# Aggregate Optimization Chart

Production Gradation Report

**PLANT #:** P-32

Contractor: _____

Sample Date: 1/23/23

Concrete Grade: **DM, 4500HP**

Dates Test Represents: 1/24/2023 through 1/30/2023

MDOT No.: _____

| Agg. Class | Pit # | Source | Weight (SSD) | ft³ | Specific Gravity | % Contribution |
|---|---|---|---|---|---|---|
| 6AA | 71-47 | Presque Isle | 1555 | 9.51 | 2.62 | 53.5 |
| 26A | 71-47 | Presque Isle | 200 | 1.22 | 2.62 | 6.9 |
| 2NS | 95-013 | Smelter Bay | 1150 | 6.95 | 2.65 | 39.6 |
| | | **Total Wt** | **2905** | **17.69** | | 100.0 |

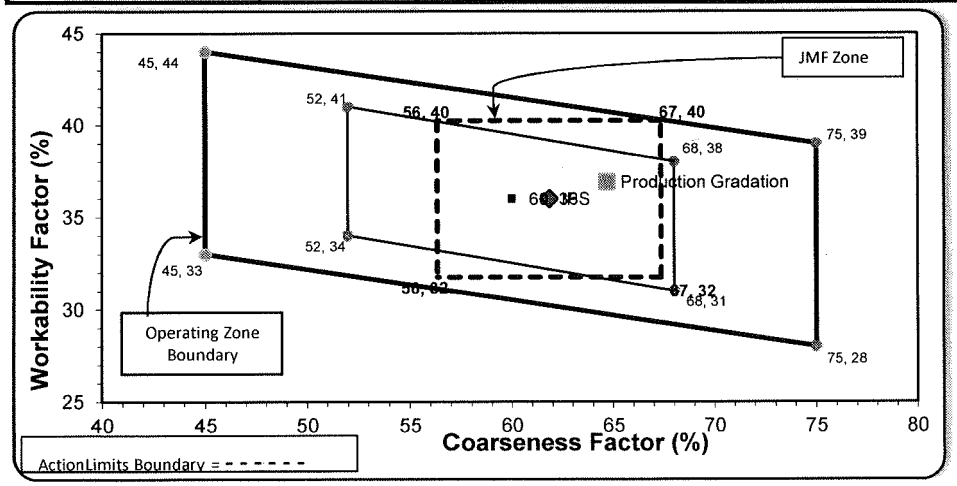
<---- Verify this number is 100%

| 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" | 97.8 | 100.0 | 100.0 | 98.8 | 1.2 | 1.2 |
| 3/4" | 82.0 | 100.0 | 100.0 | 90.4 | 8.5 | 9.6 |
| 1/2" | 43.9 | 97.7 | 100.0 | 69.8 | 20.6 | 30.2 |
| 3/8" | 22.5 | 86.3 | 100.0 | 57.6 | 12.2 | 42.4 |
| #4 | 3.2 | 16.1 | 95.9 | 40.8 | 16.8 | 59.2 |
| #8 | 1.8 | 4.0 | 83.8 | 34.4 | 6.4 | 65.6 |
| #16 | 1.6 | 2.2 | 68.9 | 28.3 | 6.1 | 71.7 |
| #30 | 1.6 | 1.9 | 50.5 | 21.0 | 7.3 | 79.0 |
| #50 | 1.5 | 1.7 | 25.0 | 10.8 | 10.2 | 89.2 |
| #100 | 1.4 | 1.6 | 7.2 | 3.7 | 7.1 | 96.3 |
| LBW | 1.2 | 1.5 | 1.6 | 1.4 | 2.3 | 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. Max. 1.5") aggregate is used.

Production Gradation ◉ Batch Plant Gradations ○ Aggregate Supplier Gradations

| Coarseness Factor: | 65 | Workability Factor: | 34 | Adjusted WF 36.9 |
|---|---|---|---|---|




Intial 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 |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PREPARED BY:
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# Edw. C. Levy Co.

JMT
8911 W. Jefferson
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(313) 429-2429

**Plant** 958-JMT

**Product** 1054-6AA LS PI

**Period:** 01/22/2023 - 01/28/2023

**Name/Title** Doug Storey / QC Technician

**Report Date** 01/27/2023

| Procedure | Sieve/Test | Result | Unit | 6AA LS PI Spec |
|---|---|---|---|---|
| | 2" (50mm) | 100.0 | % | |
| | 1 1/2" (37.5mm) | 100.0 | % | 100-100 |
| | 1" (25mm) | 97.8 | % | 95-100 |
| | 3/4" (19mm) | 82.0 | % | |
| | 1/2" (12.5mm) | 43.9 | % | 30-60 |
| | 3/8" (9.5mm) | 22.5 | % | |
| | #4 (4.75mm) | 3.2 | % | 0-8 |
| | #8 (2.36mm) | 1.8 | % | |
| | #16 (1.18mm) | 1.6 | % | |
| | #30 (.6mm) | 1.6 | % | |
| | #50 (.3mm) | 1.5 | % | |
| | #100 (.15mm) | 1.4 | % | |
| | #200 (75µm) | 1.3 | % | |
| | Wash Loss (#200/75um) | 1.2 | % | 0-2 |
| | Total Moisture | 3.4 | % | |

# Edw. C. Levy Co.

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Plant 958-JMT

Product 1067-26A Mod LS

Period: 01/22/2023 - 01/28/2023

Name/Title Doug Storey / QC Technician

Report Date 01/27/2023

| 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) | 97.7 | % | 95-100 |
| | 3/8" (9.5mm) | 86.3 | % | 60-95 |
| | #4 (4.75mm) | 16.1 | % | 5-30 |
| | #8 (2.36mm) | 4.0 | % | 0-12 |
| | #16 (1.18mm) | 2.2 | % | |
| | #30 (.6mm) | 1.9 | % | |
| | #50 (.3mm) | 1.7 | % | |
| | #100 (.15mm) | 1.6 | % | |
| | #200 (75µm) | 1.5 | % | |
| | Wash Loss (#200/75um) | 1.5 | % | 0-3 |
| | Total Moisture | 4.2 | % | |

# Edw. C. Levy Co.

JMT
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Plant 958-JMT

Product 1022-2NS GR - Smelter Bay

Period: 01/22/2023 - 01/28/2023

Name/Title Doug Storey / QC Technician

Report Date 01/27/2023

| Procedure | Sieve/Test | Result | Unit | 2NS GR Spec |
|---|---|---|---|---|
| | 3/8" (9.5mm) | 100.0 | % | 100-100 |
| | #4 (4.75mm) | 95.9 | % | 95-100 |
| | #8 (2.36mm) | 83.8 | % | 65-95 |
| | #16 (1.18mm) | 68.9 | % | 35-75 |
| | #30 (.6mm) | 50.5 | % | 20-55 |
| | #50 (.3mm) | 25.0 | % | 10-30 |
| | #100 (.15mm) | 7.2 | % | 0-10 |
| | #200 (75µm) | 1.7 | % | |
| | FM | 2.69 | | 2.6-3 |
| | Wash Loss (#200/75um) | 1.6 | % | 0-3 |
| | Total Moisture | 3.1 | % | |