NYE County NWRPO -Technical Data Report

RID No.	Transmitter	Org.	Receiver	Org.	Key word1	Title/Description
5258	Cox	Questa	QARC	Nye	19IM1,	Preliminary Analysis of Pump-Spinner Tests and 48-Hour Pump Tests in Well NC-EWDP-19IM1 and -19IM2, Near Yucca Mountain, Nevada, NWRPO-2002-05, September 2002, Prepared by Questa Engineering Corporation

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Title of Data
Preliminary Analysis of Pump-Spinner Tests and 48-Hour Pump Tests in Well NC-EWDP-19IM1 and -19IM2, Near Yucca Mountain, Nevada, NWRPO-2002-05, September 2002, Prepared by Questa Engineering Corporation

Description of Data
This record contains a hard copy and electronic file of the subject report. The report describes the test procedure, analysis methodology, results and hydrologic interpretation of pump-spinner tests and associated 48-hr. pump tests and 51- and 94-hr. recovery periods, respectively, conducted in October 2001 in wells NC-EWDP-19IM1 and -19IM2. The purpose of the tests was to determine aquifer properties, such as permeability and well efficiency, for subsurface characterization. During the NC-EWDP-19IM1 and -19IM2 testing, pressure was monitored in the adjacent well NC-EWDP-19D to evaluate inter-well communication.

Data Collection Method
Data collection is described in the Description and Results of Static Spinner Logging (Section 2.1.2), Description of Pump-Spinner Logging (Section 2.1.3), Well NC-EWDP-19IM1 Test Procedures (Section 2.2.1) and Well NC-EWDP-19IM2 Test Procedures (Section 2.2.4) sections of the report. In accordance with TP-9.0, a series of spinner logs were run prior to and during pumping. In accordance with TP-9.0 and TP-9.5, Westbay Mosdax pressure sensors were placed above the submersible pump in the pumping well (either NC-EWDP-19IM1 or -19IM2), and below the water table in the offset wells, 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-19IM1 and -19IM2 are located in alluvial deposits on the western portion of Fortymile Wash, approximately 3.5 miles (about 5.5 km) northwest of the Lathrop Wells Junction. NC-EWDP-19IM2 lies about 66 ft (20 m) east of NC-EWDP-19IM1, and NC-EWDP-19D is located about 66 ft (20 m) south of NC-EWDP-19IM1.

Data Collection Period(s)
Field activities were conducted in October 2001. The final analysis report was completed in September 2002.

Data Source(s)
The original test data were submitted by Nye County personnel to the NWRPO. See supporting data and analysis files in RID 5311; Westbay data (RID 4847); Spinner logs (RIDs 4616, 4618, 4619); and field scientific notebooks (RIDs 4786, 4787, 4774)..
References to RIDs containing supporting well information, well logs, and other original data collected from NC-EWDP-19IM1 and 19IM2 can be found on the nyecounty.com web site under "EWDP" and "EWDP-19IM1" or "EWDP-19IM2".

Data Censoring
All data obtained during the test appeared to be valid and useful for analysis. All of the original test data may be viewed in their entirety at the NWRPO QA Records Center in Pahrump, NV.

Data Processing
Data processing of the spinner data is described in the Spinner Log Fundamentals section (Section 2.1.1) of the report. Data processing of the pressure data is described in the Well NC-EWDP-19IM1 Pumping Well Drawdown Analysis (Section 2.2.2) section of the report.

Data Limitations
The initial potentiometric heads recorded prior to pumping were the same as that in the deepest interval with the highest head. After pumping, the observed heads were different. This behavior was interpreted as indicating the presence of a filter cake on the lower head intervals, which was removed

by pumping. Accordingly, the drawdown data obtained during pumping were considered to be most suitable for hydrologic analysis because all permeable intervals produced during the pumping periods. The recovery data were considered to be less suitable for analysis because the spinner logs during the recovery period indicated that significant crossflow between well screens occurred during that time. Crossflow after cessation of pumping caused the recovery trends to be artificially flattened, and application of standard analysis techniques to the recovery portion of the test would therefore yield incorrect results. The test interpretation is limited by the inherent differences between the actual aquifer system present, and the idealized aquifer model assumed in the analysis procedure. Analysis of the spinner data indicated five screened intervals were actually contributing flow, and that at least three different initial head regimes were present. Because of the complexity of the aquifer system at this location, the computed results are considered approximate.

Governing QA Docs. TP-9.0, TP-9.5, TP-9.7

Frequency of Transmittal One time only

Direct Questions About Data To- Nye County QA Records Center