Aggregate Optimization Chart

Production Gradation Report

PLANT #: P-32

Sample Date: 5/23/22

Concrete Grade: **P1M, 3500HP**

Contractor: _____

Dates Test Represents: 5/24/2022 through 5/30/2022

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft³	Specific Gravity	% Contribution
CA	71-47	Presque Isle	550	3.36	2.62	17.9
IA	71-47	Presque Isle	1270	7.77	2.62	41.4
2NS	95-013	Smelter Bay	1250	7.56	2.65	40.7
		Total Wt	**3070**	**18.69**		100.0

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

Sieve	CA	IA	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	94.7	100.0	100.0	99.1	0.9	0.9
1"	53.8	100.0	100.0	91.7	7.3	8.3
3/4"	18.0	97.2	100.0	84.2	7.6	15.8
1/2"	3.8	75.3	100.0	72.5	11.6	27.5
3/8"	2.5	56.8	100.0	64.7	7.9	35.3
#4	1.9	18.3	96.6	47.2	17.4	52.8
#8	1.8	9.3	84.6	38.6	8.6	61.4
#16	1.7	7.0	69.8	31.6	7.0	68.4
#30	1.6	6.1	50.8	23.5	8.1	76.5
#50	1.5	5.3	24.5	12.4	11.1	87.6
#100	1.4	4.5	6.9	4.9	7.5	95.1
LBW	1.0	2.9	1.3	1.9	3.0	98.1

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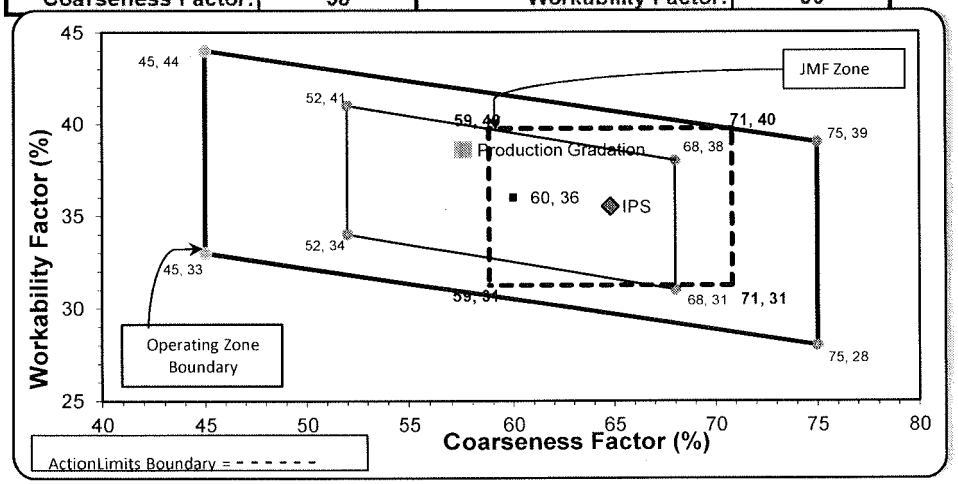
*Maximum % Retained must be above the 3/8" sieve.
*Any two adjacent sieves must equal 10% except max., nom. max., #100 and #200 sieves.
*% Retained must be at least 4% for each sieve except max., nom. max., #100 and #200 sieves.
*% Retained must be at least 8% for the 1" sieve when a 2" max. size (nom.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

Production Gradation ◉ Batch Plant Gradations ○ Aggregate Supplier Gradations

Coarseness Factor:	58	Workability Factor:	39



Intial Production Sample (IPS)

Coarseness Factor:	65
Workability Factor:	36

Sieve	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	0.0	0.0
1.5"	99.0	0.6	0.6
1"	84.0	15.3	16.0
3/4"	73.5	10.5	26.5
1/2"	65.2	8.2	34.8
3/8"	58.2	7.1	41.8
#4	44.1	14.1	55.9
#8	35.5	8.6	64.5
#16	29.1	6.4	70.9
#30	21.9	7.3	78.1
#50	9.6	12.2	90.4
#100	2.6	7.1	97.4
LBW	1.0	1.6	99.0

PREPARED BY:
SM, LLC Technical Service

Approved By:

Edw. C. Levy Co.

JMT
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Detroit, 48209
(313) 429-2429

Plant 958-JMT

Product 1022-2NS GR - Smelter Bay

Period: 05/22/2022 - 05/28/2022

Name/Title Doug Storey / QC Technician

Report Date 05/27/2022

Procedure	Sieve/Test	Result	Unit	2NS GR Spec
	3/8" (9.5mm)	100.0	%	100-100
	#4 (4.75mm)	96.6	%	95-100
	#8 (2.36mm)	84.6	%	65-95
	#16 (1.18mm)	69.8	%	35-75
	#30 (.6mm)	50.8	%	20-55
	#50 (.3mm)	24.5	%	10-30
	#100 (.15mm)	6.9	%	0-10
	#200 (75µm)	1.7	%	
	FM	2.67		2.6-3
	Wash Loss (#200/75um)	1.3	%	0-3
	Total Moisture	4.9	%	

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Plant 958-JMT

Product 7920-INTERMED AGG P1M LS PI

Period: 05/28/2022 - 05/28/2022

Name/Title Doug Storey / QC Technician

Report Date 05/28/2022

Procedure	Sieve/Test	Result	Unit	Intermed Agg P1M LS PI Target
	2" (50mm)	100.0	%	
	1 1/2" (37.5mm)	100.0	%	
	1" (25mm)	100.0	%	
	3/4" (19mm)	97.2	%	
	1/2" (12.5mm)	75.3	%	
	3/8" (9.5mm)	56.8	%	
	#4 (4.75mm)	18.3	%	
	#8 (2.36mm)	9.3	%	
	#16 (1.18mm)	7.0	%	
	#30 (.6mm)	6.1	%	
	#50 (.3mm)	5.3	%	
	#100 (.15mm)	4.5	%	
	#200 (75µm)	3.1	%	
	Wash Loss (#200/75um)	2.9	%	0-3
	Total Moisture	3.0	%	

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Plant 958-JMT

Product 7919-COARSE AGG P1M LS PI

Period: 05/22/2022 - 05/28/2022

Name/Title Doug Storey / QC Technician

Report Date 05/27/2022

Procedure	Sieve/Test	Result	Unit	Coarse Agg P1M LS PI Target
	2" (50mm)	100.0	%	
	1 1/2" (37.5mm)	94.7	%	
	1" (25mm)	53.8	%	
	3/4" (19mm)	18.0	%	
	1/2" (12.5mm)	3.8	%	
	3/8" (9.5mm)	2.5	%	
	#4 (4.75mm)	1.9	%	
	#8 (2.36mm)	1.8	%	
	#16 (1.18mm)	1.7	%	
	#30 (.6mm)	1.6	%	
	#50 (.3mm)	1.5	%	
	#100 (.15mm)	1.4	%	
	#200 (75µm)	1.2	%	
	Wash Loss (#200/75um)	1.0	%	0-2
	Total Moisture	0.3	%	