

**GEORGIA DEPARTMENT OF TRANSPORTATION  
OFFICE OF MATERIALS AND RESEARCH  
RATING SYSTEM FOR AGGREGATE SOURCES**

**I. GENERAL**

The Pit and Quarry Control Branch of the Office of Materials and Research is charged with the responsibility of monitoring all coarse and fine aggregates used on Department of Transportation projects. A major portion of this responsibility is devoted to ensuring that established standards for quality control are met or exceeded by the respective Aggregate Producers.

To facilitate accomplishment of this task, a rating system for Standard Coarse and Fine, Temporary, and Vendor Sources has been developed. This system is designed to provide Industry and the Department with a management tool for measuring the success of the Producer Certification Program and to promote consistency of products.

**II. DEFINITIONS**

In order to produce the ratings, certain data must be calculated. The following definitions are applicable to producing data for the rating system:

A. Target Band

A gradation band for a product that when rated 70 or above, at the point of shipment, should allow for specification compliance at the point of use after normal degradation and stockpile variation has occurred.

Example:

Washed 0057 Concrete Stone  
Passing 1/2"  
(25-60) Spec  
(32-48) Target Band

B. Range From Target Band (RFTB)

The range that either the upper or lower limit of the Target Band is exceeded by when the standard deviation is either added to or subtracted from the mean. When the upper limit is 100 and the mean plus the standard deviation exceeds 100, the RFTB factor will be zero. When the lower limit is zero and the mean minus the standard deviation is a negative number, the RFTB factor will be zero.

NOTE: The Mean, Standard Deviation and RFTB value are to rounded to the nearest tenth.

Example: Washed 0057 Concrete Stone  
% Passing 1/2"  
(25-60) Spec  
(32-48) Target Band  
37.4 Mean  
5.0 Std. Deviation  
 $37.4 \text{ (Mean)} \pm 5.0 \text{ (Std. Dev.)} = 32.4 - 42.4 \text{ (Range)}$   
  
(32-48) Target Band  
Compared to  
(32.4 - 42.4) Range  
RFTB=0

Example: Washed 0057 Concrete Stone  
% Passing 1/2"  
(25-60) Spec  
(32-48) Target Band  
37.4 Mean  
8.0 Std. Deviation  
 $37.4 \text{ (Mean)} \pm 8.0 \text{ (Std.Dev.)} = 29.4 - 45.4 \text{ (Range)}$   
  
(32-48) Target Band  
Compared to  
(29.4 - 45.4) Range  
RFTB=32 - 29.4 = 2.6

C. RFTB Factor

The factor (taken from tables) that the RFTB is multiplied by.

Example: Washed 0057 Concrete Stone  
% Passing No. 8 Sieve  
(0-5) Specifications  
(0-1) Target Band  
1.5 Mean  
0.5 Std.Dev.  
  
 $1.5 \text{ (Mean)} \pm 0.5 \text{ (Std. Dev.)} = 1.0 - 2.0 \text{ (Range)}$   
  
(0-1) Target Band  
Compared to  
(1.0 - 2.0) Range  
RFTB = 1.0

RFTB Factor From Tables For Washed 0057's

<u>RFTB</u>	<u>No. 8 Sieve</u> <u>Factor</u>
0-1	0
1.1 - 1.5	5
>1.5	15

Factor for RFTB of 1.0 = 0

Example:

Washed 0057 Concrete Stone  
 % Passing No. 8 Sieve  
 (0-5) Specification  
 (0-1) Target Band  
 2.0 Mean  
 0.5 Std.Dev.

$2.0 \text{ (mean)} \pm 0.5 \text{ (Std. Dev.)} = 1.5 \text{ to } 2.5 \text{ (Range)}$

(0-1) Target Band  
 Compared to  
 (1.5 - 2.5) Range  
 RFTB = 1.5

RFTB Factor From Tables For Washed 0057's

<u>RFTB</u>	<u>No. 8 Sieve</u> <u>Factor</u>
0-1	0
1.1 - 1.5	5
>1.5	15

Factor for RFTB of 1.5 = 5

D. Product Rating (For all products except for asphaltic concrete aggregates)

The sum of RFTB per sieve multiplied by the appropriate factor per sieve (from the tables) and subtracted from 100.

Example:

Washed 0057 Concrete Stone

		<u>% Passing</u>					
1 1/2	1	1/2	No. 4	No. 8			
100	95-100	25-60	0-10	0-5		Specification	
100	97-100	32-48	0-5	0-1		Target Band	
100	98	47	3	1.5		Mean	
-	0.5	3.0	1.0	0.5		Std. Dev.	
	0	2.0	0	1.0		RFTB	
	<u>x 0</u>	<u>x 5.0</u>	<u>x 0</u>	<u>x 0</u>		Factor (From Tables)	
	= 0	= 10	= 0	= 0		Deductions	

Total Deductions = 10

Product Rating = 100 - 10 = 90

Very Good

E. Product Rating (for Fine Aggregate for Asphaltic Concrete)

The sum of the standard deviation for the 3/8, No. 4, No. 8, No. 16, No. 50, No. 100 and No. 200 sieves divided by 1.5 and subtracted from 100, when the minus No. 8 portion is computed as 100% minus No. 8. All products that are coded "used in B" will be rated.

Example:

<u>Total Sample</u>			<u>% Passing</u>						
3/8	No.4	No.8	No.8	No.16	No.50	No.100	No.200		
100	98	82	100	85	49	27	13.7		Mean
0	1.6	4.1	0	1.5	1.8	1.4	2.3		Std. Dev.

0 + 1.6 + 4.1 + 0 + 1.5 + 1.8 + 1.4 + 2.3 = 12.7 (Total Std.Dev.)

Product Rating = 100 -  $\frac{12.7 \text{ (Total Std. Dev.)}}{1.5 \text{ (Division Factor)}}$  = 91.5

NOTE: A division factor of 1.5 is used to condense the Total Standard Deviation so that the Product Rating can be expressed in common terms of Excellent, Very Good, etc.

F. Product Rating for Coarse Aggregate for Asphaltic Concrete.

The sum of the standard deviation per screen size divided by 1.5 and subtracted from 100. All products that are coded "used in B" will be rated.

Example:

Unwashed 0057's for Asphalt Stone

<u>% Passing</u>					
1 1/2	1	1/2	No.4	No.8	
100	98	46	6	2	Mean
-	.9	5.0	1.0	.5	Std. Dev

$$.9 + 5.0 + 1.0 + 0.5 = 7.4 \text{ (Total Std. Dev.)}$$

$$\text{Product Rating } 100 - \frac{7.4 \text{ (Total Std. Dev.)}}{1.5 \text{ (Division Factor)}} = 95.1$$

NOTE: A factor of 1.5 is used to condense the Total Standard Deviation so that the Product Rating can be expressed in common terms of Excellent, Very Good, etc.

G. Category Rating

The categories that will be rated are as follows:

- Concrete Aggregates
  - Coarse
  - Fine
- Asphalt Aggregates
  - Coarse
  - Fine
- Graded Aggregate
- Surface Treatment Stone

The category rating is defined as "The arithmetic average of the ratings for products within a specific category," except as follows:

1. Concrete Aggregates Category

This rating will be computed based upon 80% of the coarse Aggregate Rating and 20% of the Fine Aggregate Rating.

Example:

<u>Coarse Aggregate</u>	
<u>Products</u>	<u>Product Ratings</u>
Washed 0057's	93
Washed 0067's	<u>85</u>
	178 ÷ 2 = 89

<u>Fine Aggregate</u>	
<u>Product</u>	<u>Product Rating</u>
10 SM	70
10 FM	<u>90</u>
	160 ÷ 2 = 80

	<u>Rating</u>		<u>Value</u>	=	<u>Weighted Value</u>
Coarse Aggregate	- 89	X	80%	=	71.2
Fine Aggregate	- 80	X	20%	=	<u>16.0</u>
					87.2 = Category Rating

2. Asphaltic Concrete Aggregate Category

This rating will be computed based upon 50% of the Coarse Aggregate Rating and 50% of the Fine Aggregate Rating.

Example:

<u>Coarse Aggregate</u>	
<u>Products</u>	<u>Product Rating</u>
Unwashed 0005	75
Unwashed 0006	79
Unwashed 0067	88
Unwashed 0089	74
Unwashed 0057	92
Unwashed 0067	90
Unwashed 0078	84
Washed 0057	85
Washed 0007	<u>94</u>
	761 ÷ 9 = 84.6

		<u>Fine Aggregate</u>			
		<u>Products</u>			<u>Product Rating</u>
		No. M10's			79
		No. 810's			85
		W10's			90
				$254 \div 3 = 84.7$	
		<u>Rating</u> <u>Value</u> = <u>Weighted Value</u>			
Coarse Aggregate	-	84.6	X	50%	= 42.3
Fine Aggregate	-	84.7	X	50%	= <u>42.4</u>
					84.7 = Category Rating

H. Source Rating

The average of the category ratings with all values treated equally except Surface Treatment Stone. Surface Treatment Stone will be assigned a value of 10%.

Example:

<u>Category</u>	<u>Rating</u>	<u>Value</u>	=	<u>Weighted Value</u>
Concrete Aggregates	86.3	X .30	=	25.9
Asphalt Aggregates	80	X .30	=	24.0
Graded Aggregate	90	X .30	=	27.0
Surface Treatment	85	X .10	=	<u>8.5</u>
				85.4

Source Rating = 85

In the event that a category is not rated, the categories that are rated will be given a proportionally higher value.

Example:

<u>Category</u>	<u>(Rating)</u>	<u>Value</u>	Redistributed <u>Value</u>	=	<u>Weighted Value</u>
Concrete Aggregates	(86.3)	X .30	$\frac{.30}{.70} = (.43)$	=	37.1
Asphalt Aggregates	(80)	X .30	$\frac{.30}{.70} = (.43)$	=	34.4
Grade Aggregate	not rated				
Surface Treatment	(85)	X <u>.10</u>	$\frac{.10}{.70} = (.14)$	=	<u>11.9</u>
		(total) .70			83.4

Source Rating = 83.4

### III. AUXILIARY PLANTS

Ratings for Auxiliary Plants will be produced per product only. The product ratings will then be given equal value and included in the arithmetic average for the category under the primary source number.

Example: Coarse Aggregate For Concrete

<u>Source</u>	<u>Product</u>	<u>Product Rating</u>
Primary	Washed 0057	95
Primary	Washed 0067	85
Auxiliary	Washed 0057	<u>79</u>
		$259 \div 3 = 86.3$

### IV. USE OF TEST DATA FOR COMPUTATIONS

- A. Sample location, (belt, stockpile, truck, railcar, other)

The test data for a given product will be computed separately per sample location. The "Product Rating" will be the arithmetic average of the averages per product per sample location. A weighted average based upon the number of samples per location or quantities represented will not be computed.

- B. Number of Samples

Products with less than 10 samples tested per required screen per sample location during a quarter will not be rated for that quarter. The product will be rated year to date when there are 10 or more samples on record.

### V. FREQUENCY OF RATING

Rating periods will begin January 1 and end December 31 each year. Ratings will be produced as follows:

- A. Per Quarter Rating

This rating will be based upon the data for the designated quarter only.

- B. Year to Date Rating

This rating will be produced for the 2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup> quarters and will be based upon cumulative data to date for the year.

In the event that a below 70 rating is involved during the fourth quarter, any imposed restriction will carry over into the new year until the problem is resolved. Once the problem has been resolved, the rating for the new year will begin again as of the formal date that the problem was resolved.

**VI. PUBLICATION OF RATINGS**

The "Source Ratings" and "Category Ratings" will be published and issued to all sources, **except vending yards**, semi-annually as follows:

<u>Source Rating</u>	_____
<u>Category Ratings</u>	
Concrete Aggregates	
Coarse	_____
Fine	_____
Asphalt Aggregates	
Coarse	_____
Fine	_____
Graded Aggregate Base	_____
Surface Treatment Stone	_____

**Note:** Vending yard ratings will not be published, but will be maintained separately at the Office of Materials and Research.

In the event that there is a product rating below 70, it will be identified as shown in the following example:

<u>Source Rating</u>	_____ 84
<u>Concrete Aggregates</u>	
Coarse	_____ 83

Note: The washed 0067's rated 65. The washed 0067's may be approved on a stockpile basis at the point of use only.

Fine	_____ 90
<u>Asphalt Aggregates</u>	
Coarse	_____ 85
Fine	_____ 75

Note: 0810's have a substandard consistency value.

<u>Graded Aggregate Base</u>	_____ 88
<u>Surface Treatment Stone</u>	_____ 80

## VII. ADMINISTRATION OF RATING SYSTEM

### A. Product Ratings for all products except those for Asphaltic Concrete

1. When the rating for a specific product falls below 70 for a given quarter or year to date, acceptance of Producer Certification for the product will be discontinued. However, if the year-to-date rating is below 70 but the current quarterly rating is 70 or above, the quarterly rating will take precedence.
2. In order for Producer Certification of the product to be resumed, the producer must:
  - a) Take corrective action and notify the Department in writing as to the measures that have been taken.
  - b) Request a re-evaluation and re-rating of the product. The request should specify a beginning date for the evaluation such that previously existing problems will not be reflected during the re-evaluation period. The request should also detail a plan for controlling the use of any existing inventories of the problem product.
  - c) A quarterly product rating of 75 or greater must be achieved.

During the interim the product may be accepted on a stockpile basis at the point of use only.

### B. Product Rating for Asphaltic Concrete Aggregate

1. When the rating for a specific product falls below 70 for a given quarter or year to date, rating of the product will be discontinued. The published ratings for the product would then state, "This Product has a substandard consistency value." However, if the year-to-date rating is below 70 but the current quarterly rating is 70 or above, the quarterly rating will take precedence.
2. In order to resume participation in the rating system, the producer must:
  - a) Take corrective action and notify the Department in writing as to the measures that have been taken.
  - b) Request a re-evaluation and re-rating of the product. The request should specify a beginning date for the evaluation such that previously existing problems will not be reflected during the evaluation period. The request must also detail a plan for controlling the use of any existing inventories of the problem product.

C. Product Rating for Vendor Sources

1. When the rating for a specific product falls below 70 for a given quarter or year-to-date, rating of the product will be discontinued. However, if the year-to-date rating is below 70 but the current quarterly rating is 70 or above, the quarterly rating will take precedence.
2. In order to resume participation in the rating system, the vendor must:
  - a) Conduct an investigation of the overall quality control procedures at the facility, including stockpiling and handling procedures and materials testing. If these procedures are in accordance with accepted standards, work with the supplier to investigate the condition of the product at the point of shipment and any possible causes of degradation or contamination while in transit. The Area Aggregate Engineer will monitor and/or assist in the investigation as needed.
  - b) At the conclusion of the investigation, notify the Department in writing of the measures taken to correct any deficiencies in overall quality control procedures. The Area Aggregate Engineer will then visit the vending facility to verify the agreed-upon corrective measures. If the measures meet with Departmental approval, rating of the product will resume. However, if a rating of 70 or better is not achieved after the next two quarters and the continued rating failure is attributable to quality control deficiencies, acceptance of the vendor's certification of the product will be discontinued. At this point the product may be accepted on a stockpile basis at the point of use.

In the event the rating failure is largely attributable to the natural tendency of the aggregate to degrade during shipment and a reasonable effort has been made by the supplier and the vendor to account for this, certification of the aggregate by the vendor will be accepted provided specification material is shipped for Departmental use.

**TARGET BANDS AND RFTB FACTORS / AGGREGATE RATING SYSTEM**

Washed 0005 Surface Treatment Stone	Sieves	1 ½"	Lower Limit 1"	Upper Limit 1"	Lower Limit ¾"	Upper Limit ¾"	Lower Limit ½"	Upper Limit ½"	Lower Limit 3/8"	Upper Limit 3/8"
	Specifications	100	90	100	20	55	0	10	0	5
Target Band	100	93	100	23	45	0	5	0	1	
RFTB	Range	-	0-3	-	0-3	All	-	0-1	-	0-1
	Factor	-	5	-	5	5	-	5	-	0
RFTB	Range	-	> 3	-	> 3	-	-	> 1	-	1.1-1.5
	Factor	-	10	-	10	-	-	10	-	5
RFTB	Range	-	-	-	-	-	-	-	-	>1.5
	Factor	-	-	-	-	-	-	-	-	15

Washed 0006 Surface Treatment Stone	Sieves	1"	Lower Limit ¾"	Upper Limit ¾"	Lower Limit ½"	Upper Limit ½"	Lower Limit 3/8"	Upper Limit 3/8"	Lower Limit No. 4	Upper Limit No. 4
	Specifications	100	90	100	20	55	0	15	0	5
Target Band	-	93	100	23	40	0	7	0	1	
RFTB	Range	-	0-3	-	0-3	All	-	0-3	-	0-1
	Factor	-	5	-	5	5	-	5	-	0
RFTB	Range	-	> 3	-	> 3	-	-	> 3	-	1.1-1.5
	Factor	-	10	-	10	-	-	10	-	5
RFTB	Range	-	-	-	-	-	-	-	-	> 1.5
	Factor	-	-	-	-	-	-	-	-	15

**TARGET BANDS AND RFTB FACTORS / AGGREGATE RATING SYSTEM**

Washed 0007 Surface Treatment Stone	Sieves	¾ "	Lower Limit ½"	Upper Limit ½ "	Lower Limit 3/8"	Upper Limit 3/8"	Lower Limit No. 4	Upper Limit No. 4	Lower Limit No. 8	Upper Limit No. 8
	Specifications	100	90	100	40	70	0	15	0	5
Target Band	-	93	100	45	60	0	9	0	1	
RFTB	Range	-	0-3	-	0-3	All	-	0-4	-	0-1
	Factor	-	5	-	5	5	-	5	-	0
RFTB	Range	-	> 3	-	> 3	-	-	> 4	-	1.1-1.5
	Factor	-	10	-	10	-	-	8	-	5
RFTB	Range	-	-	-	-	-	-	-	-	> 1.5
	Factor	-	-	-	-	-	-	-	-	15

Washed 0089 Surface Treatment Stone	Sieves	½"	Lower Limit 3/8"	Upper Limit 3/8"	Lower Limit No. 4	Upper Limit No. 4	Lower Limit No. 8	Upper Limit No. 8	Lower Limit No. 16	Upper Limit No. 16	Lower Limit No. 50	Upper Limit No. 50
	Specifications	100	90	100	20	55	0	15	0	10	0	5
Target Band	-	93	100	23	43	0	7	0	5	0	1	
RFTB	Range	-	0-3	-	0-3	0-4	-	0-4	-	0-3	-	0-1
	Factor	-	5	-	5	5	-	5	-	5	-	0
RFTB	Range	-	> 3	-	> 3	> 4	-	> 4	-	> 3	-	1.1-1.5
	Factor	-	10	-	10	10	-	8	-	10	-	5
RFTB	Range	-	-	-	-	-	-	-	-	-	-	> 1.5
	Factor	-	-	-	-	-	-	-	-	-	-	15

**TARGET BANDS AND RFTB FACTORS / AGGREGATE RATING SYSTEM**

	Sieves	1 ½"	Lower Limit	Upper Limit							
			1"	1"	½ "	½ "	No. 4	No. 4	No. 8	No. 8	
Washed 0057	Specifications	100	95	100	25	60	0	10	0	5	
Concrete Stone	Target Band	-	97	100	32	48	0	5	0	1	
	RFTB	Range	-	0-2	-	All	All	-	0-2	-	0-1
		Factor	-	5	-	5	5	-	5	-	0
	RFTB	Range	-	> 2	-	-	-	-	> 2	-	1.1-1.5
		Factor	-	15	-	-	-	-	15	-	5
	RFTB	Range	-	-	-	-	-	-	-	-	> 1.5
Factor		-	-	-	-	-	-	-	-	15	

	Sieves	1"	Lower Limit	Upper Limit							
			¾"	¾"	3/8"	3/8"	No. 4	No. 4	No. 8	No. 8	
Washed 0067	Specifications	100	90	100	20	55	0	10	0	5	
Concrete Stone	Target Band	-	93	100	23	45	0	5	0	1	
	RFTB	Range	-	0-3	-	0-3	All	-	0-2	-	0-1
		Factor	-	5	-	5	5	-	5	-	0
	RFTB	Range	-	> 3	-	> 3	-	-	> 2	-	1.1-1.5
		Factor	-	10	-	10	-	-	15	-	5
	RFTB	Range	-	-	-	-	-	-	-	-	> 1.5
Factor		-	-	-	-	-	-	-	-	15	

**TARGET BANDS AND RFTB FACTORS / AGGREGATE RATING SYSTEM**

No. 10SM Standard Manufactured Concrete Sand	Sieves	3/8"	Lower Limit	Upper Limit								
			No. 4	No. 4	No. 16	No. 16	No. 50	No. 50	No. 100	No. 100	No. 200	No. 200
	Specifications	100	95	100	45	95	8	30	1	10	0	4
	Target Band	--	97	100	51	90	12	24	2	9	0	3
	RFTB	Range	0-2	--	0-4	0-4	0-4	0-3	0-1	0-1	--	0-1
		Factor	--	5	--	5	5	5	5	10	0	--
	RFTB	Range	>2	--	>4	>4	>4	>3	>1	>1	--	>1
		Factor	--	15	--	7	8	6	10	15	30	--

10FM Fine Manufactured Concrete Sand	Sieves	3/8"	Lower Limit	Upper Limit								
			No. 4	No. 4	No. 16	No. 16	No. 50	No. 50	No. 100	No. 100	No. 200	No. 200
	Specifications	100	95	100	45	95	15	42	6	22	0	9
	Target Band	--	97	100	51	90	19	36	7	18	2	7
	RFTB	Range	0-2	--	0-4	0-4	0-4	All	0-1	0-4	0-1	0-2
		Factor	--	5	--	5	5	5	5	0	5	0
	RFTB	Range	>2	--	>4	>4	>4		>1	>4	>1	>2
		Factor	--	15	--	7	8	8		30	8	30

**TARGET BANDS AND RFTB FACTORS / AGGREGATE RATING SYSTEM**

Product 15CR Group II GAB for Stockpile, Truck, and other Samples  Only	Sieves	2"	Lower Limit 1 ½"	Upper Limit 1 ½"	Lower Limit ¾"	Upper Limit ¾"	Lower Limit No. 10	Upper Limit No. 10	Lower Limit No. 60	Upper Limit No. 60	Lower Limit No. 200	Upper Limit No. 200	
	Specifications	100	97	100	60	90	25	45	5	30	4	11	
	Target Band	-	99	100	70	86	32	40	8	25	6	9	
	RFTB	Range	-	0-2	-	All	0-3	0-5	0-3	0-2	0-5	0-1	0-1
		Factor	-	3	-	6	5	5	5	5	5	0	0
	RFTB	Range	-	> 2	-	-	> 3	> 5	> 3	> 2	> 5	1.1-1.5	1.1-1.5
		Factor	-	15	-	-	10	6	10	10	6	5	5
	RFTB	Range	-	-	-	-	-	-	-	-	-	>1.5	>1.5
		Factor	-	-	-	-	-	-	-	-	-	20	20

Product 15CR Group II GAB for Belt Samples Only	Sieves	2"	Lower Limit 1 ½ "	Upper Limit 1 ½"	Lower Limit ¾"	Upper Limit ¾"	Lower Limit No. 10	Upper Limit No. 10	Lower Limit No. 60	Upper Limit No. 60	Lower Limit No. 200	Upper Limit No. 200	
	Specifications	100	97	100	60	90	25	45	5	30	4	11	
	Target Band	-	99	100	70	86	30	38	8	25	6	9	
	RFTB	Range	-	0-2	-	All	0-2	0-3	0-3	0-2	0-5	0-1	0-1
		Factor	-	3	-	6	5	5	5	5	5	0	0
	RFTB	Range	-	> 2	-	-	> 2	> 3	> 3	> 2	> 5	1.1-1.5	1.1-1.5
		Factor	-	15	-	-	10	8	10	10	6	5	5
	RFTB	Range	-	-	-	-	-	-	-	-	-	>1.5	>1.5
		Factor	-	-	-	-	-	-	-	-	-	20	20

**TARGET BANDS AND RFTB FACTORS / AGGREGATE RATING SYSTEM**

Product 15CR Group I GAB Sources that meet 9% minus No. 200	Sieves	2"	Lower Limit 1 ½"	Upper Limit 1 ½"	Lower Limit ¾"	Upper Limit ¾"	Lower Limit No. 4	Upper Limit No. 4	Lower Limit No. 10	Upper Limit No. 10	Lower Limit No. 60	Upper Limit No. 60	Lower Limit No. 200	Upper Limit No. 200	
	Specifications	100	97	100	60	95	-	-	25	50	10	35	9	15	
	Target Band	-	99	100	70	91	45	69	29	43	-	-	10	12	
	RFTB	Range	-	0-2	-	All	0-3	All	All	0-3	0-2	-	-	0-1.0	0-1.0
		Factor	-	3	-	5	5	3	3	5	5	-	-	0	0
	RFTB	Range	-	> 2	-	-	> 3	-	-	> 3	> 2	-	-	> 1.0	> 1.0
		Factor	-	15	-	-	10	-	-	10	10	-	-	20	15

\* For Group I Aggregate having less than 37% passing the No. 10 sieve, a minimum of 9 % passing the No. 200 sieve will be required.

**TARGET BANDS AND RFTB FACTORS / AGGREGATE RATING SYSTEM**

Product 15CR Group I GAB	Sieves	2"	Lower Limit	Upper Limit											
			1 ½"	1 ½"	¾"	¾"	No. 4	No. 4	No. 10	No. 10	No. 60	No. 60	No. 200	No. 200	
Sources that are required to meet 37% passing the No. 10 Sieve	Specifications	100	97	100	60	95	-	-	37	50	10	35	7	15	
	Target Band	-	99	100	70	91	45	69	38	43	-	-	8	12	
	RFTB	Range	-	0-2	-	All	0-3	All	All	0-1.5	0-2	-	-	0-1	0-2
		Factor	-	3	-	5	5	3	3	5	5	-	-	0	0
	RFTB	Range	-	> 2	-	-	> 3	-	-	1.6-2.0	> 2	-	-	> 1	> 2
		Factor	-	15	-	-	10	-	-	10	10	-	-	20	15
	RFTB	Range	-	-	-	-	-	-	-	> 2.0	-	-	-	-	-
		Factor	-	-	-	-	-	-	-	15	-	-	-	-	-

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