NYE County NWRPO -Technical Data Report

RID No.	Transmitter	Org.	Receiver	Org.	Key word1	Title/Description
6316	Gilmore	Nye County	QARC	Nye	3S, 4PB,	Major Ion and Metals analyses for EWDP groundwater samples collected from 8/03 - 11/03

1

Doc. Date 8/17/2004 **General Doc. Type** Report **Keyword2** groundwater

Entry Date 8/18/2004 **Detailed Doc. Type** Data **Keyword3** analyses

Data Originator Preparer Mary Miller

Title of Data Major Ion and Metals Analyses for EWDP Groundwater Samples Collected from 8/03 - 11/03

Description of Data Water geochemistry data from water samples obtained 8/03 - 11/03 during EWDP sampling events. Major Ion and Metals analyses conducted by Desert Research Institute (DRI) are included for samples collected 8/03 - 11/03 at the following EWDP wells : NC-EWDP-3S, - 4PB, -7SC, -10P, -10S, -16P, -18P, -19D, -19IM1, -19IM2, -19P, -22PA, -22PB, -22S, -23P, -24P, -27P, -28P, and -29P. Filename: “DRI-Fall03.xls”.
Data package includes QA analyses reports.

Data Collection Method Groundwater was pumped to the ground surface with a Bennett pump (piston pump operated with compressed air) from wells NC-EWDP-4PB, -7SC, -10P, -16P, -18P, -19P, -22PA, -22PB, -23P, -24P, - 27P, -28P, and -29P, and with a submersible impeller pump from wells NC-EWDP-3S, -10S, -19D, -19IM1, -19IM2 and 22S. The wells were purged 3 well volumes and samples collected, processed, bottled, and shipped to the testing laboratory following standard methods documented in Nye County QA technical procedure TP-8.1 revision 2 and test plan TPN-11.1.

Data Location(s) NC-EWDP-3S, - 4PB, -7SC, -10P, -10S, -16P, -18P, -19D, -19IM1, -19IM2, -19P, -22PA, -22PB, -22S, -23P, -24P, -27P, -28P, and -29P.

Data Collection Period(s) 8/03 to 11/03

Data Source(s) Desert Research Institute, Division of Hydrogeologic Sciences, Reno, NV. Refer to RIDs 6239 and 6103 for field chemistry parameters and Scientific Notebooks (SNBs) #145 (RID 6256) and #155 (RID 6350) for field notes.

Data Censoring none

Data Processing Analyses was performed by DRI and transmitted to NWRPO in excel spreadsheets. Data was evaluated by NWRPO personnel for meeting quality assurance objectives according to technical procedure TP-8.1 Rev 2.

Data Limitations Air bubbles were noted in the Bennett pump discharge line suggesting an air leak in the pump and/or natural out-gassing of the water. If the former was occurring, parameters sensitive to dissolved oxygen may be perturbed from in situ conditions.
With several exceptions, analytical results for all chemical parameters of concern in all laboratory QC samples (method blanks, laboratory control spikes, laboratory control spike duplicates, matrix spikes, and matrix spike duplicates) met standard QC specifications. The exceptions are as follows for matrix spike QC analyses where the recovery limits were not met:

- NC-EWDP-10P Shallow (GWS0047) Beryllium [%recovery >125]
- NC-EWDP-10P Shallow (GWS0047) Selenium [%recovery < 75]
- NC-EWDP-24P (GWS0070) Manganese [%recovery > 125]
- NC-EWDP-22PB Deep (GWS0052) Selenium [%recovery < 75]
- NC-EWDP-22PB Deep (GWS0052) Beryllium [%recovery > 125]
- NC-EWDP-16P (GWS0041) Aluminum [%recovery >125]
- NC-EWDP-22S Zone 2 (GWS0036) NO_2 + NO_3 [%recovery < 75]

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- NC-EWDP-22S Zone 4 (GWS0039) Bromide [%recovery < 75]
- NC-EWDP-24P (GWS0070) Bromide [%recovery < 75]

Relative percent difference values (RPDs) between the blind field duplicate samples (field QA sample) and the original samples obtained during this sampling phase are generally less than 30% (an acceptable value) for most analytes with a few exceptions as follows:

- NC-EWDP-19IM1 Zone 5 (GWS0063 and GWS0074) Aluminum [RPD = 76%]
- NC-EWDP-22S Zone 1 (GWS0035 and GWS0037) Aluminum [RPD = 50%]
- NC-EWDP-22PB Shallow (GWS0051 and GWS0072) Aluminum [RPD = 200%]
- NC-EWDP-10S Zone 2 (GWS0059 and GWS0090) Scandium [RPD = 51%]

The unacceptably high RPD for aluminum in GWS0051 and GWS0072 (200%) suggests field and/or laboratory error. Higher RPD values found for a number of analytes present at low concentrations (e.g. trace metals) were not unexpected and do not necessarily indicate field or laboratory error.

Field Blank samples were evaluated to determine whether cross-contamination might have occurred.

Field blank sample results had higher than reporting limit levels of sodium, calcium, aluminum, selenium, lithium, scandium, strontium and titanium indicating that some cross-contamination might have occurred during sampling.

Governing QA Docs.	TP-8.1 Rev. 2
Frequency of Transmittal	As required by PI
Direct Questions About Data To-	Nye County QA Records Center