North Carolina Department of Environment and Natural Resources

Pat McCrory
Governor

John E. Skvarla, III
Secretary

May 21, 2014

Allan Skouby
GeoPro, Inc.
Post Office Box 150
Bowie, Texas 76230-0150

Reference: Approval of Specialty Grout Additive
PowerTEC and PowerTECx

Dear Mr. Skouby:

On March 21, 2014, we received your request for approval of PowerTEC and PowerTECx as a specialty grout as allowed for in North Carolina well construction regulation 15A NCAC 02C .0107(e)(1)(F). Based on our initial review, we determined that PowerTEC and PowerTECx were not specialty grouts, but additives to grout. We have reviewed the supporting documentation and have therefore concluded that both products, when mixed with bentonite (thermal grout), water, and/or silica sand, satisfy the approval criteria for a specialty grout specified in 15A NCAC 02C .0107(e)(1)(F).

In accordance with your request, PowerTEC and PowerTECx have been approved as additives to grout for use in geothermal well installations with the following restrictions:

1) The following minimum and maximum mixture ratios may not be exceeded:

	Thermal Grout (lbs)	PowerTEC Product (lbs)	Silica Sand (lbs)	Potable Water (gal)	Yield (gal)
PowerTEC					
Maximum amount of PowerTEC, minimum amount of silica sand	50	20	0	14.5	17.9
Minimum amount of PowerTEC, maximum amount of silica sand	50	10	250	22	35.5
PowerTECx					
Maximum amount of PowerTECx, minimum amount of silica sand	50	20	0	17.5	20.8
Minimum amount of PowerTECx, maximum amount of silica sand	50	5	250	23	36.2

2) This product may not be used to seal zones of water with a chloride concentration of 1,500 milligrams per liter or greater.

This approval does not constitute an endorsement from the Division of Water Resources and is only valid for use in accordance with the manufacturer's directions. Any variations in the chemical or physical makeup of these products will require approval before usage.

If you have any questions, please contact Debra Watts at debra.watts@ncdenr.gov or 919-807-6338, or Eric Smith at eric.g.smith@ncdenr.gov or 919-807-6407.

Sincerely,

S. Jay Zimmerman, Chief
Water Quality Regional Operations Section

cc: Nancy Deal - On-Site Water Protection
WQROS - Regional Office Supervisors