

**Kulis, Jerzy, NMENV**

**From:** Kulis, Jerzy, NMENV  
**Sent:** Friday, September 26, 2008 3:00 PM  
**To:** 'Mark Everett'; Cobrain, Dave, NMENV  
**Cc:** Young, John, NMENV; katzman@lanl.gov  
**Subject:** RE: Request to omit bentonite grout from R-43 annular fill material

Mark,

You may use bentonite chips, hydrated in 10 foot lifts and added through the drill casing, to backfill the well above the 844 feet depth, with the following conditions to reduce the potential for bridging and ensure a proper seal:

1. The size of chips selected for the fill must be less than one-fifth the width of the annular space into which they will be placed,
2. Chips will be added at a slow rate,
3. Each lift will be tamped with a tamper (a heavy cylindrical section of a metal tubing that slips over the riser and is operated on a wire rope or cable) before being hydrated,
4. Depth to each lift will be measured after tamping and before hydrating and compared with the anticipated depth to ensure that bridging had not occurred, and
5. Chips will be hydrated at a slow rate. Consider adding water through a tremie pipe in order to avoid bentonite chips sticking to wet casing walls.

Thanks,  
Jerzy Kulis  
Environmental Scientist  
Hazardous Waste Bureau  
New Mexico Environment Department  
2905 Rodeo Park Drive East, Bldg 1  
Santa Fe, NM 87505-6303  
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**From:** Mark Everett [mailto:meverett@lanl.gov]  
**Sent:** Wednesday, September 24, 2008 12:35 PM  
**To:** Cobrain, Dave, NMENV  
**Cc:** Young, John, NMENV; katzman@lanl.gov; Kulis, Jerzy, NMENV  
**Subject:** Request to omit bentonite grout from R-43 annular fill material

Dave,

Attached is a copy of the proposed well design for R-43. In light of the recent discovery of bentonite grout in the R-25c well screen and reflecting back on a similar occurrence at R-35a, LANL is requesting that all bentonite grout presented on the attached well design be replaced with hydrated bentonite chips. Bentonite chips will be added in 10 foot lifts and hydrated before adding the next lift. Additionally, as in the attached backfilling procedure for R-35 LANL requests permission to add the bentonite chips through the drill casing rather than through a tremie pipe once we are 50 feet above the top of the regional aquifer (DTW = 894'). All material from 844 feet down to the bottom of the borehole will be tremied in place.

Please respond with your concurrence to just use chips or direction to continue with the use of bentonite grout. Additionally, please let us know if using the drill casing to emplace the chips above the aquifer is acceptable to you.

Sincerely,

3/26/2009

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Mark Everett, PG  
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