

## Section 1.2

### MITIGATION OF POINT-OF-USE AGGREGATE PROBLEMS

#### 1.2.1 PURPOSE

This procedure establishes a standardized method for assuring that aggregate materials incorporated into Department projects consistently meets applicable specification and uniformity requirements. Authority, responsibilities and duties for monitoring are set out, as well as an action plan to be implemented when a problem is indicated.

#### 1.2.2 AUTHORITY

Section 120.53, Florida Statutes.

Section 334.044(2), (4), (10)(a) and Section 334.24, Florida Statutes.

Florida Department of Transportation Specifications, Section 6.

Chapter 14-103, Florida Administrative Code, Construction Aggregates.

#### 1.2.3 SCOPE

Principal users of this document include the State Materials Office (SMO), District Materials Office (DMO), and the District Construction Office (DCO).

#### 1.2.4 PROCEDURE

The Department's ***Construction Aggregates Rule (14-103)*** provides that when an approved source is using the Full QC Certification System (FCS), the producer may ship and certify aggregate for Department use prior to the Department obtaining the results of its Verification sampling. Aggregates are certified to points of use such as roadway projects, and asphalt and concrete plants. Independent Verification (IV) sampling and testing at the point of use is necessary in some instances to supplement the Department's Quality Assurance procedures performed at the aggregate source.

#### **1.2.4.1 IV Sampling and Testing**

DMO personnel should take IV samples at the point of use when the DMO has reason to believe, or visual observation indicates that defective material is present. The District Materials Engineer (DME) may determine the frequency of IV sampling as needed. A flow chart is included to facilitate following the lines of action.

When initiated by visual observation, take IV samples from selected locations with evidence of distress (areas of yielding base in roadway [an indication of plasticity], discolored or contaminated material, overly coarse or fine gradation, or excess fines, etc.). When initiated by another cause, take samples at a minimum frequency to cover the expected affected Lots or stockpiles.

The DMO will send the samples to the appropriate Materials Laboratory for testing aggregate properties as deemed necessary. Send at least one split sample out of a maximum number of ten IV samples to the SMO for testing. The DME shall evaluate the IV test results.

#### **1.2.4.2 IV Evaluation**

If the results of the IV aggregate tests meet specifications, accept the aggregate. If not, the DME will determine the disposition of the aggregate at a production facility, and should make a recommendation to the District Construction Engineer (DCE) as to disposition of any material on the roadway based on the provisions of **Section 5-3** of the **Florida Department of Transportation Specifications**.

##### **1.2.4.2.1 Concurrent Actions: Source and Point of Use**

If an assignable cause for the specification failure exists at the point of use, do not review and investigate the aggregate source. Otherwise, the DME in conjunction with SMO will review the results of the IV data, the mine QC and Verification data and past performance of the material, and take any or all of the following actions:

The DME shall notify the SMO and initiate an investigation at the source of the materials to determine probable cause. DME shall inform the SMO of any findings. If warranted, the DME may change the certification system of the source for any or all products.

The DMO will take IV samples at randomly selected locations at a

frequency of one per Lot, from all materials certified *subsequent* to initiation of Stage I actions. Take these samples immediately after material is placed on the roadway, if possible, or delivered to the point of use. This frequency shall be maintained until released by the DME. Follow the acceptance guidelines of **Section 1.2.4.2**.

**Roadway Base Only:** The DMO will take a separate set of IV samples at the same frequency in **Section 1.2.4.1** from the *roadway base* placed prior to initiation of the first IV samples to the extent deemed necessary by the DME to determine whether that base should be accepted, left in place at reduced payment or removed and replaced. These samples shall be taken immediately from in-place construction.

The DME shall evaluate the IV samples taken from the roadway base placed prior to initiation of verification sampling and, after consultation with the SMO, shall make the recommendation to the District Construction Engineer as to disposition of this material based on the provisions of **Section 5-3** of the **Florida Department of Transportation Specifications**.

#### 1.2.4.2.2 Aggregate Source

If the results of the DMO investigation of the aggregate source indicate that no problems are present, or if they were, have been corrected, resume acceptance with source certification and Department verification. If the source does not correct problems, follow acceptance procedures in **Section 1.2.4.2.3**. The DME may recommend that the SMO investigate the aggregate source in accordance with the **Construction Aggregates Rule** to determine the source's approval. The SMO will determine the on-going approval status of the source of material as per the requirements of the **Rule**. The DME, DCE, and the appropriate Resident Engineer (RE) will be notified of this action.

#### 1.2.4.2.3 Stage III Point-of-Use Acceptance

While the source is under SMO investigation, acceptance of the product at all points of use being supplied from the source should be based on IV samples taken at the point of use at a frequency matching the source. These samples shall be taken immediately after the material is placed on the roadway, project-site or plant stockpile.

---

The RE will immediately notify the contractor in writing that acceptance of the material is now based on point-of-use tests and advise the contractor of the risk of material being rejected on the basis of such samples.

#### **1.2.4.3 Disposition of Material**

The DME shall evaluate the IV samples taken and visually examine any of the subject in-place material on the project. After consultation with the DCO and the SMO, the DME shall make the recommendation to the DCE as to disposition of this material based on the provisions of **Section 5-3** of the **Florida Department of Transportation Specifications**. The DME should document the resolution of any IV and verification data not in specification compliance.

#### **1.2.5 TRAINING**

No training required.

#### **1.2.6 FORMS**

No forms required.

### MITIGATION OF AGGREGATE PROBLEMS AT POINT OF USE

