Technical Data Information Report

RID Number	Transmitter	Transmitter Organization	Receiver	Receiver Organization	Keyword 1
7925.00	Klenke	Nye County NWRPO	QARC	Nye County NWRPO	Water Levels

Document Date	8/10/2011	General Document Type	QA Program Doc	Keyword 2	Groundwater
Entry Date	8/15/2011	Detail Document Type	Data	Keyword 3	Private Wells

Document Title/Subject

Manual Water Level Measurements in Private Wells from December 2008 through December 2010.

Data Originator/Preparer

John Klenke

Data Description

This data package includes Nye County's Regional Groundwater Elevation Database (RGED V.5.0.mdb) containing manual water level measurements made in private wells (non-EWDP) from December 2008 through December 2010, field forms, hydrographs (available upon request), and exported data from the database, "Export Pahrump Data 123110.xlsx" and "Export Amargosa Data 123110.xlsx". Only the export files will be posted on the website. The export files have been compressed and posted to the NWRPO website as rid7925.zip.

Data Collection Method

Manual water level measurement data collected using calibrated electric water level sounders in accordance with Work Plan 10 Rev. 0, Groundwater Level Monitoring and Evaluation, and Technical Procedure 9.9 Rev. 4, Measurement of Groundwater Levels Using Electric Well Sounders.

Data Collection Location

Various locations in Pahrump Valley, Amargosa Desert, Chicago Valley, Death Valley, and Stewart Valley. Specific Locations for each well are included in RGED V.5.0 and in RIDs 5281 and 6398.

Data Collection Period

12/2008 - 12/2010

Data Sources

1) NWRPO derived latitude and longitude for well location and elevation data for ground elevation; 2) Depth to groundwater measured with electric water level sounders as recorded on the NWRPO Water Level Measurement Field Form or field scientific notebook; 3) Wellhead diagrams as established with engineers steel tape and recorded in scientific notebook showing casing type, diameter, and measuring point stickup above land surface.
Supporting Data: NWRPO Water Level Measurement Field Forms (TP-9.9 REV1-REV3), field scientific notebooks, and RIDs 5281 6398, 7792 containing updated GPS coordinates.

Data Censoring

Crystal Fire – Measurement of 32.92 ft on 12/19/08 at 09:00 hrs was censored. This measurement was found to be a singularity, and not substantiated by later measurements or backup data.
Executive Golf Course – Measurement of 49.77 ft on 7/2/09 at 09:40 hrs was censored. This measurement was found to be a singularity, and not substantiated by later measurements or backup data.
Franklin PVC – Measurements of 25.38 ft on 3/8/10 at 11:03 hrs and 23.01 ft on 4/14/10 at 10:39 hrs were censored. Field notes indicate that these readings were not accurate. Also, there was 3.3" of rain reported at the Community Environmental Monitoring Program (CEMP), "Amargosa Valley" precipitation station for Jan-Feb 2010, but the rise in the water level was not reproduced in earlier data when there was 2.9" of rain reported for the month of Sept 2007.
Jeep Trail Well – Measurement of 151.04 ft on 9/23/09 at 13:40 hrs was censored. This measurement was found to be a singularity, and not substantiated by later measurements or backup data.
NDOT – Measurements of 381.46 ft on 12/29/08 at 14:35 hrs, 393.07 ft on 3/18/09 at 13:35 hrs, and 398.00 ft on 8/13/09 at 10:50 hrs were censored. Field notes indicate that water level readings were very erratic and unreliable during this period.

Data Processing

Routinely, data processing consists of calculations made in the Access database (RGED V.4.0.mdb) and exports made from the database to MS Excel. Additionally, data are evaluated through the use of hydrographs to determine whether anomalous data exist. Anomalous data are investigated (through

scientific notebooks, earthquake records, etc.) to determine the source of the anomaly. If the anomaly cannot be explained, the data are censored.

Data Limitations

AVSTP – A drop in the water level for this well is noted on the 1/27/09 (0.2 ft) and 3/16/09 (1.3 ft) readings. This drop may possibly be associated with intermittent development and pump tests carried out on well NC-EWDP-4PD (1.3 miles NW) from 11/8/08 to 6/30/09 (see Scientific Notebooks #183 pp. 64-66, 74, 77-78, 84-86, 90, 96, 103, 105-124, 135, 137-141, 143-156., and #186 pp. 1-25, 29-32, 39-49, 63-67, 70, 72-75, 85-88, 91-93, 95-101, 109-117, 123-124,130-139). These tests were conducted in all six screened intervals of well 4PD (see http://www.nyecounty.com/RID_data/rid7667.pdf). However during a later pump test, occurring from 8-26-10 to 9-24-10, (pump rate of at approximately 150 gpm), carried out to assess water quality, and subsequent to plug back of the lower four screened sections, no drawdown was observed in the AVSTP well. (see Scientific Notebooks #174 pp 1-43)
Crystal Fire – A drop in the water level, up to 3.3 feet is noted occurring over the period 12/14/05 to 11/16/07. This drop may be due to pumping of a nearby well, or may represent an actual drop in the water table in the vicinity, but this drop was not recorded in any other wells in the Nye County Regional Water Level Measurement Program.
East IMV – A pump test was conducted on this well from 10/15/09 to 10/23/09 (see Scientific Notebook #188 pp. 15-21). Subsequent to the test, which required cutting down the surface casing for access, the well was renamed “East IMV PPT 10/21/09”. No significant drawdown was noted on the hydrographs from this test.
Last Chance – Well development and water sampling were carried out on this well from 6/10/09 to 6/24/09 (see Scientific Notebook #165, pp. 149, 151, 155, and 156, and Scientific Notebook #188 pp. 2-9). No significant long term drawdown was noted on the hydrographs from these tests.
As a precautionary measure, Nye County water level meter NWRPO-200-9 (NC #9) was taken out of service on 10/28/08 after failing a joint USGS-Nye County corroboration/standardization, which took place on April 21, 2008. The USGS steel reference tape measured the depth-to-water at 24.51 ft for both the opening and closing reading in well 7S. Sounder NC #9 measured the depth-to-water in the same well at 24.54 ft (out of corroboration by 0.01 ft). At the same time, NC #9 passed the standardization where Nye County's master sounder NC #6 measured the depth-to-water, in well 7S, at 25.53 feet, requiring an electric well sounder to measure the depth-to-water in the range of 24.50 to 24.55 ft. NC #9 passed this standardization. The standardization procedure is outlined in TP-9.9, Measurement of Groundwater Levels Using Electric Well Sounders, section 5.1.2. The procedure states, "The field electric sounder shall be considered successfully standardized if it produces a water level that deviates from the master sounder level by less than 0.1 feet for every 100 feet measured." After consideration, and its passing of re-standardizations in two different boreholes (NC-EWDP-12PA D.T.W of 172.78 ft, and NC-EWDP-1DX Deep D.T.W. of 179.85 ft), which were both “able to accommodate the maximum length of sounder measurement possible” (TP-9.9, section 5.1.2.), NC #9 was put back into service on 11/3/09.

Wells added to the program:

Craig– This well with location of 36.170598219, -115.980504635 (NAD83 (Conus)), mp elevation of 2647.03 ft (NAD 83-Geiod09), stickup of 1.53 ft above ground level, was added to the Regional Water Level Measurement Program on 8/13/09. For more information, see the corrected survey file R081214A.cor in RID 7792.
Veloz– This well with location of 36.209122824, - 116.013272535 (NAD83 (Conus)), mp elevation of 2595.95ft (NAD 83-Geiod09), stickup of 1.11 ft above ground level, was added to the Regional Water Level Measurement Program on 2/8/10. For more information, see the corrected survey file R081215A.cor in RID 7792.

Wells AC-CS1, AC-CS2, AC-CS3, AC-CS4, AC-CS5, AC-CS6, AC-CS7, AC-CS8, AC-CS9, AC-CS10, and AC-CS11 were added to the program on 6/10/10. These piezometers are being measured by the Amargosa Conservancy (AC), with the data being supplied to Nye County. DV Junction Well is also being measured by the AC.

Former U.S. Geological Survey (USGS) Yucca Mountain Project Environmental Monitoring Program Wells AD-3a (Gauging Station), AD-5 (Power 04), AD-7a, AD-9a, AD-12 (Ash Meadows Gauging Station), AD-14 (DV Junction Well), and RV-1, are being measured by Nye County under a cooperative agreement with the USGS. Wells AD-7a, AD-9a, and RV-1 were not previously on the Nye County Water Level Measurements Program, and therefore have not been located by Nye County. The reported location and elevation of these wells are from the USGS Geographic Watershed information System (GWIS). Site ID’s for these wells can be found in the comment column of the data spreadsheets for this submission. More information for all of these wells can be found on the USGS NWIS website at: http://waterdata.usgs.gov/nwis

Wells removed from the program:

Measurements in Franklin Dry (USGS site ID 362525116274301) and Franklin PVC Well (USGS site ID 362525116274302) have temporarily been suspended since the installation of transducers by the USGS on 9/15/10. The transducers are anticipated to be in place for a period of about two years.
AW57 – This well was removed from the program on 1/27/09, at the request of the well owner. This well was removed from the program prior to well resurveying using a higher accuracy resource grade GPS unit. Coordinates and elevations, for this well, are from the original surveys using a Trimble

	Pathfinder Pro XRS GPS unit.
Governing QA Docs:	WP-10, Rev. 0, TP-9.9, Rev. 4
Frequency of Transmittal	Biannually or as required by PI and approved by Geoscience Manager
Direct Questions About Data To:	NWRPO QA Records Center