TA54

Los Alamos
NATIONAL LABORATORY
EST. 1943

Environmental Programs
P.O. Box 1663, MS M991
Los Alamos, New Mexico 87545
(505) 606-2337/FAX (505) 665-1812

ENTERED

National Nuclear Security Administration
Los Alamos Site Office, MS A316
Environmental Restoration Program
Los Alamos, New Mexico 87544
(505) 667-4255/FAX (505) 606-2132

Date: AUG 04 2010
Refer To: EP2010-0354

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

RECEIVED
AUG 2010
NMED Hazardous Waste Bureau

Subject: Submittal of the Fact Sheets for Well R-56

Dear Mr. Bearzi:

Enclosed please find two hard copies with electronic files of the Fact Sheets for Well R-56. This submittal is in accordance with the Compliance Order on Consent 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

33838

BS/ET/TB/ME:sm

Enclosures: Two hard copies with electronic files – Well Summary Data Sheet R-56 Borehole Stratigraphy and R-56 As-Built Well Construction Diagram (LA-UR-10-5236)

Cy: (w/enc.)
Neil Weber, San Ildefonso Pueblo
Tom Whitacre, DOE-LASO, MS A316
Mark Everett, EP-ET, 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
Hai Shen, DOE-LASO, MS A316
Steve White, TerranearPMC, Los Alamos, NM (including MS Word file on CD)
Kristine Smeltz, EP-BPS, 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 C348
Michael J. Graham, ADEP, MS M991
IRM-RMMSO, MS A150 (date-stamped letter emailed)

TOTAL LENGTH
OF CASING AND SCREEN (FT) 1081.6

DEPTH TO WATER
FOLLOWING INSTALLATION (FT BGS) 923.9 *(07/26/10)*

DIAMETER OF BOREHOLE
18.75 (IN) FROM 0.0 TO 196.1 (FT BGS)
16.75 (IN) FROM 196.1 TO 394.6 (FT BGS)
15.88 (IN) FROM 394.6 TO 705.0 (FT BGS)
12.75 (IN) FROM 705.0 TO 1087.0 (FT BGS)

SURFACE COMPLETION *(proposed)*
PROTECTIVE CASING
TYPE STEEL SIZE (IN) 16
PROTECTIVE POSTS INSTALLED TBD
SURFACE SEAL AND PAD
CHECK FOR SETTLEMENT TBD
PAD MATERIAL CONCRETE
REINFORCED WIRE MESH
PAD DIMENSIONS (FT) 10 (L) 10 (W) 0.5 (H)

SURFACE SEAL 3.0 TO 59.8 (FT BGS)

HYDRATED BENTONITE CHIP SEAL 59.8 TO 938.0 (FT BGS)

FINE SAND COLLAR 938.0 TO 940.1 (FT BGS)

FILTER PACK 940.1 TO 970.6 (FT BGS)

SCREENED INTERVAL 945.0 TO 965.6 (FT BGS)

BENTONITE SEAL 970.6 TO 1039.0 (FT BGS)

FINE SAND COLLAR 1039.0 TO 1041.4 (FT BGS)

FILTER PACK 1041.4 TO 1072.1 (FT BGS)

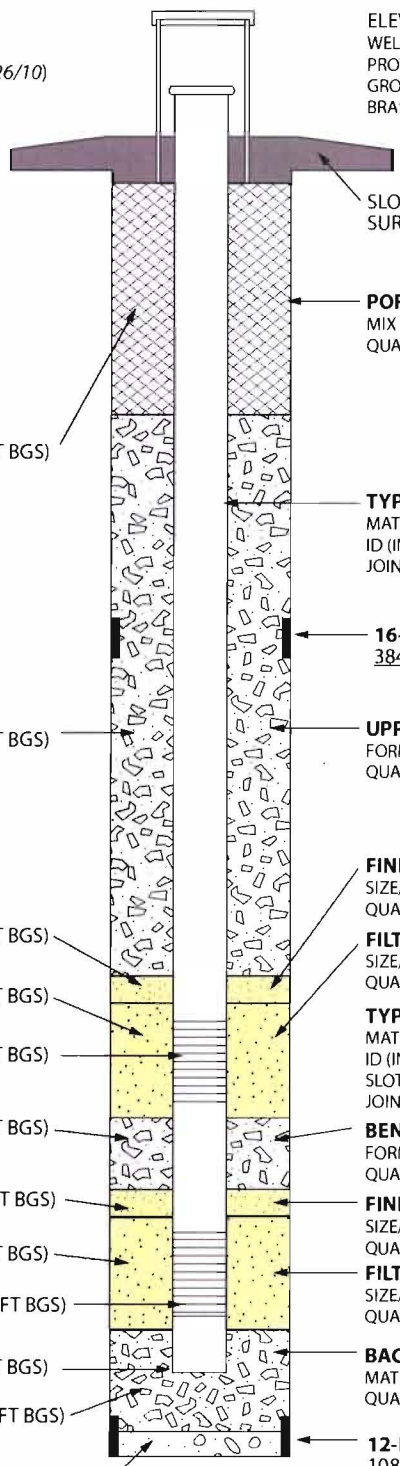
SCREENED INTERVAL 1046.6 TO 1067.1 (FT BGS)

BOTTOM OF CASING 1078.8 (FT BGS)

BACKFILL MATERIAL 1072.1 TO 1085.0 (FT BGS)

SLOUGH 1085.0 TO 1087.0 (FT BGS)

BOTTOM OF BORING 1087.0 (FT BGS)



LOCKING COVER

ELEVATIONS (FT AMSL)
WELL CASING TBD
PROTECTIVE CASING TBD
GROUND SURFACE TBD
BRASS CAP (MARKER) TBD

SLOPED CONCRETE PAD/ SURFACE SEAL

PORTLAND CEMENT SEAL
MIX (WT%) CEMENT 100 BENTONITE NONE
QUANTITY USED 137.6 FT^3 CALC 98.8 FT^3

TYPE OF CASING
MATERIAL PASSIVATED A304 STAINLESS STEEL
ID (IN) 5.00 OD (IN) 5.56 (5 9/16)
JOINT TYPE THREADED/COUPLED

16-IN. CASING/SHOE
384.1 TO 394.6 (FT BGS)

UPPER BENTONITE SEAL
FORM 3/8 IN CHIP
QUANTITY USED 816.1 FT^3 CALC 1047.0 FT^3

FINE SAND COLLAR
SIZE/TYPE 20/40 SILICA
QUANTITY USED 1.5 FT^3 CALC 1.5 FT^3

FILTER PACK SAND
SIZE/TYPE 10/20 SILICA
QUANTITY USED 32.5 FT^3 CALC 21.8 FT^3

TYPE OF SCREEN(S)
MATERIAL A304 STAINLESS STEEL
ID (IN) 5.00 OD (IN) 5.88 (5 7/8)
SLOT SIZE (IN) 0.020
JOINT TYPE THREADED/COUPLED

BENTONITE SEAL
FORM 3/8 IN CHIP
QUANTITY USED 41.5 FT^3 CALC 48.8 FT^3

FINE SAND COLLAR
SIZE/TYPE 20/40 SILICA
QUANTITY USED 2.5 FT^3 CALC 1.7 FT^3

FILTER PACK SAND
SIZE/TYPE 10/20 SILICA
QUANTITY USED 30.2 FT^3 CALC 22.0 FT^3

BACKFILL MATERIAL
MATERIAL 3/8 IN BENTONITE CHIP
QUANTITY USED 6.7 FT^3 CALC 10.2 FT^3

12-IN. CASING/SHOE
1080.4 TO 1087.0 (FT BGS)

STAINLESS STEEL CENTRALIZERS
USED AT 2.0 ft ABOVE AND BELOW WELL SCREENS

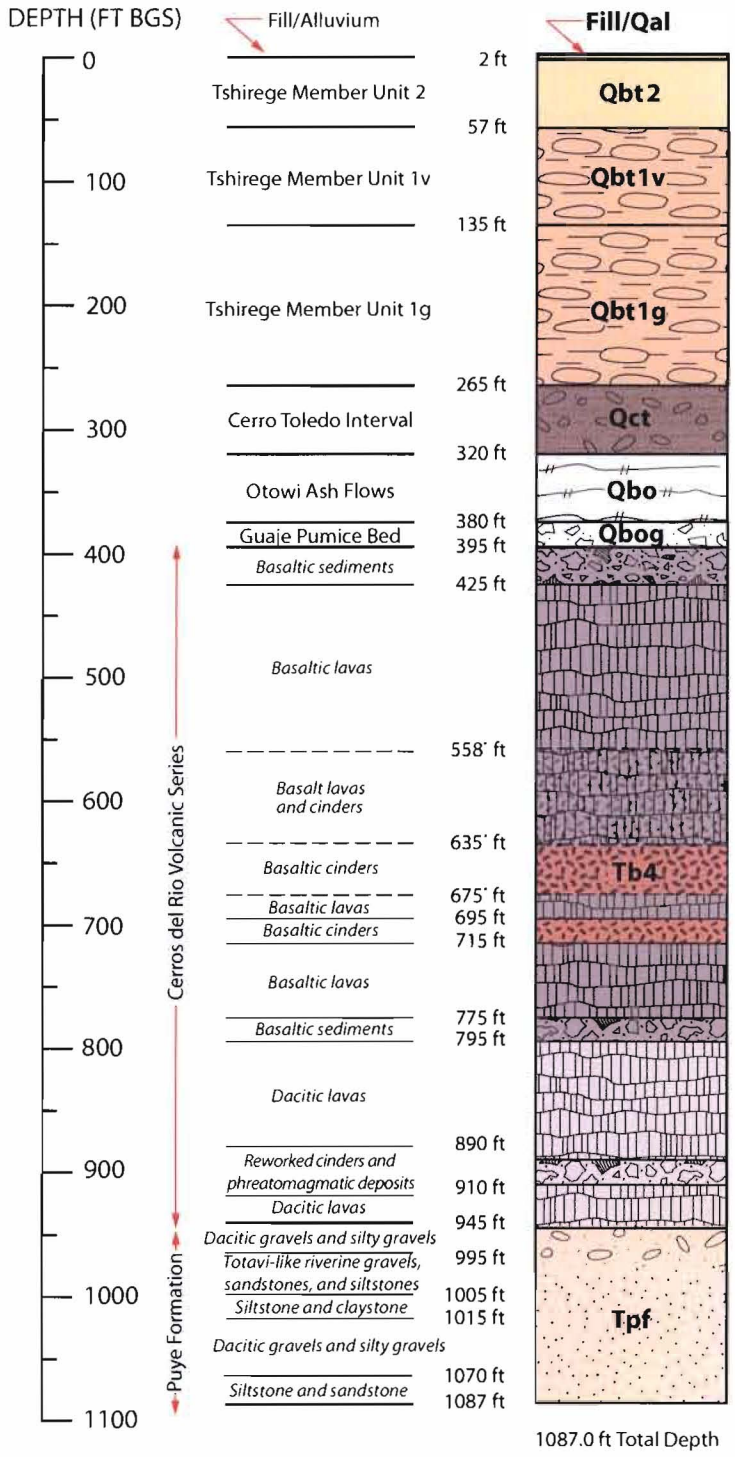
WELL COMPLETION BEGAN
DATE 06/23/10 TIME 1121
WELL COMPLETION FINISHED
DATE 07/19/10 TIME 0930

TerranearPMC

Drafted By: TPMC
Project Number: 80077
Date: July 20, 2010
File Name: R-56_AsBuilt_FactSheet

R-56 As-Built Well Construction Diagram
Technical Area 54 (TA-54)
Los Alamos National Laboratory
Los Alamos, New Mexico

FACT SHEET
NOT TO SCALE



DRILLING INFORMATION

DRILLING COMPANY/PERSONNEL:
Boart Longyear
G. Burton, E. Rivas

DRILL RIG: Foremost DR-24HD

DRILLING METHOD:
☒ DUAL ROTARY

DRILLING FLUID TYPE:

0–819 ft bgs	819–1087 ft bgs
☒ WATER	☒ WATER
☒ AIR	☒ AIR
☒ AQF-2 FOAMING AGENT	

DRILLING START/FINISH:
DATE: 04/23/2010 TIME: 1325
DATE: 06/13/2010 TIME: 1500

▼ 924.6 ft bgs (06/15/10)
(pre well installation)

* inferred depth, no samples, mid-point between over- and under-lying lithologies

TerranearPMC

Drafted By: TPMC
Project Number: 80077

Date: July 20, 2010
Filename: R56_Lithology_FactSheet

R-56 BOREHOLE STRATIGRAPHY
Technical Area 54 (TA-54)
Los Alamos National Laboratory
Los Alamos, New Mexico

Fact Sheet
NOT TO SCALE