Aggregate Optimization Chart

Production Gradation Report

PLANT #: P-32

Sample Date: 4/4/22

Concrete Grade: **S2M, 3500HP**

Contractor: _____

Dates Test Represents: 4/5/2022 through 4/11/2022

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1570	9.60	2.62	51.5
26A	71-47	Presque Isle	250	1.53	2.62	8.2
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"	97.9	100.0	100.0	98.9	1.1	1.1
3/4"	85.1	100.0	100.0	92.3	6.6	7.7
1/2"	39.7	97.0	100.0	68.7	23.6	31.3
3/8"	21.8	86.1	100.0	58.6	10.1	41.4
#4	4.2	27.5	96.2	43.2	15.4	56.8
#8	2.2	10.2	82.3	35.2	8.1	64.8
#16	1.8	4.8	67.7	28.6	6.5	71.4
#30	1.8	3.3	49.0	21.0	7.7	79.0
#50	1.6	2.9	25.2	11.2	9.7	88.8
#100	1.4	2.6	7.6	4.0	7.2	96.0
LBW	1.0	2.0	1.9	1.4	2.6	98.6

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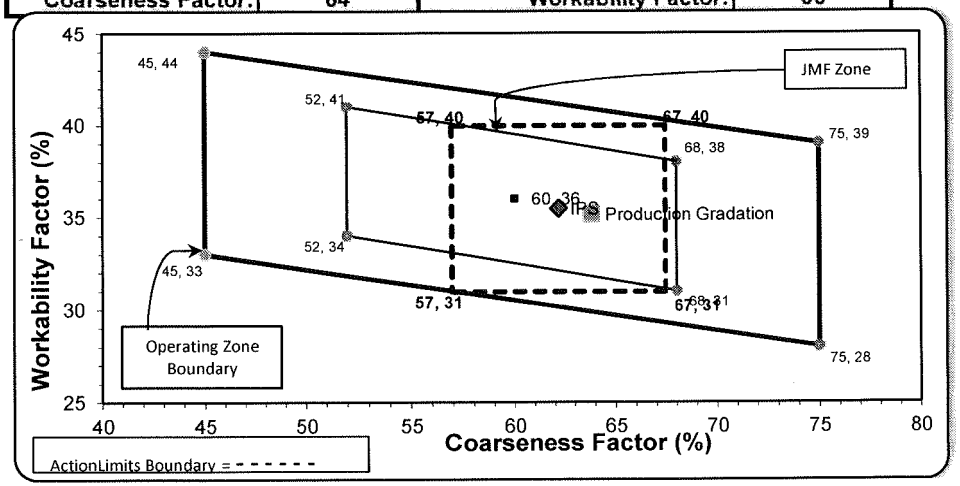
*Maximum % Retained must be above the 3/8" sieve.
*Any two adjacent sieves must equal 10% except max., nom. max., #100 and #200 sieves.
*% Retained must be at least 4% for each sieve except max., nom. max., #100 and #200 sieves.
*% Retained must be at least 8% for the 1" sieve when a 2" max. size (nom.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

Production Gradation ◉ Batch Plant Gradations ○ Aggregate Supplier Gradations

Coarseness Factor:	64	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
(313) 429-2429

Plant 958-JMT

Product 1022-2NS GR - Smelter Bay

Period: 04/03/2022 - 04/09/2022

Name/Title Doug Storey / QC Technician

Report Date 04/07/2022

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)	82.3	%	65-95
	#16 (1.18mm)	67.7	%	35-75
	#30 (.6mm)	49.0	%	20-55
	#50 (.3mm)	25.2	%	10-30
	#100 (.15mm)	7.6	%	0-10
	#200 (75µm)	2.3	%	
	FM	2.72		2.6-3
	Wash Loss (#200/75um)	1.9	%	0-3
	Total Moisture	5.0	%	

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Plant 958-JMT

Product 1067-26A Mod LS

Period: 04/03/2022 - 04/09/2022

Name/Title Doug Storey / QC Technician

Report Date 04/08/2022

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)	97.0	%	95-100
	3/8" (9.5mm)	86.1	%	60-95
	#4 (4.75mm)	27.5	%	5-30
	#8 (2.36mm)	10.2	%	0-12
	#16 (1.18mm)	4.8	%	
	#30 (.6mm)	3.3	%	
	#50 (.3mm)	2.9	%	
	#100 (.15mm)	2.6	%	
	#200 (75µm)	2.2	%	
	Wash Loss (#200/75um)	2.0	%	0-3
	Total Moisture	4.1	%	

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Plant 958-JMT

Product 1054-6AA LS PI

Period: 04/03/2022 - 04/09/2022

Name/Title Doug Storey / QC Technician

Report Date 04/08/2022

Procedure	Sieve/Test	Result	Unit	6AA LS PI Spec
	2" (50mm)	100.0	%	
	1 1/2" (37.5mm)	100.0	%	100-100
	1" (25mm)	97.9	%	95-100
	3/4" (19mm)	85.1	%	
	1/2" (12.5mm)	39.7	%	30-60
	3/8" (9.5mm)	21.8	%	
	#4 (4.75mm)	4.2	%	0-8
	#8 (2.36mm)	2.2	%	
	#16 (1.18mm)	1.8	%	
	#30 (.6mm)	1.8	%	
	#50 (.3mm)	1.6	%	
	#100 (.15mm)	1.4	%	
	#200 (75µm)	1.2	%	
	Wash Loss (#200/75um)	1.0	%	0-2
	Total Moisture	3.2	%	