



COMMONWEALTH of VIRGINIA

Department of Health
P O BOX 2448
Richmond, VA 23218

Marissa Levine, MD, MPH, FAAFP
State Health Commissioner

TTY 7-1-1 OR
1-800-828-1120

February 21, 2017

Mr. Tyler Harbeck
Technical Support Engineer
GeoPro, Inc.
PO Box 136
Elkton, SD 57026

Dear Mr. Harbeck,

We have reviewed the information you submitted requesting approval of GeoPro, Inc.'s CGPlus grout mix for use with geothermal closed-loop wells in Virginia. A detailed discussion of the submittal and review can be found in the attached review memorandum.

GeoPro, Inc. components, including PowerTEC, PowerTECx, Thermal Grout Lite, and Thermal Grout Select were previously approved by VDH and are certified to NSF/ANSI Standard 60.

Based on the submitted information, CGPlus complies with section 12VAC5-630-410.C.4 of the *Private Well Regulations*, and is approved for use as a grout in geothermal closed-loop wells in Virginia, when used in accordance with explicit manufacturer's instructions and per the qualifications of the NSF/ANSI Standard 60 certification.

This approval will be posted on our website.

Respectfully,

A handwritten signature in black ink that reads 'Marcia J. Degen'.

Marcia J. Degen, PhD., P.E.
Environmental Technical Services Administrator
Division of Onsite Sewage, Water Services, Environmental
Engineering and Marina Programs

cc: Environmental Health Managers
Office of Environmental Health Services
Virginia Water Well Association

*Virginia Department of Health
Office of Environmental Health Services
Division of Onsite Sewage and Water Services*

To: File
From: Stephen Elgin, P.E.
Date: February 17, 2017
RE: Review Summary for GeoPro, Inc. – CGPlus (geothermal well grout)
cc: Marcia Degen, P.E. – Technical Services Administrator

Background:

GeoPro, Inc. submitted an email request dated January 5, 2017, for approval of CGPlus as a grout mix for geothermal closed-loop wells in Virginia. The GeoPro product components that are contained in CGPlus mixture, (including PowerTEC, PowerTECx, TG Select, and TG Lite) are all certified under NSF/ANSI Standard 60, and previously approved by VDH.

GeoPro, Inc. submitted the following information to VDH with their request for approval of CGPlus:

Link to CGPlus product web page https://geoproinc.com/products/cg_plus.html
Manufacturer's Brochure
Hydraulic Conductivity Test Reports

The manufacturer's representative also submitted the following information with which to compare the CGPlus mix recipes to the other product recipes, previously approved by VDH:

Maximum Solids Recipes

	Component	Proposed for CG Plus	Already Approved By VDH
Mix #1	TG (lite or select)	50 lb	50 lb
	PowerTECx	15 lb	15 lb
	Water	26 gallons*	16 gallons
	Yield	30 gallons	<22 gallons
Mix #2	TG (lite or select)	50 lb	50 lb
	PowerTEC	30 lb	30 lb
	Water	26 gallons*	16 gallons
	Yield	31 gallons	<22 gallons

* possible reduction of water quantity to 24 gal in future would still be more dilute solids content than already approved.

VDH Determination:

Based on the above listed mixture recipes, the proposed respective GeoPro product concentrations in CGPlus will be no greater than those concentrations in recipes previously approved by VDH. Therefore, the use of GeoPro, Inc. CGPlus as a grout in accordance with the manufacturer's recommendations and NSF qualifications is consistent with previous listings and will be acceptable in Virginia.

Recommendation:

Accept GeoPro, Inc. CGPlus in Virginia for use as a grout in geothermal closed-loop wells, in accordance with the manufacturer's recommendations and qualifications of the NSF Standard 60 certification.