WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
MATERIALS CONTROL, SOILS AND TESTING DIVISION

MATERIALS PROCEDURE

PROCEDURE FOR DETERMINING A REDUCED UNIT PRICE TO BE PAID FOR UNDERDRAIN AGGREGATE WHICH DOES NOT CONFORM TO THE GRADING REQUIREMENTS OF THE GOVERNING SPECIFICATIONS

1.0   PURPOSE

1.1   This procedure will define a range of non-conformance in the grading of underdrain aggregate that would not be expected to affect its performance to an extent which would necessitate its removal from the project, and will provide a method for reducing the price to be paid for said nonconforming aggregate. Grading characteristics of underdrain aggregate shall be evaluated in accordance with MP 300.00.51.

2.0   SCOPE

2.1   This procedure shall apply only to those aggregates specified for use as crushed stone and/or crushed gravel for underdrains.

3.0   DEFINITION OF TERMS

3.1   Sub LOT - The quantity of material represented by a single test value.

3.2   LOT - The quantity of material represented by an average test value (not to exceed five sub LOTs).

3.3   In those cases where only one sample is taken to represent the total quantity, the sub LOT and LOT will be considered the same.

4.0   DESIGNATION OF QUANTITIES FOR EQUITABLE PRICE ADJUSTMENT

4.1   The condition of non-conformance shall be defined as that condition which exists when the average, or three consecutive individual test values, falls outside the limits of the specifications. When only one sample is taken to represent the total quantity of material used, and any sieve value falls outside the limits of the specification, the material represented thereby is considered to be nonconforming.

4.2   When a condition of non-conformance exists and material represented thereby has been incorporated into the work, the price for the quantity of material represented by the last sub LOT in the nonconforming LOT shall be reduced in accordance with section 6.0. In no event, however, shall a sub LOT of material have its price adjusted more than once, and the first adjustment which is determined shall apply.

5.0   SAMPLING FREQUENCY AND TESTING

5.1   Sampling frequency and testing shall be as prescribed by the Construction Manual and applicable sections of the Standard Specifications.

6.0   DEGREE OF NON-CONFORMANCE

6.1   When a sub LOT of material is nonconforming, the average value representing said sub LOT shall be plotted such that the relative size can be determined for the 85 percent passing and the 15 percent passing. Thus determined, these values shall be entered in the following formulas:

$$D_{85} < 4 D_{15}$$

$$D_{85} > \text{size of pipe opening (perforation)}$$

Where : D_{85} = 85 percent passing size
            D_{15} = 15 percent passing size

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6.2   If the above formulas are met such that the size at 85 percent passing is less than four (4) times the size at 15 percent passing, and the size at 85 percent passing is greater than the perforation size, then the following procedure shall apply. If one or both of the formulas are not met then the material shall be removed from the project site at the Contractors' expense.

6.3   When a sub LOT of material is to have its price adjusted, the percentage point difference between the nonconforming average value and the specification limit will be determined for each sieve size which has its average outside the limits of the specification for that sub LOT. The total measure of non-conformance is the sum of all non-conformances on the various sieves for that sub LOT. This value shall be compared to Table 1.

Table 1

Percent of Non-conformance	Percent Reduced price
1.0 to 3.0	2%
3.1 to 5.0	4%
5.1 to 8.0	7%
8.1 to 12.0	11%

7.0   DETERMINATION OF EQUITABLE ADJUSTMENT

7.1   When the total percent of non-conformance has been established and it is 12.0 or less, Table 1 shall be initiated. When the total percent of non-conformance is greater than 12.0, each nonconforming situation will be resolved on an individual basis, requiring a special investigation by the Engineer to determine the appropriate course of action to be followed.

8.0   METHOD OF EQUITABLE REDUCTION

8.1   Dollar reduction shall be calculated by (A) quantity of nonconforming sub LOT x (B) percent reduction from Table 1 x (C) unit contract price.

9.0   METHOD OF ACCOUNTING AND CHANGE ORDER PREPARATION

9.1   Equitable reductions for non-conformances will be determined for each LOT
         or sub LOT during each contract pay period and the subtotal deducted from
         the current voucher estimate. These adjustments may be processed with a
         single change order or when the item is completed by tabulating the data for
         all non-conforming sub LOTs, and preparing the change order for the total
         dollar adjustment shown on the tabulation. A copy of the tabulation should
         accompany and be made a part of the change order.

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