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*Date:* September 12, 2008  
*Refer To:* EP2008-0497

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

**Subject: Well Rehabilitation Plan for Fiscal Year 2009**

**References: (1) Work Plan for Well Rehabilitation and Replacement, Revision 2 (LANL 2007, 098119); (2) Approval of the Work Plan for Well Rehabilitation and Replacement, Revision 2 (NMED 2007, 098182); (3) Letter, Bearzi to Mssrs. Gregory and McInroy, dated December 7, 2007; (4) Pilot Well Rehabilitation Summary Report (LANL 2007, 095889)**

Dear Mr. Bearzi:

A meeting was held with your staff on August 11, 2008, to discuss plans for well rehabilitation in fiscal year (FY) 2009. This letter summarizes the discussions and requests the New Mexico Environment Department's (NMED's) approval of the proposed well rehabilitation in time to complete FY2009 planning.

As we discussed, wells R-32, R-12, R-20, R-14, and R-33 were rehabilitated successfully in FY2009, in accordance with the NMED-approved "Work Plan for R-Well Rehabilitation and Replacement" (references 1 and 2). A summary report on the conversion and rehabilitation of each individual well has been delivered to NMED.

Earlier in 2008, NMED directed Los Alamos National Laboratory (the Laboratory) to wait to rehabilitate R-22 until data from two new wells planned for Technical Area 54 (TA-54) Area G (R-39 and R-41) were available (reference 3). The data from R-41, the latter of the two wells scheduled for construction, will not be available until June 2009. Because of this schedule, the Laboratory proposes converting and rehabilitating R-22 in the July to August 2009 time frame. The attached schedule provides the most current dates for completion of well conversion and rehabilitation.

In addition, the Laboratory proposes to rehabilitate R-16 in FY2009. NMED may recall that R-16 was acted on during the pilot rehabilitation study of FY2006–FY2007 (reference 4). R-16 is a 3-screen well housing a Westbay sampling system. During the pilot study, the sampling system was

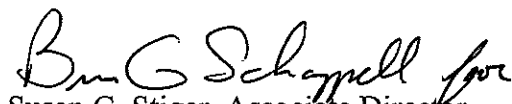
removed, the well was pumped, and the same sampling system was reinstalled. More aggressive methods were not attempted at this well. Subsequently, a monitoring-well network assessment has shown the location of R-16 to be important for monitoring potential contamination from TA-54; the well also serves as a sentinel well for the Buckman well field.

We propose rehabilitation at R-16 that includes the following: removal of the Westbay sampling system; isolation of screen 3; redevelopment of screens 2 and 4 involving swabbing, jetting, and simultaneous pumping; and installation of a Baski sampling system. We propose to retain screen 2 for monitoring downgradient of TA-54 and retain screen 4, which is at the greatest depth, for monitoring potential flow to the Buckman wells.

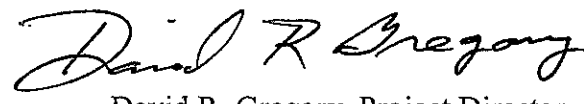
Monitoring network assessments concluded that other than the wells that were slated for rehabilitation in the approved well rehabilitation work plan (reference 1), no other wells needed to be rehabilitated at the time the network assessments were conducted. Therefore, we consider that well rehabilitation will conclude with the rehabilitation of R-22 and R-16 in FY2009. The Laboratory requests a timely response to this proposal for the purpose of FY2009 planning.

If you have any questions, please contact Ardyth Simmons at (505) 665-3935 (asimmons@lanl.gov) or Nancy Werdel at (505) 665-3619 (nwerdel@doeal.gov).

Sincerely,

  
Susan G. Stiger, Associate Director  
Environmental Programs  
Los Alamos National Laboratory

Sincerely,

  
David R. Gregory, Project Director  
Environmental Operations  
Los Alamos Site Office

SS/DG/PH/AS: sm

Attachment: Well Conversion, Rehabilitation, and Replacement Actions Schedule

Cy: (w/enc.)

Laurie King, EPA Region 6, Dallas, TX  
Steve Yanicak, NMED-OB, White Rock, NM  
Tom Skibitski, NMED-OB, Santa Fe, NM  
Alison Bennet, DOE-LASO (date-stamped letter emailed)  
Nancy Werdel, DOE-LASO, MS A316  
Hai Shen, DOE-LASO, MS A316  
Ardyth Simmons, EP-LWSP, MS M992  
Danny Katzman, EP-LWSP, MS M992  
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Paul R. Huber, EP-LWSP, MS M992  
Susan G. Stiger, ADEP, MS M991  
Alison M. Dorries, WES-DO, MS M992  
Kristine Smeltz, WES-DO, MS M992  
EP-LWSP File, MS M992  
RPF, MS M707 (with two CDs)  
IRM-RMMSO, MS A150 (date-stamped letter emailed)

### Well Conversion, Rehabilitation, and Replacement Actions Schedule

Well No.	Screens to Retain	Screen to Abandon	Development Techniques Applied	Proposed Sampling System	Document Requiring Rehabilitation or Replacement	Document That Will Describe the Activities	Schedule for Rehabilitation or Replacement	Schedule for Completion Report
<b>Rehabilitation and Conversion Wells</b>								
R-12	#1 and #2	#3	Jetting, isolation pumping (#1 only)	Baski	NMED letter "Direction to Rehabilitate Wells, Pilot Well Rehabilitation Study Summary Report," dated April 27, 2007 (NMED 2007, 095832)	"Well Rehabilitation Pilot Study Execution Plan" (LANL 2006, 092737) and "Work Plan for R-Well Rehabilitation and Replacement, Revision 2" (LANL 2007, 098119)  "Pilot Well Rehabilitation Study Summary Report" (LANL 2007, 095889)	Completed 10/30/07	Completed 11/30/07; revised 01/31/08
R-14	#1	#2	Surge/bail; jetting/pumping; isolation pumping/overpumping	Submersible pump	NMED letter "Approval with Direction of Mortandad Canyon Groundwater Monitoring Well Network Evaluation," dated August 6, 2007 (NMED 2007, 098120)	"Work Plan for R-14 Rehabilitation"	Completed 05/14/08	Completed 03/31/08; revised 06/27/08
R-16	#2 and #4	#3	Surge/bail; jetting/pumping; isolation pumping/overpumping	Baski	n/a*	"Well Rehabilitation Pilot Study Execution Plan" (LANL 2006, 092737) and "Work Plan for R-Well Rehabilitation and Replacement, Revision 2" (LANL 2007, 098119)  "Pilot Well Rehabilitation Study Summary Report" (LANL 2007, 095889)	Pilot study completed; additional rehab 04/16/09	05/15/09

Well No.	Screens to Retain	Screen to Abandon	Development Techniques Applied	Proposed Sampling System	Document Requiring Rehabilitation or Replacement	Document That Will Describe the Activities	Schedule for Rehabilitation or Replacement	Schedule for Completion Report
R-20	#1 and #2	#3	Surge/bail; jetting/pumping; isolation pumping/ overpumping	Baski	NMED letter, "Well Evaluations for Intermediate and Regional Wells," dated April 5, 2007 (NMED 2007, 095394)	"Well Rehabilitation Pilot Study Executive Plan "(LANL 2006, 092737) and "Work Plan for R-Well Rehabilitation and Replacement, Revision 2" (LANL 2007, 098119)  "Pilot Well Rehabilitation Study Summary Report" (LANL 2007, 095889)	Completed 12/07/07; pump installed 5/22/08	Completed 01/07/08; revised 7/31/08
R-22	#2 and #3	#1, #4, and #5	Surge/bail; jetting/pumping; isolation pumping/ overpumping	Baski	NMED letter, "Well Evaluations for Intermediate and Regional Wells," dated April 5, 2007(NMED 2007, 095394); NMED letter, "Approval of the Request to Revise the Order of Rehabilitation of Three Wells," dated December 7, 2007 (NMED 2007, 099258)	"Work Plan for R-22 Rehabilitation"	08/27/09	09/24/09
R-32	#1	#2 and #3	Surge/bail; jetting/pumping; isolation pumping/ overpumping	Submersible pump	NMED letter, "Well Evaluations for Intermediate and Regional Wells," dated April 5, 2007(NMED 2007, 095394)	"Work Plan for R-32 Rehabilitation"	Completed 09/30/07	Completed 10/31/07
R-33	#1 and #2	n/a	Surge/bail; jetting/pumping; isolation pumping/ overpumping	Baski (to replace Barcad)	NMED letter, "Approval with Direction of Mortandad Canyon Groundwater Monitoring Well Network Evaluation," dated August 6, 2007 (NMED 2007, 098120)	"Work Plan for R-33 Rehabilitation"	Completed 07/1/08	Completed 08/29/08

Well No.	Screens to Retain	Screen to Abandon	Development Techniques Applied	Proposed Sampling System	Document Requiring Rehabilitation or Replacement	Document That Will Describe the Activities	Schedule for Rehabilitation or Replacement	Schedule for Completion Report
CdV-R-37-2	#2, #3, and #4	n/a	Surge/bail; jetting/pumping; isolation pumping/overpumping	Westbay	"Evaluation of the Suitability of Wells Near Technical Area 16 for Monitoring Contaminant Releases from Consolidated Unit 16-021(c)-99" (LANL 2007, 095787) and "Notice of Disapproval of the Evaluation of the Suitability of Wells Near Technical Area 16 for Monitoring Contaminant Releases from Consolidated Unit 16-021(c)-99" (NMED 2007, 097874)	"Work Plan for CdV-R-37-2 Rehabilitation" (submitted following approval of the Technical Area 16 well evaluation report)	To be determined (TBD) pending NMED response	n/a
<b>Replacement Wells</b>								
R-36	Replaces R-12 Screen #3	n/a—New single-screen well	n/a—New single-screen well	Submersible pump	NMED letter "Approval of the Drilling Work Plan for Regional Aquifer Well R-36," dated August 23, 2007 (NMED 2007, 098123)	"Drilling Work Plan for Regional Aquifer Well R-36" (LANL 2007, 098122)	02/12/08	04/30/08
R-25b R-25c	Replace R-25 Screens #1 and #3	n/a—Two new wells	n/a—Two new wells	Dedicated submersible pumps	NMED letter, "Well Evaluations for Intermediate and Regional Wells," dated April 5, 2007 (NMED 2007, 095394), superseded by "Evaluation of the Suitability of Wells Near Technical Area 16 for Monitoring Contaminant Releases from Consolidated Unit 16-021(c)-99" (LANL 2007, 095787) and "Notice of Disapproval of the Evaluation of the Suitability of Wells Near Technical Area 16 for Monitoring Contaminant Releases from Consolidated Unit 16-021(c)-99" (NMED 2007, 097874)	"Drilling Work Plan for Intermediate Aquifer Well R-25b" (LANL 2007, 098121)	R-25b 09/30/08 R-25c 09/15/08	R-25b 10/31/08 R-25c 09/30/08

Well No.	Screens to Retain	Screen to Abandon	Development Techniques Applied	Proposed Sampling System	Document Requiring Rehabilitation or Replacement	Document That Will Describe the Activities	Schedule for Rehabilitation or Replacement	Schedule for Completion Report
CdV-16-3(i)	n/a		n/a	n/a	NMED letter "Well Evaluations for Intermediate and Regional Wells," dated April 5, 2007 (NMED 2007, 095394), superseded by "Evaluation of the Suitability of Wells Near Technical Area 16 for Monitoring Contaminant Releases from Consolidated Unit 16-021(c)-99" (LANL 2007, 095787), and "Notice of Disapproval of the Evaluation of the Suitability of Wells Near Technical Area 16 for Monitoring Contaminant Releases from Consolidated Unit 16-021(c)-99" (NMED 2007, 097874)	Work Plan for CdV-16-3(i)	TBD	TBD

Note: This table is an update of and supplement to Table 3.4-1 in the Work Plan for R-Well Rehabilitation and Replacement, Revision 2 (LANL 2007, 098119).

\* n/a = Not applicable.