

**Young, John, NMENV**

**From:** Jean M. Dewart [dewart@lanl.gov]  
**Sent:** Thursday, February 01, 2007 2:37 PM  
**To:** Johansen, Mathew; Young, John, NMENV; Armand R. Groffman; Shen, Hai, NMENV  
**Cc:** slug@lanl.gov; Yanicak, Steve; Cobrain, Dave, NMENV; Ford-Schmid, Ralph, NMENV; Mike Alexander; Bob Beers; Alethea Banar; Danny Katzman; Tina Behr-Andres; Matt Riggs; Steve Pearson; Begay, Cassandra A.; Ardyth Simmons; Cobrain, Dave, NMENV; Bearzi, James, NMENV; Dale, Michael; mcinroy@lanl.gov; camangeng@lanl.gov  
**Subject:** RE: Groundwater monitoring update January 23 2007  
**Attachments:** Well\_Sampling\_Status\_Table\_013007ARG.doc

John, all -

Attached is the update sampling status table. As we discussed this morning, we identified that we sampled SCI-1 in 64 days, not the required 60 days.

Here's what happened - the well was completed on October 7, 2006. During initial development it was discovered that the end cap had been dislodged. A plug was inserted and final well development was completed on November 14, 2006. Following this date, work was conducted to complete the surface pad and prepare the well head for the permanent sampling system. The well was scheduled for sampling during the first 2 weeks of January. To meet the 60 day sampling requirement, the well was to be sampled by January 13th.

Following the snowstorms of 12/29-30/06 - we returned to the site on 1/2/07 - the road into the site was snowbound - we were not able to drive equipment into the well. We were not able to get the Laboratory snow removal crews to the site (due to their need to plow parking lots, sidewalks, etc.) and so on January 8, our sampling team began clearing the road with shovels and a small tractor.

We got to the well on January 12th - and due to the cold weather - the pump was frozen. We got it thawed and tried to sample again on the 16th. Continued freezing temperatures caused the discharge lines to freeze. We were finally able to successfully collect a sample on January 17th. Sufficient water was collected for a complete set of analytes.

We should have notified you on the 12th of January, that we were probably not going to be able to sample the well within 60 days, due to the cold weather - we overlooked this notification. We are developing a corrective action plan to assure that the timelines are track closely so that appropriate notifications are made.

Let us know if you need additional information. thx - Jean

At 09:49 AM 1/30/2007, Johansen, Mathew wrote:

John, thanks for calling out the importance of the R-17 and R-23i Baski sampling systems. As you know, we have sought to develop this fully purgeable system for use in 2-screen wells, and it has now been successfully installed in R-10, R-17, R-23i. We made this trial investment to address the purge issues associated with the Westabays. If this system does what we hope, we plan to use it more in the future. The past year or so has been considered a development and testing period. We'd like to, with HWB, look at the performance of the above three wells to establish a basis for use of Baski in the future.

It appears we may have found a solid solution to 2-screen wells. If you agree, we'd like to focus more energy on finding a good approach for purgeable 3-screen wells. We've had some discussion on R-20 & R-12. While much more technically difficult than the 2-screen wells, I hope we find a good approach for those 3-screen wells that would benefit from a new system.

As part of our response to your questions below, I'll ask Tina & Co to find a time on your schedule to discuss the Baski approach.

2/2/2007



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In addition to Ardyth's Jan 26th response on R-20, We'll get back to you soon with responses to your questions below.

Thanks for devoting some time to this.

Mat

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From: Young, John, NMENV [mailto:[john.young@state.nm.us](mailto:john.young@state.nm.us)]  
 Sent: Friday, January 26, 2007 2:20 PM  
 To: Armand R. Groffman; Shen, Hai, NMENV  
 Cc: Jean Dewart; Johansen, Mathew; ER-Project Administration; David Rogers; Yanicak, Steve; Cobrain, Dave, NMENV; Ford-Schmid, Ralph, NMENV; Mike Alexander; Bob Beers; Alethea Banar; Danny Katzman; Tina Behr-Andres; Matt Riggs; Steve Pearson; WQH IM Support; Begay, Cassandra A.; Ardyth Simmons; Cobrain, Dave, NMENV; Bearzi, James, NMENV; Dale, Michael; Shen, Hai, NMENV  
 Subject: RE: Groundwater monitoring update January 23 2007

Mat, Jean, Armand et al.,

Thank you for the update. It is good to see that R-17 and R-23(i) finally have dedicated sampling systems installed. I do have a couple of questions for you:

1. Was the Grundfos/Bennet pump installed in the small diameter, PVC well that extends to 405' or so at R-23(i)? We assume so, but would like confirmation.
2. We understood that a Baski or similar system was to be installed in R-20 post rehabilitation/re-development. What happened with this approach?
3. Would you provide an update to the attached document (Jean sent it last June and it was in response to a request from me) regarding the status of sampling at all the wells listed and any newly installed wells (intermediate and regional only) since this update was sent? Also include a list identifying any current intermediate or regional wells that don't have a dedicated sampling system installed.

Although it's good that you have reinstalled the packers at R-20 to inhibit groundwater communication between the screened intervals, without a dedicated sampling system we will continue to run into questions regarding the validity of the groundwater samples collected. For example, the screens at R-12 were allowed to communicate when the packers were removed for rehabilitation/redevelopment. Currently, LANS-DOE have proposed to abandon the bottom screen at R-12 due to the difficulty in collecting a representative sample from the screen as a result of the communication. At R-20, even though purging of the well/screens occurred prior to sampling, a question will remain: was enough water purged to remove any remnant geochemical/other signatures of the introduced water? Obviously, this leads to questions regarding the quality of the groundwater data collected from this/other wells and it will remain a question if each time these wells are sampled if any communication is allowed. The last thing we need is for additional and avoidable concerns regarding the quality of your groundwater samples to arise. Since remedial action

alternatives are currently or will soon be assessed by NMED for some of the most contaminated sites on the hill, it is in LANS-DOE's best interest to provide high quality groundwater data sooner rather than later, because in lieu of representative, defensible groundwater quality data, NMED's options during remedy selection for these sites may be limited.

Rather than mess with non-dedicated sampling systems and multiple packers in multi-screened wells, we strongly urge LANS-DOE to install dedicated sampling systems (that allow purging) in all intermediate and regional wells where one is currently missing. It's expected that the type of sampling system for the existing, older wells will be evaluated based on the results of the rehabilitation efforts.

Also, pursuant to section IX.B.2.i of the Consent Order, samples from newly installed wells must be collected between 10 and 60 days after completion. At this point samples from all wells (except maybe the intermediate well in Sandia Canyon) should have undergone at least one sampling round.

Let me know if you have any questions.

john

-----Original Message-----

From: Armand R. Groffman [<mailto:groffman@lanl.gov>]

Sent: Tuesday, January 23, 2007 5:08 PM

To: Young, John, NMENV; Shen, Hai, NMENV

Cc: Jean Dewart; Mat Johansen; ER-Project Administration; David Rogers; Yanicak, Steve; Cobrain, Dave, NMENV; Ford-Schmid, Ralph, NMENV; Mike Alexander; Bob Beers; Alethea Banar; Danny Katzman; Tina Behr-Andres; Matt Riggs; Steve Pearson; WQH IM Support; Cassandra Begay; Ardyth Simmons

Subject: Groundwater monitoring update January 23 2007

John and Hai,

The following is an update on monitoring activities.

The monitoring systems at R-17 (Baski) and R-23i (Grundfos/Bennet) are fully operational.

Sampling of R-20 (three screens) was completed on Monday

(01/22/07). Packets have been reinstalled and set to isolate the three screens.

Monitoring in the CdV/Water Canyon watershed began on Tuesday January 23. Snow accumulation up to 2.5 feet at some locations is making sample collection difficult. The access road to R-CdV-16-1(i) is snow covered and icy. Transport of the generator down the steep section is too dangerous to attempt. This location will not be sampled during the 21 day time frame unless conditions drastically improve.

Work on the groundwater level program is ongoing.

Cheers,

ARG

Armand R. Groffman

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## Sample Summary Status For Intermediate Zone and Regional Aquifer Wells (1/30/07)

Location Name	Development Completion Date	Projected Sampling Date	Actual Sampling Date	Days Sampling Delayed	Cause of Delay
R-3					Well has not been drilled
LAOI-3.2	23-Jul-2005	20-Sept-2005	15-Nov-2005	51	Receipt of pump specifications and wellhead design to order and install appropriate sampling system
CdV-16-2(i)r	22-Aug-2005	21-Oct-2005	15-Dec-2005	55	A short in the electrical system caused the pump to fail. The pump was pulled, repaired and reset.
R-3i	30-Aug-2005	29-Oct-2005	10-Aug-2006	60+	A permanent pump has not been installed. Samples are currently being collected using a portable Bennett Pump.
R-10a	7-Sept-2005	6-Nov-2005	30-Nov-05	24	Delayed delivery of the stainless steel discharge line.
R-24	21-Sept-2005	22-Nov-2005	15-Nov-2005	0	None – well sampled 7 days early
R-10	6-Oct-2005	5-Dec-2005	29-Jun-2006	60+	A duel screen Baski sampling system has been installed.
R-16a	17-Oct-2005	16-Dec-2005	19-Dec-2005	3	Delayed delivery of the stainless steel discharge line.
LAOI-7	30-Sept-2005	29-Nov-2005	17-Apr-2006	60+	Delayed delivery of variable flow control parts for sampling system
R-27	14-Nov-2005	9-Jan -2006	01-July-2006	60+	A new permanent pump with the correct rating has been installed.
R-23i	20-Dec-2005	18-Feb-2006	3-Oct-2006	60+	A duel screen Bennet/Grundfos sampling system has been installed.
LAOI 3.2a	1-Feb-2006	2-Apr-2006	26-July-2006	60+	A dedicated bladder pump has been installed at this location.
R-17	21-Feb-2006	22-Apr-2006	19-Oct-2006	60+	A duel screen Baski sampling system has been installed.
SCI-1	14-Nov-2006	13-Jan-2007	17-Jan-2007	4	Access into SCI-1 was delayed due to snowfall/impassable roads. When access was obtained, cold weather caused the pump and discharge lines to freeze, delaying sampling. A temporary Bennett pump is being used to sample SCI-1.

Note: Updated on January 30, 2007.