

Construction, Stratigraphic, and Hydrologic Information for Hydrogeologic Workplan Characterization Well R-14 Rev. B (10-18-02).

Location: In Ten Site Canyon, east of the former radioactive liquid waste and septic treatment facilities at TA-35.

Survey coordinates (brass marker in NW corner of R-14 cement pad):
 x: xxxxx E y: xxxxx N (NAD 83)
 z: xxxxxxx ft asl (NGVD 29)

Drilling: air rotary core w/ wireline retrieval, conventional mud drilling, casing advance.
 R-14 Start date: 06/02/02.
 R-14 End date: 07/02/02.

Borehole R-14 drilled to 1327 ft. bgs. (T.D.).

Data collection:
 Hydrologic properties:
 Cores/cuttings submitted for geochemical and contaminant characterization: (24)
 Groundwater samples submitted for geochem and contaminant characterization: (1)
 Geologic properties: (12)
 Mineralogy, petrography, and chemistry.

Borehole logs from R-14:
 Lithologic: 0-1327 ft.
 Video (LANL tool): 0-923 ft. and 0-975 ft.
 Natural gamma (LANL tool): 0-1068 ft. and 1046-1325 ft. bgs.
 Schlumberger Logs: 0-12.2 ft (cased), 12.2-1068 ft (open hole): Litho density, Spectral Gamma, Elemental Capture, Thermal/Epithermal Neutron, Magnetic Resonance, and Natural Gamma.

Contaminants Detected in R-14
 Water Samples: none

Well construction:
 Drilling Completed: 07/02/02
 Contract Geophysics: 06/19/02 - 06/20/02
 Well Constructed : 07/04/02 - 07/11/02
 Well Developed : 07/19/02 - 11/18/02
 Westbay Installed : 11/19/02 - 11/25/02

Casing: 4.5-in I.D. stainless steel with external couplings.

Number of Screens: 2
 4.5-in I.D. pipe based, s.s. wire-wrapped with 0.010-in slots.

Screen (perforated pipe interval):
 Screen #1 - 1200.6-1233.2 ft. bgs.
 Screen #2 - 1286.5-1293.1 ft. bgs.

Well development consisted of wire brushing, bailing, chemical treatments, surging, and pumping.

Groundwater occurrence was determined for R-14 by recognition of first water produced while drilling, by borehole geophysics, and by borehole video. Static water levels were determined after the R-14 borehole was rested.

Geologic contacts for R-14 were determined by examination of cuttings and interpretation of borehole video and geophysical logs. Contacts may be refined by analysis of geologic samples by petrography and rock chemistry.

