

June 29, 1994

GMP #56

MEMORANDUM

TO: District Directors
Environmental Health Managers
Environmental Health Supervisors
Environmental Health Specialists

FROM: Gary L. Hagy, Assistant Director
Division of Onsite Sewage and Water Services

SUBJECT: Approved Bentonite Grout Materials
Wells - Product Approval - Bentonite Grout

Attached is a list of bentonite grout materials that have been approved by the Division of Onsite Sewage and Water Services for use with private wells. These are the only materials that have been submitted and approved for use with private wells. Any material not found on this list should not be approved. These materials are **not** approved for use with public water supply wells.

Please note that some companies manufacture several different types of bentonite materials for different uses. Only bentonite materials that are specifically recommended by the manufacturer for use as a grout material are to be used.

Please note that the product "SHURGEL[®]" has been removed from the list. I recently spoke with a representative of the manufacturer to update our list and during our discussion he did not recommend SHURGEL[®] for use in Virginia. The reason for its removal is that for the type of wells used in Virginia, the material settles too much resulting in not enough solids to properly seal a well.

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Finally, there has been some confusion regarding the proper mixing of bentonite. Section 3.7.C.3.c of the Private Well Regulations requires bentonite grout to be a minimum of 20% clay solids by weight. In order to achieve this, each manufacturer has provided me with the maximum number of gallons of water per bag of bentonite that would yield 20% solids. In some cases, the manufacturer does not recommend mixing a specific material to only 20% solids. In those cases (in fact in all cases), **the grout shall be mixed in accordance with the manufacturer's recommendation!** The ratio for each product has been added to the list along with any special instructions for using the material. Well drillers should be advised to follow the manufacturer's recommended handling procedures and cautioned not to exceed the manufacturer's recommended mixing ratios. To do otherwise may jeopardize the approval of the well.

This GMP replaces **GMP 44** which is hereby rescinded.

If you have any questions about this memo, please call me at (804) 786-1750.

Attachment

cc: Steve Cain
OEHS Staff
OWP

Approved Bentonite Materials
Office of Environmental Health Services
June 29, 1994

Manufacturer, Product Name, and Mixing Ratio

Baroid Drilling Fluids, Inc.

BENSEAL®* Manufacturer recommends maximum of 30 gallons of water per 50 pound bag (yields approximately 20% solids).

HOLEPLUG® Manufacturer recommends the following procedure: Above the water level, pour one bag of hole plug in the space and then five gallons of water. Repeat this procedure until the well is grouted.

QUICKGROUT Manufacturer recommends maximum of 24 gallons of water per 50 pound bag (yields 20% solids).

AQUAGUARD Manufacturer recommends maximum of 14 gallons of water per 50 pound bag (yields 30% solids).

*AQUA-GROUT™ or EZ-MUD® may be added to BENSEAL as catalysts to retard set-time of BENSEAL to allow placement in annular space. However, AQUA-GROUT™ or EZ-MUD® cannot be used alone as grout materials.

Polymer Drilling Systems, Co. (PDSCo)

Granular Seal Maximum 25 gallons of water per 50 pound bag (yields 20% solids).

PDSCo Grout Manufacturer recommends no more than 18 gallons of water per 50 pound bag (yields 25% solids).

WYO-BEN, INC. for Drillers Service, Inc. (DSI)

EASY GROUT Maximum 24 gallons of water per 50 pound bag (yields 20% solids).

SHUR-GROUT Maximum 16 gallons of water per 50 pound bag (yields 27.3% solids).

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