Aggregate Optimization Chart

Production Gradation Report

PLANT #: P-32

Sample Date: 7/19/21

Concrete Grade: **S2M**

Dates Test Represents: 7/20/2021 through 7/26/2021

Contractor: _____

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1500	9.17	2.62	49.2
26A	71-47	Presque Isle	320	1.96	2.62	10.5
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"	96.9	100.0	100.0	98.5	1.5	1.5
3/4"	77.4	100.0	100.0	88.9	9.6	11.1
1/2"	31.8	96.2	100.0	66.1	22.8	33.9
3/8"	13.7	86.1	100.0	56.1	10.0	43.9
#4	3.3	23.5	96.0	42.8	13.3	57.2
#8	2.2	6.7	83.2	35.3	7.5	64.7
#16	1.9	3.5	68.4	28.9	6.5	71.1
#30	1.8	2.8	47.4	20.3	8.6	79.7
#50	1.7	2.5	23.3	10.5	9.8	89.5
#100	1.7	2.3	7.0	3.9	6.6	96.1
LBW	1.2	1.7	1.4	1.3	2.6	98.7

*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.

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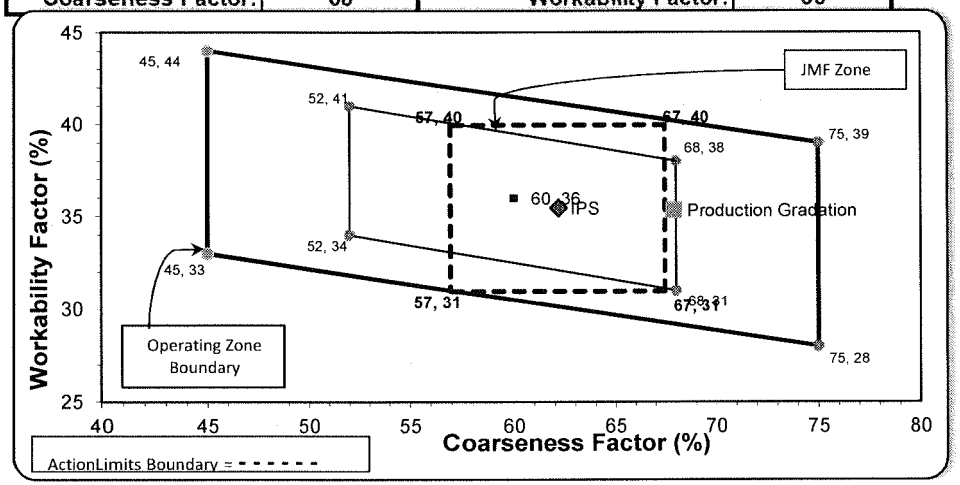
Production Gradation ◉ Batch Plant Gradations ○ Aggregate Supplier Gradations

Coarseness Factor:	68	Workability Factor:	35



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
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Plant 958-JMT

Product 1022-2NS GR - Smelter Bay

Period: 07/18/2021 - 07/24/2021

Name/Title Doug Storey / QC Technician

Report Date 07/24/2021

Procedure	Sieve/Test	Result	Unit	2NS GR Spec
	3/8" (9.5mm)	100.0	%	100-100
	#4 (4.75mm)	96.0	%	95-100
	#8 (2.36mm)	83.2	%	65-95
	#16 (1.18mm)	68.4	%	35-75
	#30 (.6mm)	47.4	%	20-55
	#50 (.3mm)	23.3	%	10-30
	#100 (.15mm)	7.0	%	0-10
	#200 (75µm)	1.7	%	
	FM	2.75		2.6-3
	Wash Loss (#200/75um)	1.4	%	0-3
	Total Moisture	5.1	%	

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Plant 958-JMT

Product 1067-26A Mod LS

Period: 07/18/2021 - 07/24/2021

Name/Title Doug Storey / QC Technician

Report Date 07/24/2021

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)	96.2	%	95-100
	3/8" (9.5mm)	86.1	%	60-95
	#4 (4.75mm)	23.5	%	5-30
	#8 (2.36mm)	6.7	%	0-12
	#16 (1.18mm)	3.5	%	
	#30 (.6mm)	2.8	%	
	#50 (.3mm)	2.5	%	
	#100 (.15mm)	2.3	%	
	#200 (75µm)	1.9	%	
	Wash Loss (#200/75um)	1.7	%	0-3
	Total Moisture	3.7	%	

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Plant 958-JMT

Product 1054-6AA LS PI

Period: 07/18/2021 - 07/24/2021

Name/Title Doug Storey / QC Technician

Report Date 07/24/2021

Procedure	Sieve/Test	Result	Unit	6AA LS PI Spec
	2" (50mm)	100.0	%	
	1 1/2" (37.5mm)	100.0	%	100-100
	1" (25mm)	96.9	%	95-100
	3/4" (19mm)	77.4	%	
	1/2" (12.5mm)	31.8	%	30-60
	3/8" (9.5mm)	13.7	%	
	#4 (4.75mm)	3.3	%	0-8
	#8 (2.36mm)	2.2	%	
	#16 (1.18mm)	1.9	%	
	#30 (.6mm)	1.8	%	
	#50 (.3mm)	1.7	%	
	#100 (.15mm)	1.7	%	
	#200 (75µm)	1.4	%	
	Wash Loss (#200/75um)	1.2	%	0-2
	Total Moisture	1.6	%	