	How does your State handle Quality Assurance on LPA Federal Aid projects on the NHS?					

Question #	Question
1	Does the State use an electronic materials management system that includes all test results (State and/or Contractor) that are used in the acceptance process? Yes <input type="checkbox"/> No <input type="checkbox"/>
Wt. 3	<p>As part of a good QA program the State should develop an electronic materials management system to store and analyze data to develop and modify specification limits. All project produced test results used in the acceptance decision are needed to provide the data when addressing specification limits.</p> <p>Criteria: Electronic Management System should include the following:</p> <ul style="list-style-type: none"> ➤ A single electronic database ➤ Containing all test results used in the acceptance decision (Contractor and State) <p>Score:</p> <ul style="list-style-type: none"> ➤ 3 if both of the criteria are met ➤ 0 if all of the criteria have not been met
2	Does the State have a documented process for controlling the location of random sampling? Yes <input type="checkbox"/> No <input type="checkbox"/>
Wt. 7	<p>As part of a good QA program the State needs to define procedures to obtain random locations for sampling materials on HMA and PCC and procedures for not letting the Contractor know of the sampling locations until the actual sampling or testing is to be conducted.</p> <p>Criteria: Verification programs should include the following:</p> <ul style="list-style-type: none"> ➤ Random numbers for field verification are generated ➤ Random locations are not provided to the Contractor until the actual sampling or testing is to be conducted. <p>Scoring</p> <ul style="list-style-type: none"> ➤ 7 if both of the criteria are included in the QA Program ➤ 0 if all of the criteria have not been met
3	Does the State control the locations for verification testing and take immediate possession of the samples? Yes <input type="checkbox"/> No <input type="checkbox"/>
Wt. 7	<p>As part of a good QA program the State needs to control locations for verification testing and maintain of the chain of custody of verification samples to minimize the switching of samples by the Contractor.</p> <p>Criteria: Verification programs should include the following:</p> <ul style="list-style-type: none"> ➤ Locations for sampling are controlled by State personnel ➤ Development and implementation of procedures to ensure that samples are maintained in the custody of the State. <p>Scoring</p> <ul style="list-style-type: none"> ➤ 7 if both of the criteria are included in the QA Program ➤ 0 if all of the criteria have not been met
4	Which of the following does the State use for Hot Mix Asphalt (HMA) pavement acceptance? Binder Content (P_b) <input type="checkbox"/> Air Voids in Total Mix (V_a) <input type="checkbox"/> Voids in Mineral Aggregate (VMA) <input type="checkbox"/> In-Place Density <input type="checkbox"/> Smoothness (IRI, PI) <input type="checkbox"/>
Wt. 2	<p>The recommended quality characteristics for use with Hot Mix Asphalt for acceptance. Partial credit will be provided for each of the characteristics with the following breakdown.</p> <p>Scoring:</p> <ul style="list-style-type: none"> ➤ Binder Content (P_b) - 0.3 ➤ Air Voids (V_a) - 0.5 ➤ VMA - 0.2 ➤ In-Place Density - 0.5 ➤ Smoothness - 0.5

5	Which of the following does the State use for Portland Cement Concrete (PCC) pavement acceptance? Strength (compressive or flexural) <input type="checkbox"/> Thickness <input type="checkbox"/> Entrained Air Content <input type="checkbox"/> Permeability <input type="checkbox"/> Smoothness (IRI, PI) <input type="checkbox"/>
Wt. 2	<p>The recommended quality characteristics for use with Portland Cement Concrete for acceptance. Partial credit will be provided for each of the characteristics with the following breakdown.</p> <p>Scoring:</p> <ul style="list-style-type: none"> ➤ Strength - 0.4 ➤ Thickness - 0.4 ➤ Air Content - 0.4 ➤ Permeability - 0.4 ➤ Smoothness - 0.4 <p>For those State's that do not have a PCC pavement standard specification, this question was not included in the overall scoring.</p>
6	Which of the following does the State use for Concrete Bridge Deck acceptance? Strength (compressive or flexural) <input type="checkbox"/> Entrained Air Content <input type="checkbox"/> Permeability <input type="checkbox"/> Smoothness (IRI, PI) <input type="checkbox"/>
Wt. 2	<p>The recommended quality characteristics for use with Concrete Bridge Deck for acceptance. Partial credit will be provided for each of the characteristics with the following breakdown.</p> <p>Scoring:</p> <ul style="list-style-type: none"> ➤ Strength - 0.5 ➤ Air Content - 0.5 ➤ Permeability - 0.5 ➤ Smoothness - 0.5
7	<p>Are the payment lot sizes for HMA between 7 and 20 tests? Yes <input type="checkbox"/> No</p> <p>AND</p> <p>Are the payment lot sizes for PCCP between 7 and 20 tests? Yes <input type="checkbox"/> No</p>
Wt. 1	<p>Payment lot size should be between 7 and 20 to more accurately pay the contractor for the quality that the contractor actually produced or constructed.</p> <p>Scoring: (Partial Credit Question)</p> <ul style="list-style-type: none"> ➤ 1 if payment lot sizes are between 7 and 20 tests for both HMA and PCCP activities ➤ 0.6 if payment lot sizes are between 7 and 20 tests for either HMA or PCCP activities ➤ 0 if payment lot sizes are not between 7 and 20 tests for HMA and PCCP activities <p>For those State's that do not have a PCC pavement standard specification, this question will be based only on the lot size for HMA and the score will be either 1 or 0.</p>
8	<p>Does the State use PWL/PD type specifications for HMA for payment? Yes <input type="checkbox"/> No</p> <p>AND</p> <p>Does the State use PWL/PD type specifications for PCCP for payment? Yes <input type="checkbox"/> No</p>
Wt. 3	<p>Determining the acceptability of materials and construction activities by the use of statistical specifications that control the center and spread of the data is recommended to be part of a State's QA program.</p> <p>Scoring: (Partial Credit Question)</p> <ul style="list-style-type: none"> ➤ 3 if PWL/PD type specifications are being used for both HMA and PCCP activities ➤ 2 if PWL/PD type specifications are being used for either HMA or PCCP activities ➤ 0 if PWL/PD type specifications are not being used for HMA or PCCP activities <p>For those State's that do not have a PCC pavement standard specification, this question will be based on whether PWL/PD type specifications are used for HMA and the score will be either 3 or 0.</p>

9	<p>If the State uses contractor tests in the acceptance decision for HMA does the State verify the contractor test results with F& t tests for HMA using a minimum of 5 State results to 7-20 contractor results? Yes <input type="checkbox"/> No <input type="checkbox"/> N/A</p> <p>AND</p> <p>If the State uses contractor tests in the acceptance decision for PCCP does the State verify the contractor test results with F& t tests for PCCP using a minimum of 5 State results to 7-20 contractor results? Yes <input type="checkbox"/> No <input type="checkbox"/> N/A</p>
Wt. 7	<p>For States using Contractor's tests in the acceptance decision, data validation using statistical tests is needed to determine if both the Contractor's test results and the States verification test results are from the same population. In order to insure at least a 50 % chance of detecting a difference that actually exists, a minimum of 5 State tests are needed to compare to 7 to 20 Contractor tests. If more than 20 Contractor's tests are used in the validation process, the Contractor can change there process without being detected.</p> <p>Criteria: If F& t comparisons contain the minimum number of State and Contractor tests</p> <p>Scoring: (Partial Credit Question)</p> <ul style="list-style-type: none"> ➤ 7 if F& t criteria is met for both HMA and PCCP activities ➤ 5 of F&t criteria is met for either HMA or PCCP activities ➤ 0 if F& t criteria is not met for HMA and PCCP activities <p>For those State's that do not utilize Contractors tests in the acceptance decision this question is not included in the overall scoring.</p> <p>For those State's that only use contractor tests in the acceptance decision for either HMA or PCC pavements, this question will be based only on that material and the score will be either 7 or 0.</p>
10	<p>Has the State performed a risk analysis on the PWL acceptance program? Yes <input type="checkbox"/> No <input type="checkbox"/></p>
Wt. 1	<p>As part of a good QA program determining the risk to both the State and Contractor of accepting poor material or rejecting good materials needs to be accomplished.</p> <p>Scoring:</p> <ul style="list-style-type: none"> ➤ 1 if a risk analysis been completed ➤ 0 if a risk analysis has not been completed
11	<p>Does the State use continuous equations for HMA for payment adjustments? Yes <input type="checkbox"/> No <input type="checkbox"/></p> <p>AND</p> <p>Does the State use continuous equations for PCCP for payment adjustments? Yes <input type="checkbox"/> No <input type="checkbox"/></p>
Wt. 3	<p>As part of a good QA program, payment decisions should be determined by the use of continuous equations to reduce the potential for fraud and abuse especially when Contractor's tests are being used in the acceptance decision.</p> <p>Scoring: (Partial Credit Question)</p> <ul style="list-style-type: none"> ➤ 3 if continuous equations are used for both HMA and PCCP activities ➤ 2 if continuous equations are used for either HMA or PCCP activities ➤ 0 if continuous equations are not used for HMA and PCCP activities <p>For those State's that do not have a PCC pavement standard specification, this question will be based on whether continuous equations are used for HMA and the score will be either 3 or 0.</p>
12	<p>Has the State used data from the National Transportation Product Evaluation Program (NTPEP) when developing qualified product lists? Yes <input type="checkbox"/> No <input type="checkbox"/></p>
Wt. 1	<p>As part of the State acceptance program, the data from the NTPEP can be utilized as part of the State's evaluation process for approving manufactured materials. The utilization of the NTPEP allows for the reduction of State testing resources.</p> <p>Scoring:</p> <ul style="list-style-type: none"> ➤ 1 if the NTPEP is being utilized ➤ 0 if the NTPEP is not being utilized

13	Does your State sample material at the closest point prior to the incorporation into the project? Yes <input type="checkbox"/> No <input type="checkbox"/>
Wt. 1	As part of the State acceptance program, are materials being sampled at the last point prior to being incorporated into the project? Scoring: (Partial Credit Question) <ul style="list-style-type: none"> ➤ 0.5 if Hot Mix Asphalt is sampled after discharge from the hauling vehicle ➤ 0.5 Portland Cement Concrete: if a portion of the concrete is sampled from the end of the pump line for structural concrete, and from ahead of the paver on the grade for concrete pavement ➤ 0 if the criteria are not met
14	Are 75% or more of the materials accepted using the state's standard QA system verses a small quantity system? Yes <input type="checkbox"/> No <input type="checkbox"/>
Wt. 3	As part of a good QA program, the State standard QA program with appropriate sampling and testing is used rather than visual inspections for at least 75 percent of materials. Scoring: <ul style="list-style-type: none"> ➤ 3 if no more than 25% of the materials is visually accepted ➤ 0 if more than 25% of the materials is visually accepted
15	Does the State use a System approach with an Annual Report that shows that the Agency covered at least <u>90</u> percent of the technicians once a year? Yes <input type="checkbox"/> No <input type="checkbox"/> OR Does the State use a System approach with an Annual Report that shows that the Agency covered at least <u>75</u> percent of the technicians once a year? Yes <input type="checkbox"/> No <input type="checkbox"/>
Wt. 5	As part of a required QA program, Independent assurance is needed to ensure that the personnel doing sampling and testing are able to perform the tests accurately. Criteria: System approach with an annual report showing at least 90 percent of the technicians are reviewed once a year Scoring: (Partial Credit Question) <ul style="list-style-type: none"> ➤ 5 if the system approach was used and 90 percent of the technicians were reviewed ➤ 3 if the system approach was used and 75 percent of the technicians were reviewed ➤ 0 if the criteria was not met
16	Does the State have a formal materials testing dispute resolution process that includes samples that are in the custody of the State and are analyzed in an unbiased manner? Yes <input type="checkbox"/> No <input type="checkbox"/>
Wt. 3/7	A material testing dispute resolution process is needed to reduce the risk related to inaccurate test results and is especially needed when Contractor's tests are being used in the acceptance decision. Criteria: Dispute resolution process needs to include the following: <ul style="list-style-type: none"> ➤ The State has custody of samples ➤ The dispute resolution process is written and is included in the State's QA program documents ➤ The dispute resolution process includes testing by alternative laboratories Note: Different weights are assigned depending on whether contractor's tests are used in the acceptance decision. Scoring - State testing only: <ul style="list-style-type: none"> ➤ 3 if all three criteria are included in the QA Program ➤ 0 if all of the criteria have not been met Scoring – Contractor tests used in the acceptance decision: <ul style="list-style-type: none"> ➤ 7 if all three criteria are included in the QA Program ➤ 0 if all of the criteria have not been met

17	<p>Are the personnel that review and approve the State and Contractor field laboratories approved by a higher accreditation program? Yes <input type="checkbox"/></p> <p>No <input type="checkbox"/></p>									
Wt. 5	<p>As part of a good QA program, checks and balances for laboratory approvals should include non-project personnel approving field laboratories to reduce the potential that the laboratories don't meet minimum standards.</p> <p>Criteria: Examples of non-project personnel include:</p> <ul style="list-style-type: none"> ➤ State Central laboratory ➤ District laboratory ➤ Region laboratory ➤ AMRL <p>Scoring:</p> <ul style="list-style-type: none"> ➤ 5 if non-project personnel are used ➤ 0 project personnel are used 									
18	<p>Does the State qualify sampling and testing personnel through a program that includes formal classroom training of sampling and testing procedures and a written examination along with testing to demonstrate proficiency for the following materials? <input type="checkbox"/></p> <table border="0" style="width: 100%;"> <tr> <td style="width: 150px;">HMA</td> <td>Yes</td> <td>No</td> </tr> <tr> <td>Concrete</td> <td>Yes</td> <td>No</td> </tr> <tr> <td>Soils</td> <td>Yes</td> <td>No</td> </tr> </table>	HMA	Yes	No	Concrete	Yes	No	Soils	Yes	No
HMA	Yes	No								
Concrete	Yes	No								
Soils	Yes	No								
Wt. 7	<p>As part of a good QA program, a personnel qualification program is needed for sampling and testing to reduce the potential risk of inaccurate testing.</p> <p>Criteria: Qualification Programs should include the following:</p> <ul style="list-style-type: none"> ➤ Formal Classroom training on sampling and testing procedures ➤ Written examination ➤ Demonstration of testing proficiency <p>Scoring: (Partial Credit Question)</p> <ul style="list-style-type: none"> ➤ 7 if all three criteria are met for all three material types ➤ 5 if all three criteria are met for two of the material types ➤ 0 if all three criteria are met for fewer than two material types 									



U.S. Department
of Transportation
**Federal Highway
Administration**

Material Quality Review Guide

FHWA Compliance Assessment Program

FHWA DIVISION	PMI TEAM ID#	DATE OF REVIEW	FEDERAL PROJECT #	STATE PROJECT #
<input type="checkbox"/> INTERSTATE <input type="checkbox"/> NHS <input type="checkbox"/> NON-NHS		<input type="checkbox"/> STATE ADMINISTERED <input type="checkbox"/> LOCALLY ADMINISTERED		
PROJECT DESCRIPTION				
INDIVIDUAL (S) CONDUCTING REVIEW				
SUPERVISOR REVIEW				
NAME:				
DATE:				
ADDITIONAL CAP REVIEW GUIDE(S) USED ON THIS REVIEW (LIST ALL)				
Review Guide is only applicable to Federal-aid highway projects on the National Highway System				
<ol style="list-style-type: none"> Complete all questions in the CAP Review Guide. Do not modify questions. Additional Division Specific questions may be added at the bottom of the guide. Provide comments for each NO, N/A or Don't Know answer. Use answers and comments from each CAP Review Guide for local trending and analysis. Directly verify all answers with source documentation. Ensure source documentation is retained by the Division or State and available as necessary for quality assurance reviews or audits. Reviewers should use judgment on large projects, in terms of how many items, tests or days of production to review to assess compliance for a given question. 				
#	QUESTIONS	CITATION	ANSWER	COMMENT
MQ1	Is all sampling and testing data used in the acceptance decision for this project executed by qualified sampling and testing personnel?	23 CFR 637.209(b)	Yes , all sampling and testing data used in the acceptance decision for this project is executed by qualified sampling and testing personnel. No , all sampling and	

#	QUESTIONS	CITATION	ANSWER	COMMENT
			<p>testing data used in the acceptance decision for this project is not executed by qualified sampling and testing personnel. (Comment required)</p> <p>N/A, does not apply. (Comment required)</p> <p>Don't Know, could not be verified at the time of this review. (Comment required)</p>	
MQ2	Is all testing used in the acceptance decision for this project performed by qualified laboratories?	23 CFR 637.209(a)(1)	<p>Yes, all testing used in the acceptance decision is performed by qualified laboratories.</p> <p>No, all testing used in the acceptance decision is not performed by qualified laboratories. (Comment required)</p> <p>N/A, does not apply. (Comment required)</p> <p>Don't Know, could not be verified at the time of this review. (Comment required)</p>	
MQ3	Based on a review of a minimum of one major item of work (asphalt, concrete, or soils and base), are material samples used in the acceptance decision randomly selected?	23 CFR 637.205(e)	<p>Yes, material samples used in the acceptance decision are randomly selected.</p> <p>No, material samples used in the acceptance decision is not randomly selected. (Comment required)</p> <p>N/A, does not apply. (Comment required)</p>	

#	QUESTIONS	CITATION	ANSWER	COMMENT
			<p>Don't Know, could not be verified at the time of this review. (Comment required)</p>	
MQ4	<p>Are the State's required independent assurance (IA) activities being performed?</p>	<p>23 CFR 637.207(a)(2)</p>	<p>Yes, the State's required IA activities are being performed on this project using a project approach for IA.</p> <p>Yes, the State used a system approach for IA on this project.</p> <p>No, the State's required IA activities are not being performed. (Comment required)</p> <p>N/A, does not apply (Comment required)</p> <p>Don't Know, could not be verified at the time of this review. (Comment required)</p>	
MQ5	<p>Based on a review of a minimum of one major item of work (asphalt, concrete, or soils and base), was all of the required testing used in the acceptance decision completed in accordance with the frequency guide schedule specified in the State's Quality Assurance Program?</p>	<p>23 CFR 637.207(a) (1) (i) (A)</p>	<p>Yes, all sampling and testing data finished at the time of the review and used in the acceptance decision was completed in accordance with the frequency guide schedule specified in the State's Quality Assurance Program.</p> <p>No, all sampling and testing data finished at the time of the review and used in the acceptance decision was not completed in accordance with the frequency guide schedule specified in</p>	

#	QUESTIONS	CITATION	ANSWER	COMMENT
			<p>the State's Quality Assurance Program (Comment required)</p> <p>N/A, does not apply. (Comment required)</p> <p>Don't Know, could not be verified at the time of this review. (Comment required)</p>	
MQ6	Based on a review of a minimum of one major item of work (asphalt, concrete, or soils and base), did the required testing meet specification requirements?	<p>23 CFR 637.205 (a)</p> <p>Appendix A – Guide Letter of Certification by State Engineer</p>	<p>Yes, all sampling and testing data used in the acceptance decision met specification requirements.</p> <p>Yes, a specification with pay factors was used and material remained in place with the appropriate pay adjustment.</p> <p>No, all sampling and testing data used in the acceptance decision did not meet specification requirements (Comment required)</p> <p>N/A, does not apply. (Comment required)</p> <p>Don't Know, could not be verified at the time of this review. (Comment required)</p>	
MQ7	When QC tests are used in the acceptance decision and based on a review of a minimum of one major item of work (asphalt, concrete, or soils and base). Are verification samples taken	23 CFR 637.207(a) (1) (ii) (B)	<p>Yes, QC tests are used in the acceptance decision and all verification samples were taken independently of the of the QC samples.</p> <p>No, all verification samples were not taken independently of the of the QC</p>	

#	QUESTIONS	CITATION	ANSWER	COMMENT
	independently of the of the QC samples?		<p>samples (Comment required)</p> <p>N/A, does not apply. (Comment required)</p> <p>Don't Know, could not be verified at the time of this review. (Comment required)</p>	
MQ8	When QC tests are used in the acceptance decision and based on a review of a minimum of one major item of work (asphalt, concrete, or soils and base), was the required process completed to validate that the verification results compare to QC results?	23 CFR 637.207(a) (1) (ii) (B)	<p>Yes, the required process to validate that the verification results compare to QC results was completed.</p> <p>No, the required process to validate that the verification results compare to QC results was not completed (Comment required)</p> <p>N/A, does not apply. (Comment required)</p> <p>Don't Know, could not be verified at the time of this review. (Comment required)</p>	
MQ9	<p>Are employees of the SHA or their designated agent performing verification sampling and testing?</p> <p>Note: Reviewers should be aware that alternate contracting methods such as Design-Build or Construction Manager/General Contractor have be found to be at</p>	23 CFR 637.205(d)	<p>Yes, employees of the SHA or their designated agent performed verification sampling and testing.</p> <p>No, employees of the SHA or their designated agent did not perform verification sampling and testing (Comment required)</p> <p>N/A, does not apply. (Comment required)</p> <p>Don't Know, could not be verified at the time of this review.</p>	

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	elevated risk for this area.		(Comment required)	
MQ10	If a non-STD laboratory is used for testing, did it perform only one of the following types of testing on this project (verification, quality control, independent assurance and dispute resolution)?	23 CFR 637.209(c)	<p>Yes, All non-STD laboratories only performed one of the following types of testing for this project (verification, quality control, independent assurance and dispute resolution)</p> <p>No, At least one non-STD laboratory performed more than one of the following types of testing for this project (verification, quality control, independent assurance and dispute resolution) (Comment required)</p> <p>N/A, does not apply. (Comment required)</p> <p>Don't Know, could not be verified at the time of this review. (Comment required)</p>	
MQ11	Were the manufactured materials incorporated into this project accepted using the methods in the approved Quality Assurance program? (Qualified or Approved Products List, Certified Producer, etc.)?	<p>23 CFR 637.205(a)</p> <p>23 CFR 637.207(a) (1)</p>	<p>Yes, the manufactured materials incorporated into this project were accepted using the required methods.</p> <p>No, the manufactured materials incorporated into this project were not accepted using the required methods (Comment required)</p> <p>N/A, does not apply. (Comment required)</p> <p>Don't Know, could</p>	

#	QUESTIONS	CITATION	ANSWER	COMMENT
			not be verified at the time of this review. (Comment required)	
DIVISION SPECIFIC QUESTIONS				
	Insert Question			
	Insert Question			