APPENDIX B
PAY QUANTITIES

Method of Computing Pay Quantities of Pugmill Mixed Material

To illustrate the method of computing pay quantities of central-mix aggregate with or without cement, let us assume that 500 tons of material was shipped containing 10 percent total moisture and 4 percent cement. (The test for total moisture must be made on a sample of material obtained by the Plant Quality Control Technician after all water has been added to the mix in the pugmill and after the material is ready for job shipment. This test must be conducted periodically during a day’s operation.) Assume also that the average optimum moisture of the material is 6 percent. (This information is furnished by the District Materials Engineer.)

**Step 1: Determine Total Allowable Moisture**

Optimum Moisture + 2% = Total Allowable Moisture
6% + 2% = Total Allowable Moisture
8% = Total Allowable Moisture

**Step 2: Determine the Dry Weight of the Aggregate**

Tons Shipped / (1 + % Avg. Moist.) = Dry Wt. of Aggregate
500 / (1 + 10%) = Dry Weight of Aggregate
500 / (1 + .10) = Dry Weight of Aggregate
500 / (1.10) = Dry Weight of Aggregate
454.55 = Dry Weight of Aggregate

**Step 3: Determine the Pay Quantity**

Dry Weight of Aggregate x (1 + % Allowable Moisture) = Pay Quantity
454.55 x (1 + 8.0%) = Pay Quantity
454.55 x (1 + .08) = Pay Quantity
454.55 x (1.08) = Pay Quantity
490.91 = Pay Quantity

*This is the total combined tonnage that should be computed as the amount eligible for payment. Notes should be made on the input form (Form TL-52A) and on the weighpersons Daily Summary Sheet showing the average optimum moisture and the total moisture, in order that the proper corrections for payment may be made later in the net weight recorded on the weigh ticket and in materials notebooks. If material is stockpiled after production, it will be necessary to perform tests for total moisture and record results on the above indicated forms at the time of shipment of the material to the project. If the moisture in the stockpile is below the minimum required (optimum minus 2 percent), either the stockpiles must be sprinkled to bring the moisture within allowable limits or the District Materials Engineer may require the material to be run through the pugmill again. Computations for the pay quantity should be carried out to the same decimal point as the pay item.
Appendix B
Problems

1. A plant produced 406 tons of material at a moisture content of 9.6%. If the optimum moisture was 6.0%, give the weight in tons of stone and moisture that may be paid for.

2. A plant produced 333 tons of mix at a moisture of 10.6%. If the optimum moisture was 7.0%, give the weight in tons of stone and moisture that may be paid for.

3. A plant shipped 396.0 tons of mix. The moisture sample taken weighed 500 grams wet and 454.9 grams dry. If the optimum moisture content was 7.2%, determine the allowable pay quantities of stone and moisture.