

NYE County NWRPO - Technical Data Report

Title/Description

RID No.	Transmitter	Org.	Receiver	Org.	Key word1
6930	Gilmore	Nye County NWRPO	QARC	Nye	10

Analysis of 48-Hour Aquifer Pump Test at Site 10 near Yucca Mountain, Nevada, NWRPO-2006-01, Cox Engineering Corporation, February 2006

Doc. Date 4/18/2006 **General Doc. Type** Report **Keyword2** Pump Test
Entry Date 5/16/2006 **Detailed Doc. Type** Technical Report **Keyword3** Analysis

Data Originator Preparer Dave Cox

Title of Data Analysis of 48-Hour Aquifer Pump Test at Site 10 near Yucca Mountain, Nevada, NWRPO-2006-01, Cox Engineering Corporation, February 2006

Description of Data Hardcopy and electronic files: "NWRPO-2006-01 rev 1", "NWRPO-2006-01 Figures", "NWRPO-2006-01 Tables", and "NWRPO-2006-01 Appendix A". The report describes the test procedure, analysis methodology, and results of a two zone, combined pump test and associated recovery test conducted in February 2002 in NC-EWDP-10S. The purpose of the tests was to determine aquifer properties, such as permeability and well efficiency, for subsurface characterization of alluvium and upper Tertiary sediments along a potential flowpath between Yucca Mountain and populated areas of the Town of Amargosa Valley, Nevada. During the NC-EWDP-10S testing, pressure was monitored in two zones at the adjacent observation well NC-EWDP-10P to evaluate inter-well communication.

Data Collection Method Data collection is described in Sections 2.1 and 2.2 of the report. In accordance with Technical Procedures TP-9.0 and TP-10.0, Westbay Mosdax pressure sensors were placed above the submersible pump in the pumping well, and below the water table in the offset well, to measure the pressure response to pumping and recovery. Barometric pressure during the test was also recorded. Pump rates were determined using a 50-gal. (189.3-L) drum and a stopwatch, and also with a turbine flow meter.

Data Location(s) NC-EWDP-10S, and -10P

Data Collection Period(s) February 2002

Data Source(s) The original test data were submitted by Nye County personnel to the NWRPO QA Records Center (QARC). Supporting Data: Westbay data in file 2250210S.wk1 (RID 4845) and Scientific Notebook #147.

Data Censoring None

Data Processing Data processing of the pressure data is described in Sections 2.1 and 2.2 of the report. MOSDAX pressure probe (i.e., transducer) readings were converted to equivalent piezometric surface elevations.

Data Limitations It was not necessary to filter the test data for changes in barometric pressure because the effect of these changes was very small.

The test interpretation is limited by the inherent differences between the actual aquifer system present, and the idealized aquifer models assumed in the analysis procedure. In particular, the presence of drilling mud and debris in the pumping well at the time of the test makes the results for NC-EWDP-10S Zone 2 subject to great uncertainty. Although there was an observation well (NC-EWDP-10P) reading corresponding to each screened interval in the pumping well (NC-EWDP-10S), the aquifer system at this location is very complex, which limits the accuracy of the computed results.

Governing QA Docs. QAP-3.2 Rev. 1, TP-9.0 Rev. 1

NYE County NWRPO - Technical Data Report

Title/Description

RID No.	Transmitter	Org.	Receiver	Org.	Key word1
6930	Gilmore	Nye County NWRPO	QARC	Nye	10

Analysis of 48-Hour Aquifer Pump Test at Site 10 near Yucca Mountain, Nevada, NWRPO-2006-01, Cox Engineering Corporation, February 2006

.....
Frequency of Transmittal As required by PI

.....
Direct Questions About Data To- NWRPO QA Records Center