BOWSER-MORNER, INC.

Delivery Address: 4518 Taylorsville Road • Dayton, Ohio 45424 **Mailing Address**: P. O. Box 51 • Dayton, Ohio 45401

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LABORATORY REPORT

Report To: The Pyne Rock Corporation
Attn: Morgan Duncan
101 Knoll Crest Circle
Homewood, AL 35209

Report Date: January 9, 2025
Job No.: 20001439
Report No.: 615784
No. of Pages: 3

Report On: Laboratory Analysis of One (1) Sandstone Sample
Source: Pyne Rock
Sample ID: **Coarse Aggregate**

On November 25, 2024, one (1) sample of sandstone was submitted for laboratory analysis from the above referenced source. Testing was performed as specified by the client and in accordance with the following procedures:

ASTM C 29, "Bulk Density ("Unit Weight") and Voids in Aggregate".
ASTM C 88, "Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate".
ASTM C 123, "Lightweight Particles in Aggregate".
ASTM C 127, "Relative Density (Specific Gravity) and Absorption of Coarse Aggregate".
ASTM C 131, "Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine".
ASTM C 142, "Clay Lumps and Friable Particles in Aggregate".

The client requested the sandstone be processed in a laboratory jaw crusher to target ASTM No. 57 sizes for testing. The samples were double choke crushed with the crusher opening staged to process the stone until the entire sample was passing 1 1/2" diameter mesh sieve.

Results are detailed on the attached data sheets.

Should you have any questions, or if we may be of further service, please contact me at (937) 236-8805, extension 269.

Respectfully submitted,

BOWSER-MORNER, INC.

Brooke L. Chapman, Manager
Construction Materials and
Geotechnical Laboratories

BLC/cm
615784
1-File
1-morgan@pynerock.com

Sample ID: Coarse Aggregate

TABLE I
General Quality Parameters

Test Parameter	ASTM Test Method	Result	ASTM C 33 Class 5S Specifications, % Max.
Los Angeles Abrasion - Grading B, %:	C 131	**35.7**	50.0
Five Cycle Sodium Sulfate Soundness, %:	C 88	**25.5***	12.0
Coal and Lignite, %:	C 123	**0.0**	0.5
Total Chert, %:	C 123	**0.0**	---
Clay Lumps & Friable Particles, %:	C 142	**0.2**	2.0
Lightweight Chert at 2.40 Gs, %:	C 123	**0.0**	3.0
Sum of Clay Lumps and Ltwt. Chert at 2.40 Gs, %:	C 142/C123	**0.2**	3.0
Dry-Rodded Bulk Density, pcf:	C 29	**119.7**	---
Dry-Rodded Bulk Density, tcy:	C 29	**1.616**	---
Loose Bulk Density, pcf:	C 29	**103.6**	---
Loose Bulk Density, tcy:	C 29	**1.398**	---
Bulk Dry Specific Gravity:	C 127	**2.853**	---
Bulk SSD Specific Gravity:	C 127	**2.887**	---
Apparent Specific Gravity:	C 127	**2.953**	---
Absorption, %:	C 127	**1.2**	---

**Does not meet one or more specifications.*

TABLE II
Five Cycle Sodium Sulfate Soundness (ASTM C 88) - Detailed by Size Fraction

Size Fraction	Percent Loss	Gradation Factor	Wtd Percent Loss	ASTM C 33 Class 5S Specification, % Max.
1" to 3/4"	15.55	0.300	4.67	---
3/4" to 1/2"	18.41	0.200	3.68	---
1/2" to 3/8"	27.66	0.200	5.53	---
3/8" to No. 4	38.75	0.300	11.63	---
Total	---	---	**25.5***	12.0

**Does not meet one or more specifications.*

Sample ID: Coarse Aggregate

TABLE III

Visual Deleterious Examination. No other categories were observed visually. Percentages as percent of size fraction, un-weighted for gradation.

Size Fraction	Clay Lumps and Friable	Ltwt. Chert at 2.40 Gs	Sum of Preceding	Total Chert	Coal and Lignite
1" to 3/4"	0.00	0.00	0.00	0.00	0.00
3/4" to 1/2"	0.00	0.00	0.00	0.00	0.00
1/2" to 3/8"	0.02	0.00	0.02	0.00	0.00
3/8" to No. 4	0.78	0.00	0.78	0.00	0.00

TABLE IV

Deleterious Material. Corrected for as-received gradation.

Size Fraction	Clay Lumps and Friable	Ltwt. Chert at 2.40 Gs	Sum of Preceding	Total Chert	Coal and Lignite
1" to 3/4"	0.00	0.00	0.00	0.00	0.00
3/4" to 1/2"	0.00	0.00	0.00	0.00	0.00
1/2" to 3/8"	0.00	0.00	0.00	0.00	0.00
3/8" to No. 4	0.23	0.00	0.23	0.00	0.00
Totals	**0.2**	**0.0**	**0.2**	**0.0**	**0.0**
ASTM C 33 Class 5S Specifications, % Max.	2.0	3.0	3.0	---	0.5