

**METHODS OF SAMPLING AND TESTING**  
**MT 225-04**  
**PROCEDURE FOR**  
**FAILING AND CHECK SAMPLES OF AGGREGATE**

**1 SCOPE:**

- 1.1** This method defines the procedures for obtaining check samples and directs the necessary corrective action required to return failing material to acceptable limits.
- 1.2** It is a training requirement for new personnel sampling or testing aggregate to view the Safety and Training Bureau's slide and audio presentation, "Aggregate Gradation Testing", prior to performing this test.

**2 Referenced Documents:**

- 2.1** *MT Manual:*  
MT-201 Sampling Roadway Materials

**3 Production Samples:**

- 3.1** In general, a sample from a moving belt or a sampling device can be represented by a check sample only if the original sample has been split with a portion designated for use as a check sample. Samples taken at a later time cannot be designated as check samples since considerable production may have occurred between the time of testing the failing sample and testing of the next sample. Therefore, the second sample simply becomes another Acceptance sample and is numbered consecutively.
- 3.1.1** If the second sample, taken after further production, also fails, steps must be taken to halt the production of aggregate until an explanation for the failure has been found and corrective action can be taken.
- 3.1.2** A few examples of the possible causes for failing tests are listed below:
- A hole in one or more screens in the plant.
  - An unrepresentative sample.
  - An error in the testing procedure.
  - An error in calculating the test results.
  - Testing equipment not in calibration or not meeting specifications.
  - A change in the physical characteristics of the material in the pit (in the case of a crushing operation).
  - Stockpile contamination.
  - A plugged feeder or plugged bins.

**4 Road and Windrow Samples:**

- 4.1** Test results from a sample of material that has been placed on the roadway can easily be checked by obtaining another sample of the material from the same location on the roadway and in the same manner as the failing sample. Check for possible causes of the failing tests as in 3.1.2, where applicable. (See MT-201, Sampling Roadway Materials). If the check samples also fail to meet specifications, an investigation must be conducted to determine the extent and seriousness of the problem.

**4 Road and Windrow Samples:** (continued)

*Note 1 - A single check sample is not a satisfactory indication that the production of aggregate has returned to acceptable limits. At least two passing check samples must be taken.*

**5 Stockpile Samples:**

**5.1** Refer to MT-201, Section 10, for the procedure in sampling a stockpile. The most satisfactory method of determining a stockpile average is to sample and test the material at the time of crushing. If tests of stockpiled material do not meet specifications, the same investigation should be conducted as described in paragraph 3.1.2. Check samples on material taken during production of a stockpile must be a split of the original sample. Existing stockpiles can be re-sampled at a later time and that sample can be designated as a check sample.

**6 Plant Mix Aggregate:**

**6.1** Production test numbering will begin and continue as long as the sample is from material being incorporated into the work. These are acceptance samples.

**6.2** Tests which are run to monitor operations adjustments, while the material being sampled is not to be incorporated into the work, shall be labeled and numbered as "Non-production #1," "Non-production #2," etc. Only those tests run a split of the same sample

**6.3** Only those tests run on a split of the same sample will be designated as check samples.

**7 Numbering Check Samples:**

**7.1** When a check sample is taken it will be assigned the same number as the sample being checked, with the addition of a letter suffix. For example, if sample number 38 failed to meet specifications, the first check sample would be numbered 38-A, the second check sample would be 38-B, etc.

**8 Other Samples:**

**8.1** Usually check tests on the materials not listed above are covered in the specific methods for the materials being tested.

**9 Remarks:**

**9.1** The person with the responsibility for sampling and testing aggregates shall, in the case of failing tests, remark on the work sheet, or summary, the corrective action taken to resolve the problem.