NEAUPG
RAP Task Group Update

Cindy LaFleur
Callanan Industries
October 8, 2009
NEAUPG RAP Task Group

- Formed in 2008
- Rising Liquid and Energy Prices, Warm Mix Technology “Sustainability”
  - National emphasis on increasing RAP use
    - FHWA RAP ETG
    - FHWA RAP Best Practices Guide
    - NCAT Research
  - NEAUPG- Northeast perspective
- Owner, Academia and Industry representatives
- Geographic expanse, we have “met” via conference calls
NEAUPG RAP Task Group
Members

- **Academia**
  - Walla Mogawer, UMASS
  - Jim Mahoney, UCONN

- **Industry**
  - Ron Cominsky, PAPA
  - Brian Dolan, MDA
  - Chris Suttmeier, Peckham
  - Jeff Pochily, Pike Industries
  - John Ingraham, Tilcon, CT
  - Ron Tardiff, Aggregate Industries
  - Scott Laudone, Tilcon, NJ
  - Wayne Byard, Traprock
  - Cindy LaFleur, Callanan Industries

- **DOT**
  - Alan Rawson, NH
  - Bruce Yeaton, ME
  - Eileen Sheehy, NJ
  - Karl Zipf, DE
  - Dean Maurer, PA

- **Looking for volunteers additional representatives from PA & RI**
Survey of RAP specifications by State

- CT 15%
- NJ- 15% surface, 25% others (trial 25% in surface)
- MA- Mass Highway 10% in surface, up to 40% others
  *Excluded by Turnpike and City of Boston*
- NH- 15% surface, others 20%, 30% (Drum), 20% “unknown” sources, Binder replacement
- ME- 15% all mixtures (DOT controls millings)
- NY 20% surface and intermediate, 30% in Base
- VT- 0-15% no PGB change, 15.1-24.9 grade bump softer, 25-50% recovery to PG 58-28
- PA- 15% no additional binder testing
- RI – 0%
- DE- 20% Base, 15% others
Owners barrier to using additional RAP

- Binder Grade (low temperature)
- RAP quality, consistency
- Comfort level with existing specifications
- Perception that producers unwilling to add PGB storage
- RAP specific gravity; RAP impact on volumetrics
Focal points for Task group

1. Binder grade changes (low temperature), and impact on mixture properties. (Jeff and Jo)
2. Best management practices for the handling and processing of RAP, Shingles
3. Use of Warm Mix technologies to increase RAP

Gsb
2008 Callanan Industries

-DOT Quality Stockpiles

- RAP #4 Sieve, Variation expressed as weighted standard deviation by stockpile and number of tests = 4.1%
  - n = 136 tests

- Stone Production, #4 Sieve (#1A) variation measured in standard deviation weighted by stockpile (location) and number of tests is = 6.5%
  - n = 157
Oldcastle - New England Division

- RAP #4 Variation (weighted by number of tests per location) = 5.1%
  - n = 744
- Stone #4 Variation (weighted by number of tests per location) = 6.9%
  - n = 2983
6 states, 70 stockpiles
NCAT “Median” Sieve standard deviation (weighted by number of tests), is 4.8%
n = 2048
Better Roads Article, October 1, 2009
  – “Mean of standard deviations for RAP statistically less than virgin aggregates”
Future Plans of Group

- Winter Conferencing
  - Keep abreast of FHWA RAP ETG activities and recommendations
  - Discussion of Binder data
  - Integration of Warm Mix technologies to increase RAP
  - Discussion of Best Practices for RAP handling and processing
  - Pursue Mixture Testing (IDT)