


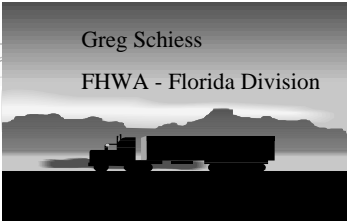
SEAUPG 2004 Conference - Baton Rouge

FHWA - Greg Schiess, Florida Division

SEAUPG
November 2004
FHWA Quality Assurance
Review




Greg Schiess
FHWA - Florida Division



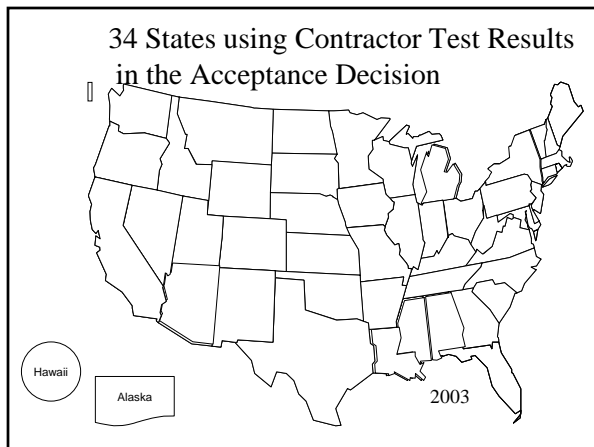
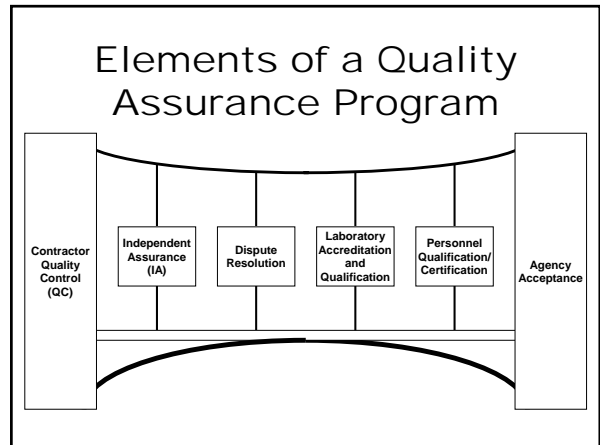
Limited Discussion

- Quality Assurance systems that use the contractor's test results in the acceptance decision




Quality Assurance

- Contractor's Quality Control
- Certified labs
- Quantified Technicians
- Independent Assurance Program
- State's verification program (S&T and analysis)
- Dispute Resolution

Why do the reviews?



CFR 637.... Regulation!
1995

SEAUPG 2004 Conference - Baton Rouge FHWA - Greg Schiess, Florida Division

FHWA Southeastern Resource Center

- Best practice reviews
- Reviews were conducted in Kentucky, Kansas, Idaho and New Mexico
- Presentation to SEAUPG

Federal Highway Administration
QA Focus Group Goal:
States evaluate and implement statistically based specifications.



Highway agencies and FHWA Divisions indicated concerns in the fall of 2003

Is there a real concern?

- Survey of FHWA Division Administrators
 - 60% of the Divisions that have done a review have a concern with the results obtained from the contractor
 - Seven Divisions reported concerns and they **had not even** done a review

Fall 2003

You know it's a concern when.....

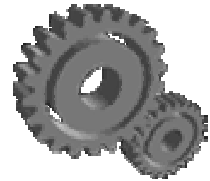
- 30 percent of the states represented at the SOC in '03 expressed a concern
- DAs are requesting reviews

SEAUPG 2004 Conference - Baton Rouge FHWA - Greg Schiess, Florida Division

You REALLY know it's a concern when

- State Highway Agencies are requesting reviews by FHWA

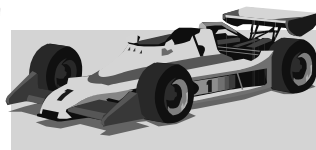
Going to the use of the contractor's data in the acceptance decision is changing gears!



NO we didn't changed gears!



We Changed Vehicles



FHWA National Reviews



- Mike Rafalowski is responsible for the reviews (1995 CFR 637)
- Mat Corrigan and representatives from the Divisions are participating

Reviews

- Four reviews completed FY 2003
 - Maine
 - Missouri – use contractor test results
 - Colorado – use contractor test results
 - Oklahoma – use contractor test results

Reviews

- Five Reviews for FY 2004
 - California – January
 - Georgia – March
 - North Carolina – June
 - New York – September
 - Maryland - October

SEAUPG 2004 Conference - Baton Rouge FHWA - Greg Schiess, Florida Division

Future Reviews

- The FHWA Resource Center and Headquarters will be doing several more reviews. As many as 10 per year for the next 3 years are in the planning stages

Biggest Risk

- Lack of a robust system for verification
 - Increase the number of State's results to Contractor results
 - Independent samples for verification
 - Reduce time for running comparison
 - Perform statistical comparison
 - Increase testing frequency when tests don't compare

Concerns

- Agency cutbacks (sampling frequency)
- Reliance on split samples for verification
- Retesting ("Say what you do and do what you say")
- Source documentation for contractor supplied tests (samples)
- Out dated or incorrect comparison tolerances

Findings - Improvements

- Several States need to develop or improve the use of electronic means to collect and analysis data
- Recommending the use of a Percent Within Limits (PWL) specification
- Design Mix Revisions (Build what you design)

Findings - Improvements, cont.

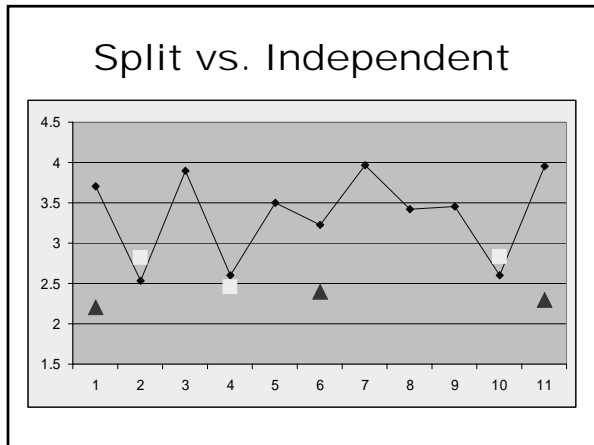
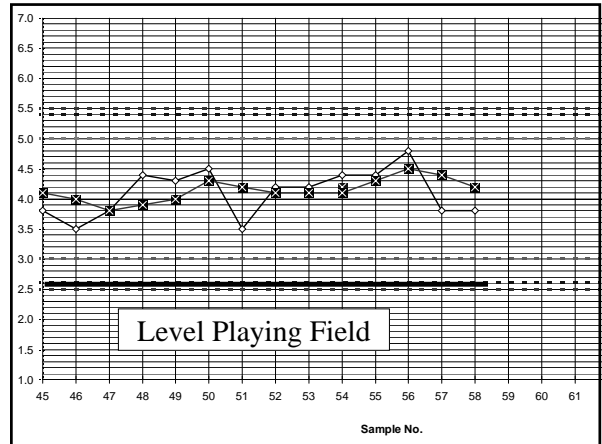
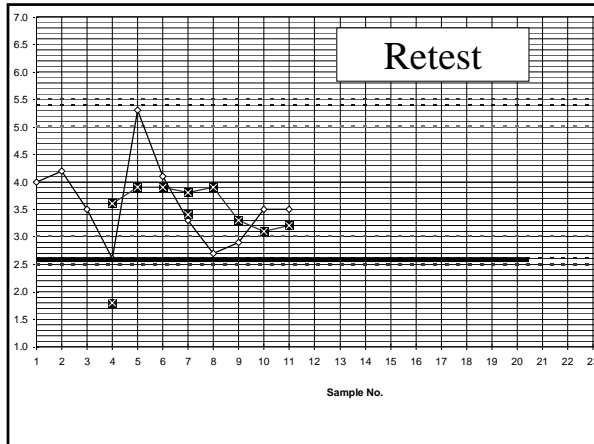
- Skill level and general understanding
- Reevaluation of program and details
- Statistical analysis

Stop the Madness

- Stop retesting
- Reduce substantially the reliance on split samples



SEAUPG 2004 Conference - Baton Rouge FHWA - Greg Schiess, Florida Division



Optimal Procedures
for Quality
Assurance
Specifications
Jim Burati, Clemson
University
Publication No:
FHWA-RD-02-
095

- Evaluation of Procedures for Quality Assurance Specifications
- Publication No. FHWA-HRT-04-046
- October 2004

SEAUPG 2004 Conference - Baton Rouge FHWA - Greg Schiess, Florida Division

Publications

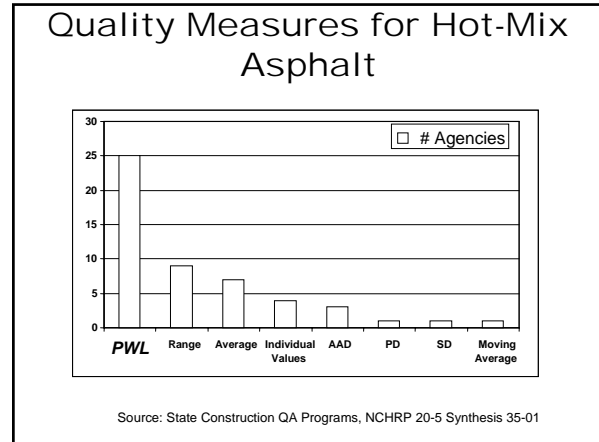
Continued

NEW! AASHTO R-9 (03) Standard Recommended Practice for Acceptance Sampling Plans for Highway Construction (Hughes)

NEW! TA: Use of Contractor Test Results in the Acceptance Decision, Recommended Quality Measures, and the Identification of Contractor/Department Risks (Corrigan)

- <http://www.fhwa.dot.gov/legisregs/directives/techadv/t61203.htm>

NEW! State Construction QA Programs, NCHRP 20-5 Synthesis 35-01 (Hughes)



Training

Basic Level PWL Workshop

- FHWA PWL Risk Analysis Workshop
 - Delivery Begins Early 2005
- NHI Advanced QA Workshop
 - Delivery Begins 2006

FHWA PWL Risk Analysis Workshop

NEW!

- Content:
 - AASHTO R-9 Standard
 - TA on Contractor Test Results
 - Guidance on Risk Analysis
- Pilot Workshop
 - Anticipate 2 Pilots
 - HQ & Kansas in Late 04
- 5-7 Workshops in FY 05. Locations undetermined
- Cost: none (except facility for meeting)

NHI Advanced QA Workshop

- Anticipated Delivery 2006
- Possible Topics
 - Introduction To QA Specification Development
 - Background and history of QA Specifications
 - Implementation Process
 - QA SPEC Requirements
 - Agency Requirements
 - Quality Control System Requirements
 - Dispute Resolution System Provisions

Advanced NHI QA Workshop Cont'd

- Possible Topics
 - Development Of Statistical Acceptance Plans
 - Statistical Concepts and Tools
 - General Considerations in Developing Statistical Acceptance Plans
 - Select Lot Size and Sample Size
 - Select Quality Measure
 - Analyze Available Historic Quality Data
 - Establish Quality Targets and Limits
 - Develop Pay Adjustment Provisions
 - Assign and Evaluate Contractor and Agency Risks
 - Implementation And Validation Of QA Specifications
 - Implementing Pilot Quality Assurance Specifications
 - Evaluating and Refining QA Specifications

SEAUPG 2004 Conference - Baton Rouge FHWA - Greg Schiess, Florida Division

Software

FHWA "In-house" Risk Analysis Spreadsheet w/Visual Basic

NEW!

"Contract" QA software (Burati)

- Follow-up to Demo 89 DOS based risk software
- Address issues with interrelated variables
- Late 05 / early 06 anticipated delivery date



Field Reviews

- State of the Practice Review of Quality
- State Construction Quality Database (Kopac)
 - Answer question: How are state QA specs working?
 - Best practices in collection and use of project data in QA decision-making.
 - Basis for guidance to evaluate QA systems, monitor and update specs, & assess contractor historical performance.



Thank you

