Aggregate Optimization Chart

Production Gradation Report

PLANT #: P-32

Contractor: _____

Sample Date: 1/18/21

Concrete Grade: P1M

Dates Test Represents: 1/19/2021 through 1/25/2021

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft³	Specific Gravity	% Contribution
CA	71-47	Presque Isle	1000	6.12	2.62	32.6
IA	71-47	Presque Isle	820	5.02	2.62	26.7
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"	95.2	100.0	100.0	98.4	1.6	1.6
1"	30.0	100.0	100.0	77.2	21.2	22.8
3/4"	6.0	98.5	100.0	69.0	8.2	31.0
1/2"	4.3	73.0	100.0	61.6	7.4	38.4
3/8"	4.2	46.0	100.0	54.4	7.2	45.6
#4	4.2	7.9	96.6	42.8	11.6	57.2
#8	4.2	2.9	82.8	35.9	7.0	64.1
#16	4.1	2.0	66.7	29.0	6.8	71.0
#30	3.9	1.7	43.3	19.4	9.7	80.6
#50	3.3	1.5	18.0	8.8	10.6	91.2
#100	2.5	1.3	4.4	3.0	5.9	97.0
LBW	1.6	0.7	1.1	1.2	1.8	98.8

*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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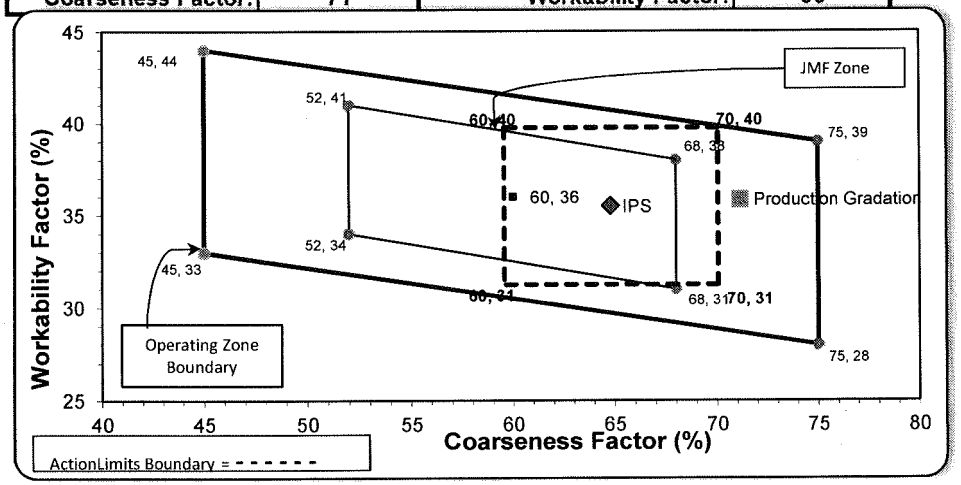
Production Gradation ◉ Batch Plant Gradations ○ Aggregate Supplier Gradations

Coarseness Factor:	71	Workability Factor:	36



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.

Basic Quality Statistical Summary Report

Plant 958-JMT
Product 7919-COARSE AGG P1M LS PI
Specification Coarse Agg P1M LS PI Target
Period 01/17/2021 - 01/23/2021

Sieve/Test	Tests	Average	St Dev	Target	Specification
2" (50mm)	1	100.0		100-100	
1 1/2" (37.5mm)	1	95.2		93-100	
1" (25mm)	1	30.0		35-55	
3/4" (19mm)	1	6.0		8-24	
1/2" (12.5mm)	1	4.3		0-6	
3/8" (9.5mm)	1	4.2		0-5	
#4 (4.75mm)	1	4.2		0-3	
#8 (2.36mm)	1	4.2			
#16 (1.18mm)	1	4.1			
#30 (.6mm)	1	3.9			
#50 (.3mm)	1	3.3			
#100 (.15mm)	1	2.5			
#200 (75µm)	1	2.0		0-2	
Pan	1	0.0			
Wash Loss (#200/75um)	1	1.6			0-2
Total Moisture	1	3.0			

Edw. C. Levy Co.

Basic Quality Statistical Summary Report

Plant 958-JMT
Product 7920-INTERMED AGG P1M LS PI
Specification Intermed Agg P1M LS PI Target
Period 01/17/2021 - 01/23/2021

Sieve/Test	Tests	Average	St Dev	Target	Specification
2" (50mm)	1	100.0			
1 1/2" (37.5mm)	1	100.0			
1" (25mm)	1	100.0		100-100	
3/4" (19mm)	1	98.5		98-100	
1/2" (12.5mm)	1	73.0		72-92	
3/8" (9.5mm)	1	46.0		39-68	
#4 (4.75mm)	1	7.9		2-23	
#8 (2.36mm)	1	2.9			
#16 (1.18mm)	1	2.0			
#30 (.6mm)	1	1.7			
#50 (.3mm)	1	1.5			
#100 (.15mm)	1	1.3			
#200 (75µm)	1	0.9		0-3	
Pan	1	0.0			
Wash Loss (#200/75um)	1	0.7			0-3
Total Moisture	1	2.6			

Edw. C. Levy Co.

Basic Quality Statistical Summary Report

Plant 958-JMT
Product 1022-2NS GR - Smelter Bay
Specification 2NS GR Spec
Period 01/17/2021 - 01/23/2021

Sieve/Test	Tests	Average	St Dev	Target	Specification
3/8" (9.5mm)	1	100.0			100-100
#4 (4.75mm)	1	96.6			95-100
#8 (2.36mm)	1	82.8			65-95
#16 (1.18mm)	1	66.7			35-75
#30 (.6mm)	1	43.3			20-55
#50 (.3mm)	1	18.0		18-28	10-30
#100 (.15mm)	1	4.4			0-10
#200 (75µm)	1	1.1			
Pan	1	0.0			
FM	1	2.88		2.7-2.9	2.6-3
Wash Loss (#200/75um)	1	1.1			0-3
Total Moisture	1	4.8			