

LABORATORY SERVICES REPORT

Report Number: 02211341.0001
Service Date: 05/05/22
Report Date: 05/09/22



15620 W 113th St
Lenexa, KS 66219-5102
913-492-7777

Client

GeoPro Inc
Attn: Tyler Harbeck
302 E Warehouse St
Elkton, SD 57026-2186

Project

GeoPro Laboratory Services
Various
Lenexa, KS 66219

Project Number: 02211341

Sample Description: BH 20 25.00% by weight – Deionized Water 75.00% by weight
Material Source: BH 25
Sample Location: NA
Proposed Use: Not Provided
Testing Performed: Hydraulic Conductivity (Permeability)

Summary:

Terracon's laboratory completed the requested scope of testing for the above-referenced sample. A report of these test results is attached.

Services:

Terracon Rep.:

Reported To:

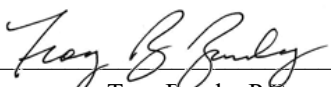
Contractor:

Report Distribution:

(1) GeoPro Inc,
THarbeck@geoproinc.com

Reviewed By:

rvw2: tbb


Troy Bandy, P.E.

Laboratory Manager

The tests were performed in general accordance with applicable ASTM, AASHTO, or DOT test methods. This report is exclusively for the use of the client indicated above and shall not be reproduced except in full without the written consent of our company. Test results transmitted herein are only applicable to the actual samples tested at the location(s) referenced and are not necessarily indicative of the properties of other apparently similar or identical materials.

**MEASUREMENT OF HYDRAULIC CONDUCTIVITY OF SATURATED POROUS MATERIALS
USING A FLEXIBLE WALL PERMEAMETER
ASTM D 5084 - 16, METHOD C
FLUID: DEAIRED DISTILLED WATER WITH 0.01 M CaCL2**

DATE: 4/18/2022
PROJECT NUMBER: 022011341.0001
PROJECT NAME: GeoPro
LOCATION: NA
SAMPLE ID: BH 25
SAMPLE DESCRIPTION: BH 20 25.00% by weight - Deionized Water 75.00% by weight



15620 W. 113th Street
Lenexa, Kansas 66219
(913) 492-7777

SAMPLE DATA

	INITIAL		ADDITIONAL DATA	
Moisture %:	NA		Sample Recompact?	YES
Wet Unit Weight, pcf	72.8		Maximum Dry Density, pcf:	NA
Dry Unit Weight, pcf	NA		Optimum Moisture Content, %:	NA
Height, in.	0.99		Compaction, %:	NA
Diameter, in.	2.42		Over Optimum Moisture Content, %:	NA
Saturation, %:	NA		Specific Gravity:	NA
Void Ratio	NA		SG Assumed or Tested	NA
Porosity	NA		B-Value Parameter After Saturation:	0.95

PERMEATION DATA

Elapsed Time (min.)	Cell Pressure (psi)	Bottom Pressure (psi)	Top Pressure (psi)	Cell Volume (ml)	Bottom Volume (ml)	Top Volume (ml)	In Flow (ml/min.)	Out Flow (ml/min.)	Flow Ratio	Pressure Diff. (psi)	Gradient	k Value cm/sec
4110	93.06	90.37	89.30	2.015	7.486	-7.189	0.00165	0.00163	0.99	0.69	19.2	4.8E-08
4290	93.05	90.38	89.30	2.164	7.791	-7.486	0.00168	0.00172	1.02	0.69	19.3	4.9E-08
4410	93.05	90.37	89.32	2.237	7.992	-7.683	0.00166	0.00167	1.00	0.67	18.6	5.0E-08
4561	93.06	90.37	89.30	2.216	8.236	-7.934	0.00170	0.00169	0.99	0.68	19.0	5.0E-08

HYDRAULIC CONDUCTIVITY (k20), CM/SEC : **4.9E-08**

