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Date: MAY 03 2011
Refer To: EP2011-0176

James Bearzi, Bureau Chief
Hazardous Waste Bureau
New Mexico Environment Department
2905 Rodeo Park Drive East, Building 1
Santa Fe, NM 87505-6303

Subject: Condition of Well R-26 and Recommendation To Abandon the Lower Screen and Evaluate the Need for Supplementary Drilling

Dear Mr. Bearzi:

During the Westbay Reliability Assessment, Los Alamos National Laboratory (the Laboratory) confirmed that the lower screen in well R-26 is severely impacted with bentonite. This correspondence is intended both to inform the New Mexico Environment Department (NMED) of this finding and to propose a path forward for the well.

During the initial removal of the Westbay sampling system from R-26, attempts were made by a Westbay technician using various techniques to pull the system. None of these attempts were successful; however, it was determined from sampling system stretch length calculations that the system was stuck near the lowest packer. A professional fishing technician was mobilized to the site and was able to lock into the bottom packer from the inside. A total of three fishing runs were made; all but the bottom 10 ft of the system was successfully removed. However, the bottom 30 ft of the recovered system, which corresponds to the entire lower screen interval, was covered in thick bentonite gel. The source of the bentonite is probably the mud used during drilling. Based on the amount of bentonite observed and its location, it is unlikely that the screen can be brought into a useable state.

The Laboratory proposes to abandon the lower screen at well R-26 by filling the inside of the stainless-steel casing with 6/9 sand up through the screen interval (1421.8 to 1445 ft below ground surface [bgs]) to a depth of 1300 ft bgs (Figure 1). To prevent infiltration of cement, a 5-ft length of 20/40 sand will be placed on top of the 6/9 sand. A 40-ft interval of neat cement will be placed from 1255 to 1295 ft bgs, followed by 6/9 sand to 750 ft bgs.

Once the lower screen is abandoned, the Laboratory will complete the reliability study as approved by NMED in its letter of June 15, 2010. In light of the abandonment of the lower screen, activities at well R-26 will be modified as follows. The upper screen will now be developed before purging and sampling are performed. The screen will be swabbed and then pumped to remove any effects from removal of the Westbay system and placement of cement. A specific capacity test will not be

performed since calculation of the cross-flow between screens is no longer necessary. Purging and sampling will then be performed at 3 to 5 gallons per minute; samples will be collected after purging of 3, 6, and 10 casing volumes.

The Laboratory will evaluate the need of the lower screen within the context of the Well Evaluation and Network Recommendations Study Report for Technical Area 16 and Upper Water Canyon Watershed, which will be submitted to NMED by December 15, 2011.

If you have any questions, please contact John McCann at (505) 665-1091 (jmccann@lanl.gov) or Woody Woodworth at (505) 665-5820 (lwoodworth@doeal.gov).

Sincerely,

Michael J. Graham, Associate Director
Environmental Programs
Los Alamos National Laboratory

Sincerely,

George J. Rael, Manager
Environmental Projects Office
Los Alamos Site Office

MG/GR/DM/JM:sm

Att: Figure 1, R-26 well abandonment schematic

Cy: Laurie King, EPA Region 6, Dallas, TX
Steve Yanicak, NMED-DOE-OB, MS M894
Tom Skibitski, NMED-OB, Santa Fe, NM (date-stamped letter emailed)
Woody Woodworth, DOE-LASO, MS A316 (date-stamped letter emailed)
Annette Russell, DOE-LASO (date-stamped letter emailed)
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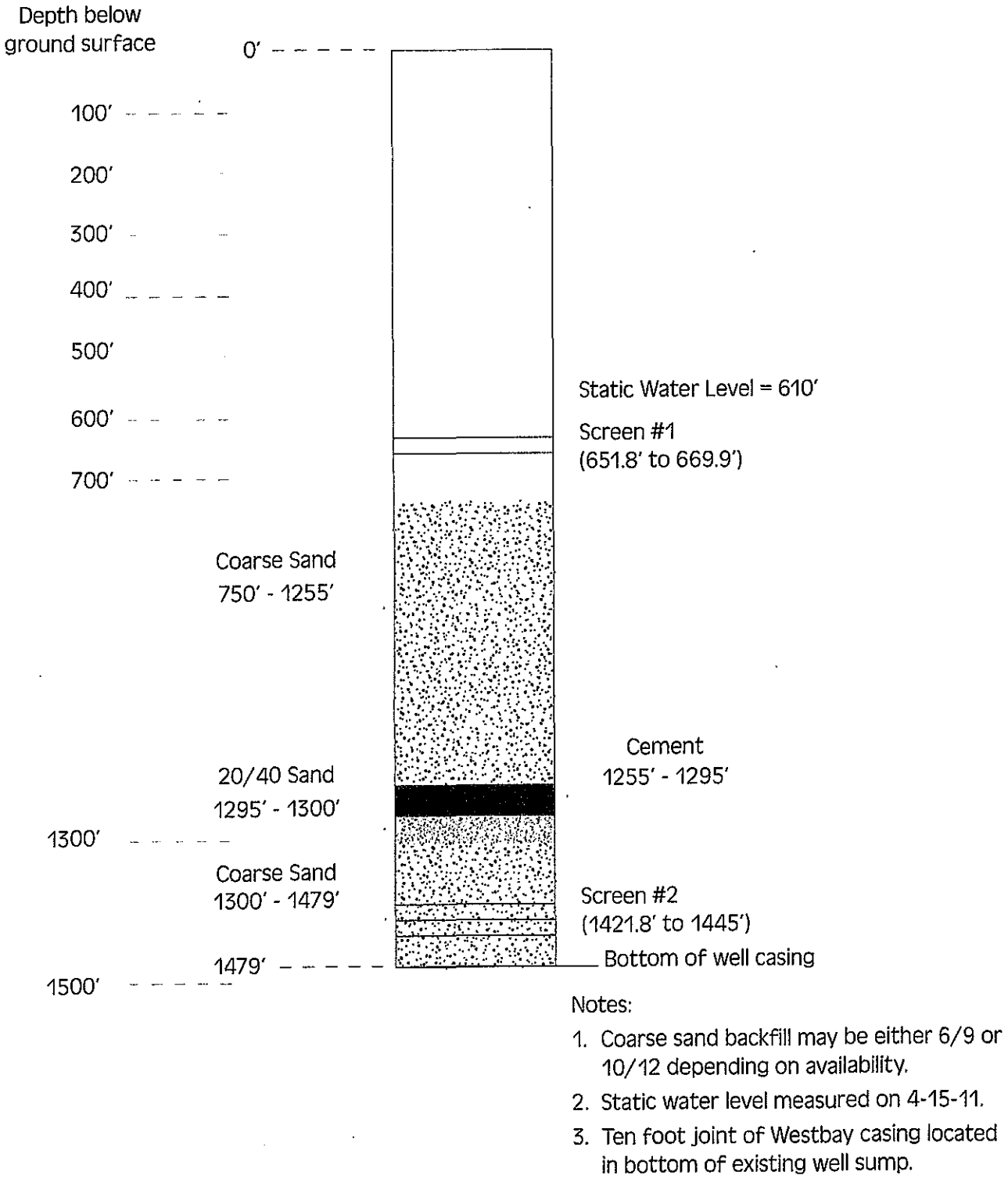

Notes:

1. Coarse sand backfill may be either 6/9 or 10/12 depending on availability.
2. Static water level measured on 4-15-11.
3. Ten foot joint of Westbay casing located in bottom of existing well sump.

Figure 1 R-26 well abandonment schematic