Aggregate Optimization Chart

Production Gradation Report

PLANT #: P-32

Contractor: _____

Sample Date: 6/27/22

Concrete Grade: **DM, 4500HP**

Dates Test Represents: 6/28/2022 through 7/4/2022

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1305	7.98	2.62	44.9
26A	71-47	Presque Isle	450	2.75	2.62	15.5
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"	98.5	100.0	100.0	99.3	0.7	0.7
3/4"	91.0	100.0	100.0	96.0	3.4	4.0
1/2"	56.1	95.5	100.0	79.6	16.4	20.4
3/8"	32.5	86.5	100.0	67.6	12.0	32.4
#4	6.4	31.3	96.2	45.8	21.8	54.2
#8	3.0	10.6	84.1	36.3	9.5	63.7
#16	2.6	5.0	69.6	29.5	6.8	70.5
#30	2.4	3.8	51.2	21.9	7.6	78.1
#50	2.3	3.3	26.6	12.1	9.9	87.9
#100	2.2	3.0	8.7	4.9	7.2	95.1
LBW	1.9	2.6	1.6	1.9	3.0	98.1

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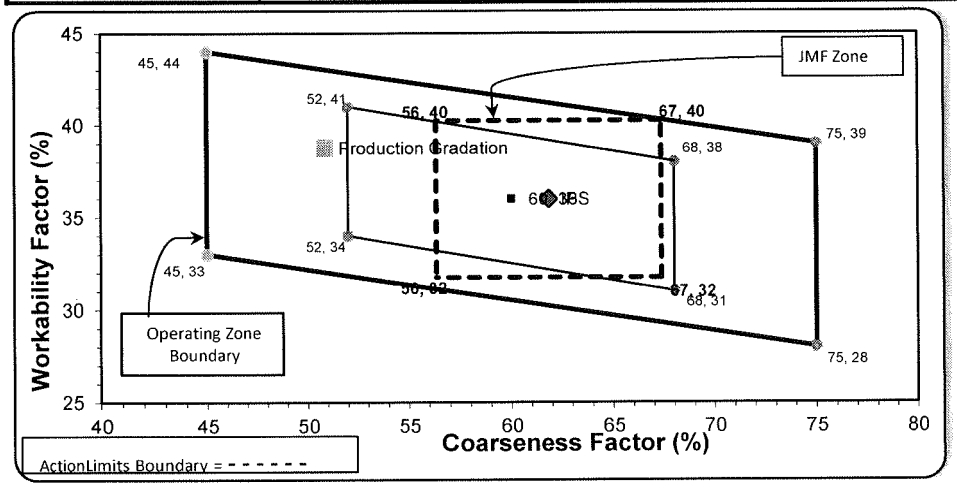
*Maximum % Retained must be above the 3/8" sieve.
*Any two adjacent sieves must equal 10% except max., nom. max., #100 and #200 sieves.
*% Retained must be at least 4% for each sieve except max., nom. max., #100 and #200 sieves.
*% Retained must be at least 8% for the 1" sieve when a 2" max. size (nom.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

Production Gradation ◉ Batch Plant Gradations ○ Aggregate Supplier Gradations

Coarseness Factor:	51	Workability Factor:	36	Adjusted WF	38.8



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

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: 06/26/2022 - 07/02/2022

Name/Title Doug Storey / QC Technician

Report Date 07/01/2022

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)	84.1	%	65-95
	#16 (1.18mm)	69.6	%	35-75
	#30 (.6mm)	51.2	%	20-55
	#50 (.3mm)	26.6	%	10-30
	#100 (.15mm)	8.7	%	0-10
	#200 (75µm)	2.1	%	
	FM	2.64		2.6-3
	Wash Loss (#200/75um)	1.6	%	0-3

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Plant 958-JMT

Product 1067-26A Mod LS

Period: 06/26/2022 - 07/02/2022

Name/Title Doug Storey / QC Technician

Report Date 07/01/2022

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)	95.5	%	95-100
	3/8" (9.5mm)	86.5	%	60-95
	#4 (4.75mm)	31.3	%	5-30
	#8 (2.36mm)	10.6	%	0-12
	#16 (1.18mm)	5.0	%	
	#30 (.6mm)	3.8	%	
	#50 (.3mm)	3.3	%	
	#100 (.15mm)	3.0	%	
	#200 (75µm)	2.7	%	
	Wash Loss (#200/75um)	2.6	%	0-3

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Plant 958-JMT

Product 1054-6AA LS PI

Period: 06/26/2022 - 07/02/2022

Name/Title Doug Storey / QC Technician

Report Date 07/01/2022

Procedure	Sieve/Test	Result	Unit	6AA LS PI Spec
	2" (50mm)	100.0	%	
	1 1/2" (37.5mm)	100.0	%	100-100
	1" (25mm)	98.5	%	95-100
	3/4" (19mm)	91.0	%	
	1/2" (12.5mm)	56.1	%	30-60
	3/8" (9.5mm)	32.5	%	
	#4 (4.75mm)	6.4	%	0-8
	#8 (2.36mm)	3.0	%	
	#16 (1.18mm)	2.6	%	
	#30 (.6mm)	2.4	%	
	#50 (.3mm)	2.3	%	
	#100 (.15mm)	2.2	%	
	#200 (75µm)	2.0	%	
	Wash Loss (#200/75um)	1.9	%	0-2