

Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-32**

Sample Date: 8/16/21

Dates Test Represents: 8/17/2021 through 8/23/2021

Concrete Grade: **P1M**

Contractor: _____

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	Contribution %
CA	71-47	Presque Isle	950	5.81	2.62	30.9
IA	71-47	Presque Isle	870	5.32	2.62	28.3
N2S	95-013	Smelter Bay	1250	7.56	2.65	40.7
Total Wt			3070	18.69		100.0

Sieve	CA	IA	N2S	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	93.3	100.0	100.0	97.9	2.1	2.1
1"	18.1	100.0	100.0	74.7	23.3	25.3
3/4"	2.3	97.7	100.0	69.6	5.1	30.4
1/2"	2.8	78.0	100.0	63.5	6.0	36.5
3/8"	2.1	54.5	100.0	56.8	6.7	43.2
#4	2.1	16.3	97.2	44.8	12.0	55.2
#8	2.0	6.5	82.3	36.0	8.9	64.0
#16	1.9	4.1	67.0	29.0	6.9	71.0
#30	1.8	3.5	48.4	21.3	7.8	78.7
#50	1.7	3.2	25.2	11.7	9.6	88.3
#100	1.5	2.8	5.2	3.4	8.3	96.6
LBW	1.2	2.3	0.9	1.4	2.0	98.6

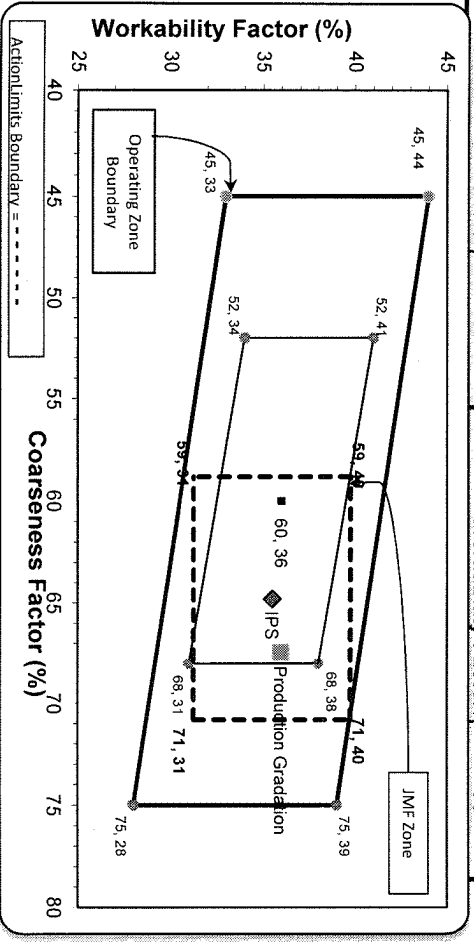


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*Maximum % Retained must be above the 3/8" sieve.
 *Any two adjacent sieves must equal 10% except max.
 nom. max. #100 and #200 sieves.
 *Retained must be at least 4% for each sieve except max.
 nom. max. #100 and #200 sieves.
 *% Retained must be 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: **67** Workability Factor: **36**



Initial 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: _____

Plant 958-JMT

Product 1022-2NS GR - Smelter Bay

Name/Title Doug Storey / QC Technician

Period: 08/15/2021 - 08/21/2021

Report Date 08/21/2021

Procedure	Sieve/Test	Result	Unit	2NS GR Spec
	3/8" (9.5mm)	100.0	%	100-100
	#4 (4.75mm)	97.2	%	95-100
	#8 (2.36mm)	82.3	%	65-95
	#16 (1.18mm)	67.0	%	35-75
	#30 (.6mm)	48.4	%	20-55
	#50 (.3mm)	25.2	%	10-30
	#100 (.15mm)	5.2	%	0-10
	#200 (75µm)	1.2	%	
	FM	2.75		2.6-3
	Wash Loss (#200/75um)	0.9	%	0-3
	Total Moisture	4.0	%	

Plant 958-JMT

Product 7920-INTERMED AGG P1M LS PI

Name/Title Doug Storey / QC Technician

Period: 08/15/2021 - 08/21/2021

Report Date 08/21/2021

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)	97.7	%	
	1/2" (12.5mm)	78.0	%	
	3/8" (9.5mm)	54.5	%	
	#4 (4.75mm)	16.3	%	
	#8 (2.36mm)	6.5	%	
	#16 (1.18mm)	4.1	%	
	#30 (.6mm)	3.5	%	
	#50 (.3mm)	3.2	%	
	#100 (.15mm)	2.8	%	
	#200 (75µm)	2.3	%	
	Wash Loss (#200/75um)	2.3	%	0-3
	Total Moisture	2.2	%	

Edw. C. Levy Co.

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Plant 958-JMT

Product 7919-COARSE AGG P1M LS PI

Name/Title Doug Storey / QC Technician

Period: 08/15/2021 - 08/21/2021

Report Date 08/21/2021

Procedure	Sieve/Test	Result	Unit	Coarse Agg P1M LS PI Target
	2" (50mm)	100.0	%	
	1 1/2" (37.5mm)	93.3	%	
	1" (25mm)	18.1	%	
	3/4" (19mm)	3.8	%	
	1/2" (12.5mm)	2.3	%	
	3/8" (9.5mm)	2.1	%	
	#4 (4.75mm)	2.1	%	
	#8 (2.36mm)	2.0	%	
	#16 (1.18mm)	1.9	%	
	#30 (.6mm)	1.8	%	
	#50 (.3mm)	1.7	%	
	#100 (.15mm)	1.5	%	
	#200 (75µm)	1.3	%	
	Wash Loss (#200/75um)	1.2	%	0-2
	Total Moisture	2.7	%	