Aggregate Optimization Chart

Production Gradation Report

PLANT #: P-32

Sample Date: 1/9/23

Concrete Grade: DM, 4500HP

Dates Test Represents: 1/10/2023 through 1/16/2023

Contractor: _____

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1455	8.90	2.62	50.1
26A	71-47	Presque Isle	300	1.83	2.62	10.3
2NS	95-013	Smelter Bay	1150	6.95	2.65	39.6
		Total Wt	**2905**	**17.69**		100.0

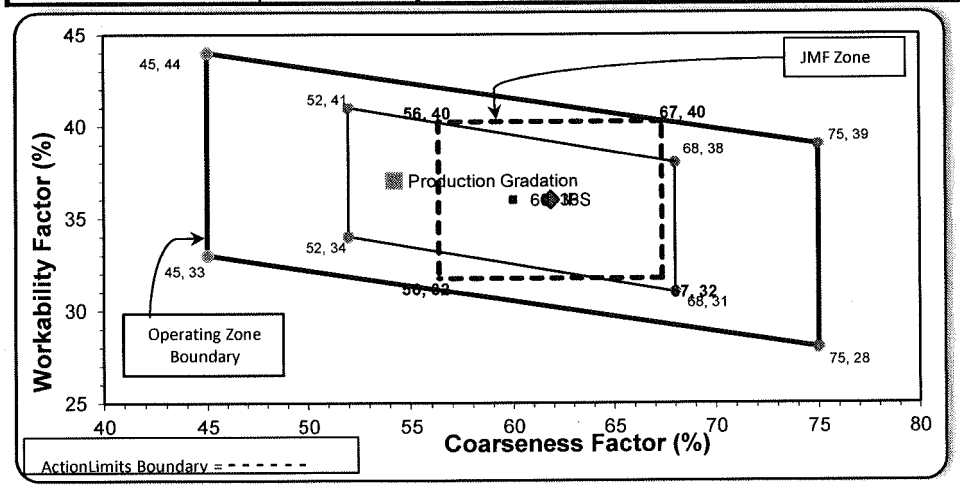
<----- Verify this number is 100%

Sieve	6AA	26A	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	100.0	100.0	100.0	100.0	0.0	0.0
1"	100.0	100.0	100.0	100.0	0.0	0.0
3/4"	90.7	100.0	100.0	95.3	4.7	4.7
1/2"	56.2	96.4	100.0	77.7	17.7	22.3
3/8"	33.1	80.8	100.0	64.5	13.2	35.5
#4	4.3	12.3	96.2	41.5	23.0	58.5
#8	2.2	3.0	83.7	34.5	7.0	65.5
#16	2.1	1.9	68.4	28.3	6.2	71.7
#30	2.0	1.7	49.5	20.8	7.6	79.2
#50	2.0	1.6	23.8	10.6	10.2	89.4
#100	1.9	1.5	7.0	3.9	6.7	96.1
LBW	1.5	1.2	1.9	1.6	2.3	98.4

*Maximum % Retained must be above the 3/8" sieve.
*Any two adjacent sieves must equal 10% except max., nom. max., #100 and #200 sieves.
*% Retained must be at least 4% for each sieve except max., nom. max., #100 and #200 sieves.
*% Retained must be at least 8% for the 1" sieve when a 2" max. size (nom. Max. 1.5") aggregate is used.

Production Gradation ◉ Batch Plant Gradations ○ Aggregate Supplier Gradations

Coarseness Factor:	54	Workability Factor:	35	Adjusted WF	37.0



Intial Production Sample (IPS)

Coarseness Factor:	62
Workability Factor:	36

Sieve	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	0.0	0.0
1.5"	100.0	0.0	0.0
1"	100.0	0.0	0.0
3/4"	95.0	5.0	5.0
1/2"	72.3	22.8	27.7
3/8"	60.4	11.8	39.6
#4	42.6	17.8	57.4
#8	36.0	6.6	64.0
#16	29.5	6.5	70.5
#30	20.3	9.2	79.7
#50	9.5	10.8	90.5
#100	3.4	6.1	96.6
LBW	1.3	2.1	98.7

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Plant 958-JMT

Product 1022-2NS GR - Smelter Bay

Period: 01/08/2023 - 01/14/2023

Name/Title Doug Storey / QC Technician

Report Date 01/14/2023

Procedure	Sieve/Test	Result	Unit	2NS GR Spec
	3/8" (9.5mm)	100.0	%	100-100
	#4 (4.75mm)	96.2	%	95-100
	#8 (2.36mm)	83.7	%	65-95
	#16 (1.18mm)	68.4	%	35-75
	#30 (.6mm)	49.5	%	20-55
	#50 (.3mm)	23.8	%	10-30
	#100 (.15mm)	7.0	%	0-10
	#200 (75µm)	2.1	%	
	FM	2.71		2.6-3
	Wash Loss (#200/75um)	1.9	%	0-3
	Total Moisture	3.5	%	

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Plant 958-JMT

Product 1067-26A Mod LS

Period: 01/08/2023 - 01/14/2023

Name/Title Doug Storey / QC Technician

Report Date 01/14/2023

Procedure	Sieve/Test	Result	Unit	26A Mod LS Spec
	2" (50mm)	100.0	%	
	1 1/2" (37.5mm)	100.0	%	
	1" (25mm)	100.0	%	
	3/4" (19mm)	100.0	%	100-100
	1/2" (12.5mm)	96.4	%	95-100
	3/8" (9.5mm)	80.8	%	60-95
	#4 (4.75mm)	12.3	%	5-30
	#8 (2.36mm)	3.0	%	0-12
	#16 (1.18mm)	1.9	%	
	#30 (.6mm)	1.7	%	
	#50 (.3mm)	1.6	%	
	#100 (.15mm)	1.5	%	
	#200 (75µm)	1.3	%	
	Wash Loss (#200/75um)	1.2	%	0-3
	Total Moisture	3.4	%	

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Plant 958-JMT

Product 1054-6AA LS PI

Period: 01/08/2023 - 01/14/2023

Name/Title Doug Storey / QC Technician

Report Date 01/14/2023

Procedure	Sieve/Test	Result	Unit	6AA LS PI Spec
	2" (50mm)	100.0	%	
	1 1/2" (37.5mm)	100.0	%	100-100
	1" (25mm)	100.0	%	95-100
	3/4" (19mm)	90.7	%	
	1/2" (12.5mm)	56.2	%	30-60
	3/8" (9.5mm)	33.1	%	
	#4 (4.75mm)	4.3	%	0-8
	#8 (2.36mm)	2.2	%	
	#16 (1.18mm)	2.1	%	
	#30 (.6mm)	2.0	%	
	#50 (.3mm)	2.0	%	
	#100 (.15mm)	1.9	%	
	#200 (75µm)	1.7	%	
	Wash Loss (#200/75um)	1.5	%	0-2
	Total Moisture	3.6	%	