

Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-32**

Contractor: _____

Sample Date: **7/11/22**

Concrete Grade: **S2M, 3500HP**

Dates Test Represents: **7/12/2022** through **7/18/2022**

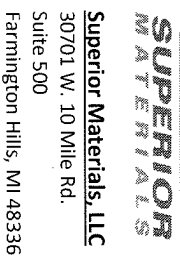
MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1820	11.13	2.62	59.7
26A	71-47	Presque Isle	0	0.00	2.62	0.0
ZNS	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	ZNS	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"	98.9	100.0	100.0	99.3	0.7	0.7
3/4"	87.3	100.0	100.0	92.4	6.9	7.6
1/2"	53.7	96.5	100.0	72.4	20.0	27.6
3/8"	28.0	86.9	100.0	57.0	15.3	43.0
#4	4.8	29.6	95.6	41.4	15.6	58.6
#8	2.3	10.0	81.6	34.3	7.1	65.7
#16	2.0	5.0	66.7	28.1	6.2	71.9
#30	1.9	3.5	47.8	20.4	7.7	79.6
#50	1.8	3.1	24.1	10.8	9.6	89.2
#100	1.7	2.8	7.7	4.1	6.7	95.9
LBW	1.3	2.5	1.8	1.5	2.6	98.5

*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. 1.5") aggregate is used.



Production Gradation Batch Plant Gradations Aggregate Supplier Gradations

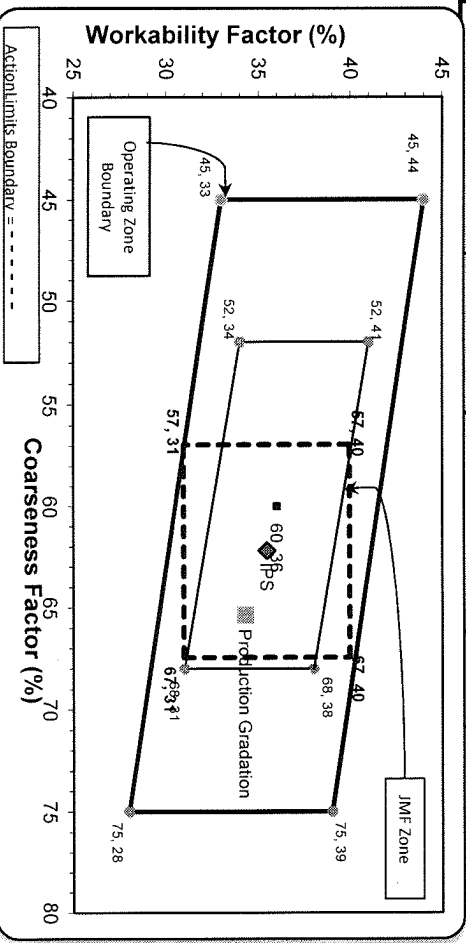
Initial Production Sample (IPS)

Coarseness Factor: **62**

Workability Factor: **35**

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: _____

Plant 958-JMT

Product 1022-2NS GR - Smelter Bay

Name/Title Doug Storey / QC Technician

Period: 07/10/2022 - 07/16/2022

Report Date 07/15/2022

Procedure	Sieve/Test	Result	Unit	2NS GR Spec
	3/8" (9.5mm)	100.0	%	100-100
	#4 (4.75mm)	95.6	%	95-100
	#8 (2.36mm)	81.6	%	65-95
	#16 (1.18mm)	66.7	%	35-75
	#30 (.6mm)	47.8	%	20-55
	#50 (.3mm)	24.1	%	10-30
	#100 (.15mm)	7.7	%	0-10
	#200 (75µm)	2.1	%	
	FM	2.76		2.6-3
	Wash Loss (#200/75um)	1.8	%	0-3

Plant 958-JMT

Product 1067-26A Mod LS

Name/Title Doug Storey / QC Technician

Period: 07/10/2022 - 07/16/2022

Report Date 07/15/2022

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)	96.5	%	95-100
	3/8" (9.5mm)	86.9	%	60-95
	#4 (4.75mm)	29.6	%	5-30
	#8 (2.36mm)	10.0	%	0-12
	#16 (1.18mm)	5.0	%	
	#30 (.6mm)	3.5	%	
	#50 (.3mm)	3.1	%	
	#100 (.15mm)	2.8	%	
	#200 (75µm)	2.6	%	
	Wash Loss (#200/75um)	2.5	%	0-3

Plant 958-JMT

Product 1054-6AA LS PI

Name/Title Doug Storey / QC Technician

Period: 07/10/2022 - 07/16/2022

Report Date 07/15/2022

Procedure	Sieve/Test	Result	Unit	6AA LS PI Spec
	2" (50mm)	100.0	%	
	1 1/2" (37.5mm)	100.0	%	100-100
	1" (25mm)	98.9	%	95-100
	3/4" (19mm)	87.3	%	
	1/2" (12.5mm)	53.7	%	30-60
	3/8" (9.5mm)	28.0	%	
	#4 (4.75mm)	4.8	%	0-8
	#8 (2.36mm)	2.3	%	
	#16 (1.18mm)	2.0	%	
	#30 (.6mm)	1.9	%	
	#50 (.3mm)	1.8	%	
	#100 (.15mm)	1.7	%	
	#200 (75µm)	1.5	%	
	Wash Loss (#200/75um)	1.3	%	0-2