

# Aggregate Optimization Chart

# Production Gradation Report

PLANT #: **11**

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

Sample Date: 11/14/22

Concrete Grade: **P1M, 3500HP**

Dates Test Represents: 11/15/2022 through 11/12/2022

MIDOT No.: \_\_\_\_\_

Agg. Class	Pit #	Source	Weight (ssd)	ft <sup>3</sup>	Specific Gravity	Contribution %
CA	71-47	Presque Isle	920	5.63	2.62	30.0
IA	71-47	Presque Isle	900	5.50	2.62	29.3
2NS	95-013	Smelter Bay	1250	7.56	2.65	40.7
<b>Total Wt</b>			<b>3070</b>	<b>18.69</b>		<b>100.0</b>

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"	98.2	100.0	100.0	99.5	0.5	0.5
1"	42.8	100.0	100.0	82.9	16.6	17.1
3/4"	13.5	99.5	100.0	73.9	8.9	26.1
1/2"	3.7	85.3	100.0	66.8	7.1	33.2
3/8"	2.7	63.2	100.0	60.1	6.8	39.9
#4	2.3	16.3	97.0	45.0	15.1	55.0
#8	2.2	5.4	81.2	35.3	9.7	64.7
#16	2.1	3.6	66.8	28.9	6.4	71.1
#30	2.1	3.2	52.2	22.8	6.1	77.2
#50	2.0	3.0	27.7	12.8	10.1	87.2
#100	1.9	2.7	6.0	3.8	9.0	96.2
LBW	1.5	2.3	0.7	1.4	2.4	98.6

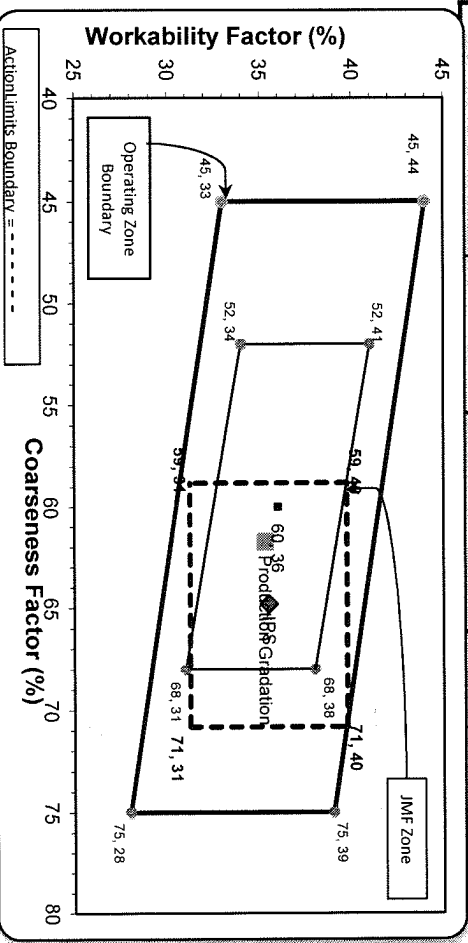
\*Maximum % Retained must be above the 3/8" sieve.  
 \*Any two adjacent sieves must equal 10% except max.  
 nom. max. #100 and #200 sieves.  
 \*% Retained must be at least 4% for each sieve except max.  
 nom. max. #100 and #200 sieves.  
 \*% Retained must be at least 8% for the 1" sieve when  
 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: **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: \_\_\_\_\_



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Plant S11-Superior Onsite Jefferson

Product 1022-2NS GR

Name/Title Doug Storey / QC Technician

Period: 11/13/2022 - 11/19/2022

Report Date 11/18/2022

Procedure	Sieve/Test	Result	Unit	2NS GR Spec
	3/8" (9.5mm)	100.0	%	100-100
	#4 (4.75mm)	97.0	%	95-100
	#8 (2.36mm)	81.2	%	65-95
	#16 (1.18mm)	66.8	%	35-75
	#30 (.6mm)	52.2	%	20-55
	#50 (.3mm)	27.7	%	10-30
	#100 (.15mm)	6.0	%	0-10
	#200 (75µm)	0.8	%	
	FM	2.69		2.6-3
	Wash Loss (#200/75um)	0.7	%	0-3
	Total Moisture	3.65	%	



Plant S11-Superior Onsite Jefferson

Product 7920-INTERMED AGG P1M LS

Name/Title Doug Storey / QC Technician

Period: 11/13/2022 - 11/19/2022

Report Date 11/18/2022

Procedure	Sieve/Test	Result	Unit	Intermed Agg P1M LS Target
	2" (50mm)	100.0	%	
	1 1/2" (37.5mm)	100.0	%	
	1" (25mm)	100.0	%	
	3/4" (19mm)	99.5	%	
	1/2" (12.5mm)	85.3	%	
	3/8" (9.5mm)	63.2	%	
	#4 (4.75mm)	16.3	%	
	#8 (2.36mm)	5.4	%	
	#16 (1.18mm)	3.6	%	
	#30 (.6mm)	3.2	%	
	#50 (.3mm)	3.0	%	
	#100 (.15mm)	2.7	%	
	#200 (75µm)	2.4	%	
	Wash Loss (#200/75um)	2.3	%	0-3
	Total Moisture	3.04	%	



Plant S11-Superior Onsite Jefferson

Product 7919-COARSE AGG P1M LS

Name/Title Doug Storey / QC Technician

Period: 11/13/2022 - 11/19/2022

Report Date 11/18/2022

Procedure	Sieve/Test	Result	Unit	Coarse Agg P1M LS Target
	2" (50mm)	100.0	%	
	1 1/2" (37.5mm)	98.2	%	
	1" (25mm)	42.8	%	
	3/4" (19mm)	13.5	%	
	1/2" (12.5mm)	3.7	%	
	3/8" (9.5mm)	2.7	%	
	#4 (4.75mm)	2.3	%	
	#8 (2.36mm)	2.2	%	
	#16 (1.18mm)	2.1	%	
	#30 (.6mm)	2.1	%	
	#50 (.3mm)	2.0	%	
	#100 (.15mm)	1.9	%	
	#200 (75µm)	1.6	%	
	Wash Loss (#200/75um)	1.5	%	0-2
	Total Moisture	0.91	%	