

Laboratory Evaluation of
Construction Materials
Field Testing & Observation
Subsurface Investigations
Geotechnical Engineering

John H. Robinson Testing

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Member: ASTM, ACI, ACIL
AAP AASHTO R18 Accredited
USACOE Validated

Date: May 6, 2010

Client: H & H Materials
190 Canon Road
Stoneboro, PA 16153
Attn: Mr. Neil Hoobler, V.P.

Re: Hutcheson Pit
Type "A" Concrete Sand
Compliance Check: PENNDOT 408/703
Project 2010501.32

Lab Ref.: A-10-055
Received: 04-13-2010
Examined with the following results:

PTM 510 SULFATE SOUNDNESS, SODIUM ; 5 -CYCLE

| <u>Pass</u> | <u>Rtd.On</u> | <u>Gdg., %</u> | <u>Sample Weight</u> | <u>% Loss</u> | <u>Wtd. % Loss</u> |
|-------------|---------------|----------------|----------------------|---------------|--------------------|
| 100 | | 4.5 | - | - | - |
| 50 | 100 | 14.2 | - | - | - |
| 30 | 50 | 30.1 | 100.0 gm | 0.8 | 0.24 |
| 16 | 30 | 19.3 | 100.0 gm | 2.3 | 0.44 |
| 8 | 16 | 18.0 | 100.0 gm | 3.7 | 0.67 |
| 4 | 8 | 12.7 | 100.0 gm | 3.9 | 0.50 |
| .375 | 4 | 1.2 | | 3.9 | 0.05 |
| | <u>.375</u> | <u>0.0</u> | | | |
| | | 100.0 | <u>400.0 gm</u> | | <u>1.90</u> |

Maximum Allowable: 10.00

AASHTO T-21: Organic Impurities: *Supernatant lighter than Color #2 after 24 hours*

PTM 100: Material Finer than #200 screen: 1.7 % (3.0 % Maximum allowed)

PTM 501: Fineness Modulus2.75

Acceptable Range = 2.30 to 3.15

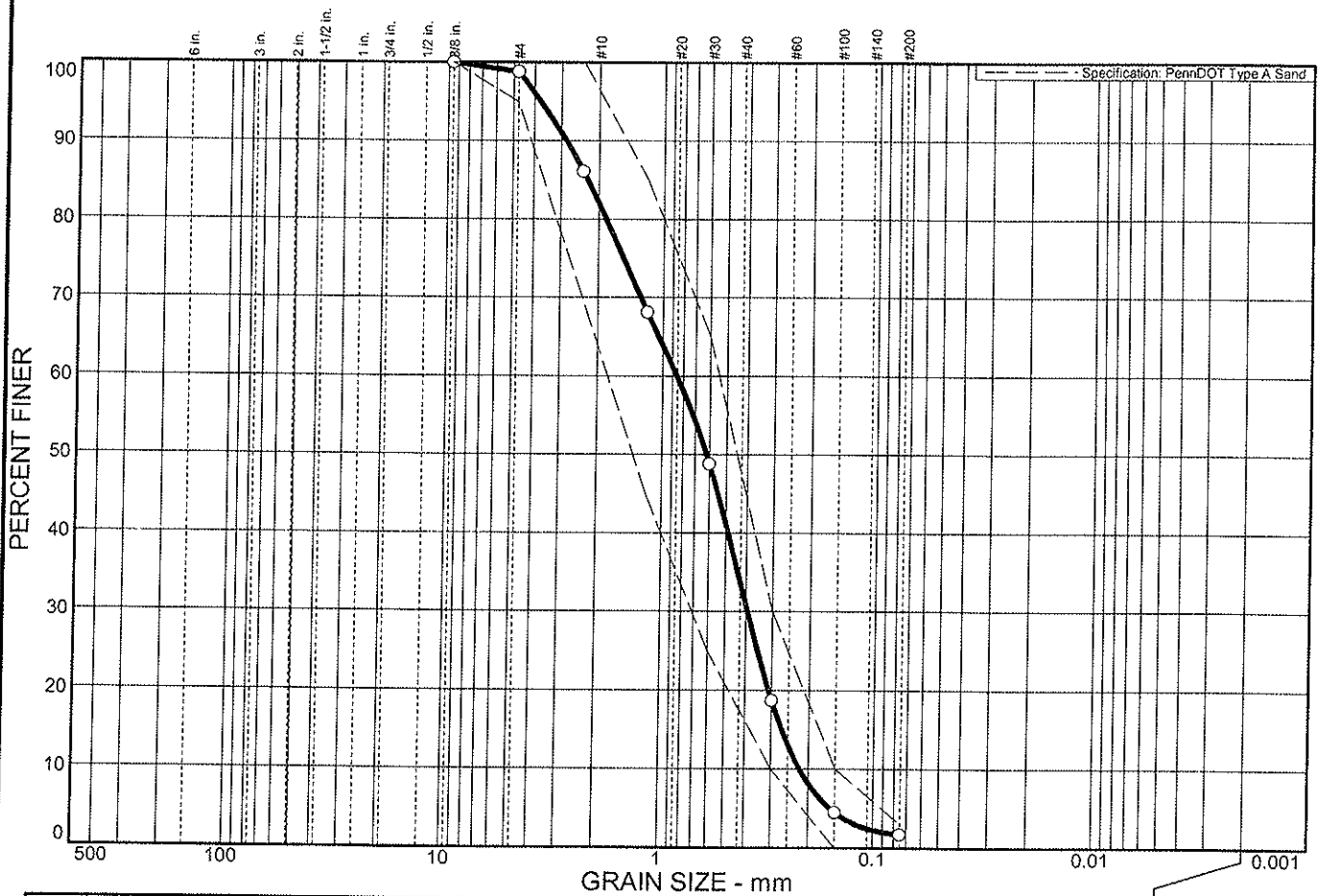
This material meets the requirements for Type "A" Sand as noted in PENNDOT 408/703

Respectfully submitted,



Dennis R. Smale,
Laboratory Superintendent

Grain Size Distribution Test Report



| | | | | |
|--------|----------|--------|--------|--------|
| % + 3" | % GRAVEL | % SAND | % SILT | % CLAY |
| 0.0 | 1.2 | 97.1 | 1.7 | |

| SIEVE SIZE | PERCENT FINER | SPEC.* PERCENT | PASS? (X=NO) |
|---------------|------------------|-------------------|-----------------|
| 3/8 in. | 100.0 | 100.0 - 100.0 | |
| #4 | 98.8 | 95.0 - 100.0 | |
| #8 | 86.1 | 70.0 - 100.0 | |
| #16 | 68.1 | 45.0 - 85.0 | |
| #30 | 48.8 | 25.0 - 65.0 | |
| #50 | 18.7 | 10.0 - 30.0 | |
| #100 | 4.5 | 0.0 - 10.0 | |
| #200 | 1.7 | 0.0 - 3.0 | |

Material Description

Poorly graded sand

Atterberg Limits

PL= NP LL= NP PI= NP

Coefficients

D₈₅= 2.25 D₆₀= 0.856 D₅₀= 0.619
 D₃₀= 0.393 D₁₅= 0.268 D₁₀= 0.220
 C_u= 3.89 C_c= 0.82

Classification

USCS= SP AASHTO=

Remarks

Received 04-13-2010
 Lab ref.: A-10-055
 Sampled by: Client

* PennDOT Type A Sand

Sample No.: 1 **Source of Sample:** Hutcheson Pit **Date:** 05-06-2010
Location: Type "A" Concrete Sand Stockpile **Elev./Depth:**

URBAN ENGINEERS
 OF
 ERIE, INC.

Client: H & H Materials
Project: Compliance Testing
 PENNDOT 408/703
Project No.: 2010501.32

Figure No. 055-1