Aggregate Optimization Chart

Production Gradation Report

PLANT #: P-32

Sample Date: 3/22/21

Concrete Grade: S2M

Contractor: _____

Dates Test Represents: 3/23/2021 through 3/29/2021

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1420	8.69	2.62	46.6
26A	71-47	Presque Isle	400	2.45	2.62	13.1
2NS	95-013	Smelter Bay	1230	7.44	2.65	40.3
		Total Wt	**3050**	**18.57**		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"	96.3	100.0	100.0	98.3	1.7	1.7
3/4"	76.0	100.0	100.0	88.8	9.5	11.2
1/2"	37.6	97.8	100.0	70.7	18.2	29.3
3/8"	19.5	82.2	100.0	60.2	10.5	39.8
#4	4.2	16.2	96.4	43.0	17.2	57.0
#8	2.5	4.2	83.8	35.5	7.4	64.5
#16	2.2	2.5	68.0	28.8	6.7	71.2
#30	2.0	2.2	44.5	19.2	9.6	80.8
#50	1.9	2.0	18.7	8.7	10.5	91.3
#100	1.7	1.9	4.3	2.8	5.9	97.2
LBW	1.3	1.6	1.0	1.2	1.6	98.8

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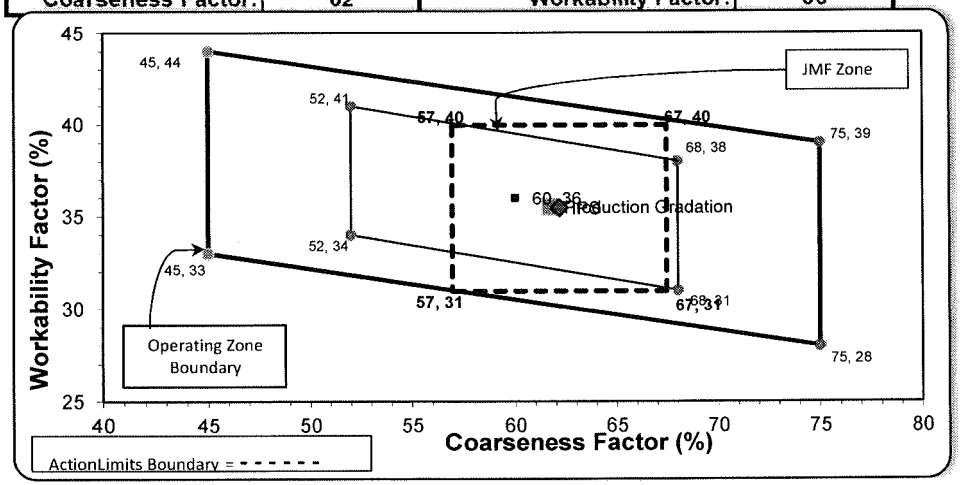
*Maximum % Retained must be above the 3/8" sieve.
*Any two adjacent sieves must equal 10% except max., nom. max., #100 and #200 sieves.
*% Retained must be at least 4% for each sieve except max., nom. max., #100 and #200 sieves.
*% Retained must be at least 8% for the 1" sieve when a 2" max. size (nom.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

Production Gradation ◉ Batch Plant Gradations ○ Aggregate Supplier Gradations

Coarseness Factor:	62	Workability Factor:	36



Intial Production Sample (IPS)

Coarseness Factor:	62
Workability Factor:	35

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"	94.0	6.0	6.0
1/2"	70.2	23.7	29.8
3/8"	59.9	10.4	40.1
#4	42.7	17.2	57.3
#8	35.5	7.2	64.5
#16	28.4	7.0	71.6
#30	19.2	9.2	80.8
#50	8.9	10.3	91.1
#100	3.1	5.9	96.9
LBW	1.4	1.7	98.6

PREPARED BY:
SM, LLC Technical Service

Approved By:

Edw. C. Levy Co.

JMT
8911 W. Jefferson
Detroit, 48209
(313) 429-2429

Plant 958-JMT

Product 1022-2NS GR - Smelter Bay

Period: 03/01/2021 - 03/26/2021

Name/Title Doug Storey / QC Technician

Report Date 03/26/2021

Procedure	Sieve/Test	Result	Unit	2NS GR Spec
	3/8" (9.5mm)	100.0	%	100-100
	#4 (4.75mm)	96.4	%	95-100
	#8 (2.36mm)	83.8	%	65-95
	#16 (1.18mm)	68.0	%	35-75
	#30 (.6mm)	44.5	%	20-55
	#50 (.3mm)	18.7	%	10-30
	#100 (.15mm)	4.3	%	0-10
	#200 (75µm)	1.0	%	
	FM	2.84		2.6-3
	Wash Loss (#200/75um)	1.0	%	0-3
	Total Moisture	3.6	%	

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Plant 958-JMT

Product 1067-26A Mod LS

Period: 03/01/2021 - 03/26/2021

Name/Title Doug Storey / QC Technician

Report Date 03/26/2021

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)	97.8	%	95-100
	3/8" (9.5mm)	82.2	%	60-95
	#4 (4.75mm)	16.2	%	5-30
	#8 (2.36mm)	4.2	%	0-12
	#16 (1.18mm)	2.5	%	
	#30 (.6mm)	2.2	%	
	#50 (.3mm)	2.0	%	
	#100 (.15mm)	1.9	%	
	#200 (75µm)	1.7	%	
	Wash Loss (#200/75um)	1.6	%	0-3
	Total Moisture	2.7	%	

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Plant 958-JMT

Product 1054-6AA LS PI

Period: 03/01/2021 - 03/26/2021

Name/Title Doug Storey / QC Technician

Report Date 03/26/2021

Procedure	Sieve/Test	Result	Unit	6AA LS PI Spec
	2" (50mm)	100.0	%	
	1 1/2" (37.5mm)	100.0	%	100-100
	1" (25mm)	98.3	%	95-100
	3/4" (19mm)	76.0	%	
	1/2" (12.5mm)	37.6	%	30-60
	3/8" (9.5mm)	19.5	%	
	#4 (4.75mm)	4.2	%	0-8
	#8 (2.36mm)	2.5	%	
	#16 (1.18mm)	2.2	%	
	#30 (.6mm)	2.0	%	
	#50 (.3mm)	1.9	%	
	#100 (.15mm)	1.7	%	
	#200 (75µm)	1.4	%	
AASHTO T11	-#200 (75um)	1.43	%	
	Wash Loss (#200/75um)	1.3	%	0-2
	Total Moisture	2.3	%	