

# Aggregate Optimization Chart

# Production Gradation Report

PLANT #: **P-32**

Contractor: \_\_\_\_\_

Sample Date: **9/20/21**

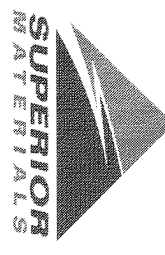
MDOT No.: \_\_\_\_\_

Dates Test Represents: **9/21/2021** through **9/27/2021**

Concrete Grade: **DM**

Agg. Class	Pit #	Source	Weight (SSD)	ft <sup>3</sup>	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1600	9.79	2.62	55.1
26A	71-47	Presque Isle	155	0.95	2.62	5.3
2NS	95-013	Smelter Bay	1150	6.95	2.65	39.6
<b>Total Wt:</b>						<b>2905</b>
						<b>17.69</b>
						<b>100.0</b>

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"	96.3	100.0	100.0	98.0	2.0	2.0
3/4"	73.5	100.0	100.0	85.4	12.6	14.6
1/2"	37.2	96.9	100.0	65.2	20.2	34.8
3/8"	23.1	87.0	100.0	57.0	8.3	43.0
#4	4.4	21.1	95.3	41.3	15.7	58.7
#8	1.7	5.8	83.2	34.2	7.1	65.8
#16	1.3	2.8	67.9	27.7	6.4	72.3
#30	1.2	2.3	49.8	20.5	7.2	79.5
#50	1.2	2.1	25.3	10.8	9.7	89.2
#100	1.1	2.0	8.4	4.0	6.8	96.0
LBW	0.8	1.6	1.7	1.2	2.8	98.8



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1"	96.3	100.0	100.0	98.0	2.0	2.0
3/4"	73.5	100.0	100.0	85.4	12.6	14.6
1/2"	37.2	96.9	100.0	65.2	20.2	34.8
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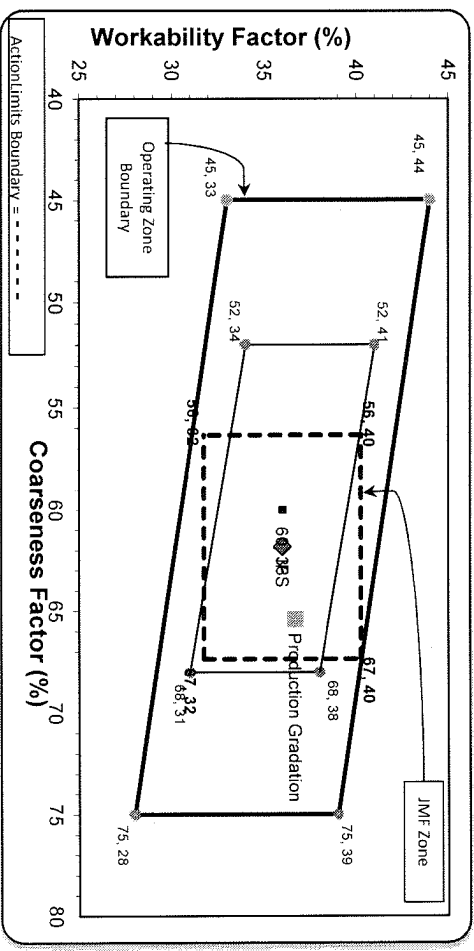
\*Maximum % Retained must be above the 3/8" sieve.  
 \*Any two adjacent sieves must equal 10% except max.  
 nom. max., #100 and #200 sieves.  
 \*% Retained must be at least 4% for each sieve except max.  
 nom. max., #100 and #200 sieves.  
 \*% Retained must be at least 8% for the 1" sieve when  
 a 2" max. size (nom. Max. 1.5") aggregate is used.

Production Gradation  Batch Plant Gradations  Aggregate Supplier Gradations

Coarseness Factor: **65** Workability Factor: **34** Adjusted WF: **36.7**

Initial 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: \_\_\_\_\_

Plant 958-JMT

Product 1022-2NS GR - Smelter Bay

Name/Title Doug Storey / QC Technician

Period: 09/19/2021 - 09/25/2021

Report Date 09/24/2021

Procedure	Sieve/Test	Result	Unit	2NS GR Spec
	3/8" (9.5mm)	100.0	%	100-100
	#4 (4.75mm)	95.3	%	95-100
	#8 (2.36mm)	83.2	%	65-95
	#16 (1.18mm)	67.9	%	35-75
	#30 (.6mm)	49.8	%	20-55
	#50 (.3mm)	25.3	%	10-30
	#100 (.15mm)	8.4	%	0-10
	#200 (75µm)	2.2	%	
	FM	2.70		2.6-3
	Wash Loss (#200/75um)	1.7	%	0-3
	Total Moisture	4.0	%	

Plant 958-JMT  
 Product 1067-26A Mod LS  
 Period: 09/19/2021 - 09/25/2021

Name/Title Doug Storey / QC Technician  
 Report Date 09/24/2021

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)	96.9	%	95-100
	3/8" (9.5mm)	87.0	%	60-95
	#4 (4.75mm)	21.1	%	5-30
	#8 (2.36mm)	5.8	%	0-12
	#16 (1.18mm)	2.8	%	
	#30 (.6mm)	2.3	%	
	#50 (.3mm)	2.1	%	
	#100 (.15mm)	2.0	%	
	#200 (75µm)	1.7	%	
	Wash Loss (#200/75um)	1.6	%	0-3
	Total Moisture	3.6	%	

Plant 958-JMT

Product 1054-6AA LS PI

Period: 09/19/2021 - 09/25/2021

Name/Title Doug Storey / QC Technician

Report Date 09/24/2021

Procedure	Sieve/Test	Result	Unit	6AA LS PI Spec
	2" (50mm)	100.0	%	
	1 1/2" (37.5mm)	100.0	%	100-100
	1" (25mm)	96.3	%	95-100
	3/4" (19mm)	73.5	%	
	1/2" (12.5mm)	37.2	%	30-60
	3/8" (9.5mm)	23.1	%	
	#4 (4.75mm)	4.4	%	0-8
	#8 (2.36mm)	1.7	%	
	#16 (1.18mm)	1.3	%	
	#30 (.6mm)	1.2	%	
	#50 (.3mm)	1.2	%	
	#100 (.15mm)	1.1	%	
	#200 (75µm)	0.9	%	
	Wash Loss (#200/75µm)	0.8	%	0-2
	Total Moisture	3.2	%	