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

Subject: Submittal of the Well Completion Summary Fact Sheets for R-50  

Dear Mr. Bearzi:

Enclosed please find two hard copies with electronic files of the Well Completion Summary Fact Sheets for Well R-50. This submittal is in accordance with the Consent Order Schedule of Deliverables (Table XII-4).

If you have any questions, please contact Ted Ball at (505) 665-3996 (tedball@lanl.gov) or Tom Whitacre at (505) 665-5042 (twhitacre@doeal.gov).

Sincerely,

Bruce Schappell, Executive Director  
Environmental Programs – Recovery Act Projects  
Los Alamos National Laboratory

Sincerely,

Everett Trollinger, Federal Project Director  
Environmental Projects – ARRA  
Los Alamos Site Office
Enclosures: Two hard copies with electronic files – Well Summary Data Sheet R-50 Borehole Stratigraphy and R-50 As-Built Well Construction Diagram (LA-UR-10-1425)

Cy: (w/enc.)
Neil Weber, San Ildefonso Pueblo
Tom Whitacre, DOE-LASO, MS A316
Hai Shen, DOE-LASO, MS A316
Mark Everett, EP-TS-DO, MS M992
RPF, MS M707 (with two CDs)
Public Reading Room, MS M992

Cy: (Letter and CD only)
Laurie King, EPA Region 6, Dallas, TX
Steve Yanicak, NMED-DOE-OB, MS M894
Steve White, TerranearPMC, Los Alamos, NM
Kristine Smeltz, EP-WES, MS M992

Cy: (w/o enc.)
Tom Skibitski, NMED-OB, Santa Fe, NM
Annette Russell, DOE-LASO (date-stamped letter emailed)
Ted Ball, EP-ARRA Project, MS M992
Michael J. Graham, ADEP, MS M991
IRM-RMMSO, MS A150 (date-stamped letter emailed)
TOTAL LENGTH LOCKING COVER ELEVATIONS (FT AMSL)

- 1220.4

DEPTI' TO WATER FOLLOWING INSTALLATION (FT BGS) 1066.8 (02/17/10)

DIAMETER OF BOREHOLE
- 18.00 (IN) FROM SURF TO 190.7 (FT BGS)
- 16.75 (IN) FROM 190.7 TO 555.1 (FT BGS)
- 15.88 (IN) FROM 555.1 TO 895.0 (FT BGS)
- 12.75 (IN) FROM 895.0 TO 1224.5 (FT BGS)

SURFACE COMPLETION
- PROTECTIVE CASING TYPE STEEL SIZE (IN) 10
- PROTECTIVE POSTS INSTALLED YES

SURFACE SEAL AND PAD
- CHECK FOR SETTLEMENT YES
- PAD MATERIAL CONCRETE REINFORCED WIRE MESH
- PAD DIMENSIONS (FT) L (L) W (H)

SURFACE SEAL
- HYDRATED BENTONITE CHIP SEAL

FINE SAND COLLAR
- SIZE/TYPE 20/40 SILICA
- QUANTITY USED 1.8 FT³ CALC 2.2 FT³

FILTER PACK SAND
- SIZE/TYPE 10/20 SILICA
- QUANTITY USED 21.3 FT³ CALC 14.3 FT³

BENTONITE SEAL
- FORM 3/4-In CHIP
- QUANTITY USED (DRIY) 66.7 FT³ CALC 60.8 FT³

FINE SAND COLLAR
- SIZE/TYPE 20/40 SILICA
- QUANTITY USED 3.3 FT³ CALC 2.1 FT³

FILTER PACK SAND
- SIZE/TYPE 10/20 SILICA
- QUANTITY USED 41.4 FT³ CALC 22.4 FT³

BOTTOM OF CASING
- 1217.5 (FT BGS)

BACKFILL MATERIAL
- 1210.9 TO 1221.4 (FT BGS)

SLOUGH
- 1221.4 TO 1224.5 (FT BGS)

BOTTOM OF BORING
- 1224.5 (FT BGS)

ELEVATIONS (FT BGS)
- 02/01/10 TIME 13:25
- 02/13/10 TIME 07:50

WELL COMPLETION BEGAN
- DATE 02/01/10 TIME 13:25
- WELL COMPLETION FINISHED
- DATE 02/13/10 TIME 07:50

SLOPED CONCRETE PAD/
SURFACE PAD 3.0 TO 3.0 (FT BGS)

SURFACE SEAL
- MIX (DRIY WT%) CEMENT 100% ADDITIVE NONE
- QUANTITY USED 573.1 FT³ CALC 437.8 FT³

TYPE OF CASING
- MATERIAL PASSIVATED A304 STAINLESS STEEL
- ID (IN) 5.00 OD (IN) 5.88 (5%)
- SLOT SIZE (IN) 0.020

HYDRATED BENTONITE SEAL
- FORM 3/4-IN CHIP
- QUANTITY USED (DRIY) 714.6 FT³ CALC 824.4 FT³

16-IN CASING/SHOE
- SIZE/TYPE 12/20 SILICA
- QUANTITY USED 1.8 FT³ CALC 2.2 FT³

FILTER PACK SAND
- SIZE/TYPE 10/20 SILICA
- QUANTITY USED 21.3 FT³ CALC 14.3 FT³

BENTONITE SEAL
- FORM 3/4-IN CHIP
- QUANTITY USED (DRIY) 66.7 FT³ CALC 60.8 FT³

FINE SAND COLLAR
- SIZE/TYPE 20/40 SILICA
- QUANTITY USED 3.3 FT³ CALC 2.1 FT³

FILTER PACK SAND
- SIZE/TYPE 10/20 SILICA
- QUANTITY USED 41.4 FT³ CALC 22.4 FT³

BACKFILL MATERIAL
- MATERIAL 3/4-IN BENTONITE CHIPS
- QUANTITY USED (DRIY) 3.7 FT³ CALC 1.5 FT³

STAINLESS-STEEL CENTRALIZERS
- USED YES AT 2.0 FT ABOVE AND BELOW WELL SCREENS
DEPTH (FT BGS)

0
100
200
300
400
500
600
700
800
900
1000
1100
1200
1250

Fill
Qbt 2
Qbt 1v
Qbt 1g
Cerro Toledo Interval
Otowi Member
Guaje Pumice Bed
Puye Formation
Puye Formation
Cerros del Rio Basalt
Miocene Pumiceous Sediments
Tsu

WELL SUMMARY DATA SHEET
R-50 Borehole Stratigraphy
Technical Area 05 (TA-05)
Los Alamos National Laboratory
Los Alamos, New Mexico

Terranea PMC
Drafted By: TPMC
Project Number: B0067
Date: March 10, 2010
Filename: RS5_Lithology_FactSheet

DRILLING INFORMATION
DRILLING COMPANY/PERSONNEL:
Boart Longyear
C Seal, M. Cross
DRILL RIG: Foremost DR-24HD
DRILLING METHOD:
☐ DUAL ROTARY
DRILLING FLUID TYPE:
☐ WATER ☐ WATER
☐ AIR ☐ AIR
☐ AOQ-2 FOAMING AGENT

DRILLING START/FINISH:
DATE: 12/05/2009 TIME: 1740
DATE: 01/25/2010 TIME: 0405

1066.8 ft bgs (02/17/10)
(post well installation)