

Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-32**

Sample Date: **1/10/22**

Dates Test Represents: **1/11/2022** through **1/17/2022**

Concrete Grade: **S2M**

Contractor: _____

MIDOT No.: _____

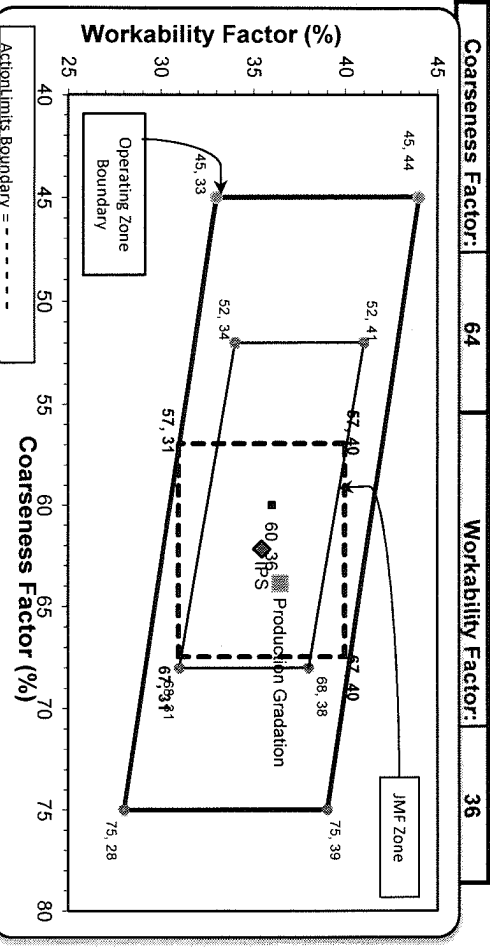
| Agg. Class | Pit # | Source | Weight (SSD) | ft ³ | Specific Gravity | Contribution % |
|------------------|--------|--------------|--------------|-----------------|------------------|----------------|
| 6AA | 71-47 | Presque Isle | 1600 | 9.79 | 2.62 | 52.5 |
| 26A | 71-47 | Presque Isle | 220 | 1.35 | 2.62 | 7.2 |
| 2NS | 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 | 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" | 96.0 | 100.0 | 100.0 | 97.9 | 2.1 | 2.1 |
| 3/4" | 75.0 | 100.0 | 100.0 | 86.9 | 13.1 | 13.1 |
| 1/2" | 38.5 | 95.2 | 100.0 | 67.4 | 32.6 | 32.6 |
| 3/8" | 24.5 | 86.2 | 100.0 | 59.4 | 40.6 | 40.6 |
| #4 | 6.3 | 29.5 | 97.0 | 44.6 | 55.4 | 55.4 |
| #8 | 3.0 | 11.7 | 84.4 | 36.5 | 63.5 | 63.5 |
| #16 | 2.5 | 6.9 | 68.7 | 29.5 | 70.5 | 70.5 |
| #30 | 2.3 | 5.1 | 48.8 | 21.3 | 78.7 | 78.7 |
| #50 | 2.1 | 3.9 | 23.3 | 10.8 | 89.2 | 89.2 |
| #100 | 1.9 | 3.0 | 6.9 | 4.0 | 96.0 | 96.0 |
| LBW | 1.5 | 2.5 | 1.6 | 1.6 | 98.4 | 98.4 |

Production Gradation Batch Plant Gradations Aggregate Supplier Gradations

Initial Production Sample (IPS)



| Sieve | Coarseness Factor: | Workability Factor: | % Retained | Cumulative % Retained |
|-------|--------------------|---------------------|------------|-----------------------|
| 2" | 62 | 35 | 0.0 | 0.0 |
| 1.5" | | | 0.0 | 0.0 |
| 1" | | | 0.0 | 0.0 |
| 3/4" | | | 6.0 | 6.0 |
| 1/2" | | | 23.7 | 29.8 |
| 3/8" | | | 10.4 | 40.1 |
| #4 | | | 17.2 | 57.3 |
| #8 | | | 7.2 | 64.5 |
| #16 | | | 7.0 | 71.6 |
| #30 | | | 9.2 | 80.8 |
| #50 | | | 10.3 | 91.1 |
| #100 | | | 5.9 | 96.9 |
| LBW | | | 1.7 | 98.6 |

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PREPARED BY:
SM, LLC Technical Service

Approved By: _____

Plant 958-JMT

Product 1022-2NS GR - Smelter Bay

Name/Title Doug Storey / QC Technician

Period: 01/09/2022 - 01/15/2022

Report Date 01/14/2022

| 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) | 84.4 | % | 65-95 |
| | #16 (1.18mm) | 68.7 | % | 35-75 |
| | #30 (.6mm) | 48.8 | % | 20-55 |
| | #50 (.3mm) | 23.3 | % | 10-30 |
| | #100 (.15mm) | 6.9 | % | 0-10 |
| | #200 (75µm) | 2.0 | % | |
| | FM | 2.71 | | 2.6-3 |
| | Wash Loss (#200/75µm) | 1.6 | % | 0-3 |
| | Total Moisture | 5.2 | % | |

Plant 958-JMT

Product 1067-26A Mod LS

Name/Title Doug Storey / QC Technician

Period: 01/09/2022 - 01/15/2022

Report Date 01/14/2022

| 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) | 95.2 | % | 95-100 |
| | 3/8" (9.5mm) | 86.2 | % | 60-95 |
| | #4 (4.75mm) | 29.5 | % | 5-30 |
| | #8 (2.36mm) | 11.7 | % | 0-12 |
| | #16 (1.18mm) | 6.9 | % | |
| | #30 (.6mm) | 5.1 | % | |
| | #50 (.3mm) | 3.9 | % | |
| | #100 (.15mm) | 3.0 | % | |
| | #200 (75µm) | 2.6 | % | |
| | Wash Loss (#200/75um) | 2.5 | % | 0-3 |
| | Total Moisture | 4.0 | % | |

Plant 958-JMT

Product 1054-6AA LS PI

Name/Title Doug Storey / QC Technician

Period: 01/09/2022 - 01/15/2022

Report Date 01/14/2022

| Procedure | Sieve/Test | Result | Unit | 6AA LS PI Spec |
|-----------|-----------------------|--------|------|----------------|
| | 2" (50mm) | 100.0 | % | |
| | 1 1/2" (37.5mm) | 100.0 | % | 100-100 |
| | 1" (25mm) | 96.0 | % | 95-100 |
| | 3/4" (19mm) | 75.0 | % | |
| | 1/2" (12.5mm) | 38.5 | % | 30-60 |
| | 3/8" (9.5mm) | 24.5 | % | |
| | #4 (4.75mm) | 6.3 | % | 0-8 |
| | #8 (2.36mm) | 3.0 | % | |
| | #16 (1.18mm) | 2.5 | % | |
| | #30 (.6mm) | 2.3 | % | |
| | #50 (.3mm) | 2.1 | % | |
| | #100 (.15mm) | 1.9 | % | |
| | #200 (75µm) | 1.7 | % | |
| | Wash Loss (#200/75µm) | 1.5 | % | 0-2 |
| | Total Moisture | 3.3 | % | |