

**BETA ANALYTIC INC.**

DR. M.A. TAMERS and MR. D.G. HOOD

4985 S.W. 74 COURT
MIAMI, FLORIDA, USA 33155
PH: 305-667-5167 FAX: 305-663-0964
beta@radiocarbon.com

REPORT OF RADIOCARBON DATING ANALYSES

Mr. Levi Kryder

Report Date: 4/14/2011

Nye County Nuclear Waste Repository Project Office

Material Received: 3/25/2011

Sample Data	Apparent C14 Age (fraction modern)	C13/C12 Ratio
Beta - 296310	1580 +/- 30 BP (Fmdn 0.8214 +/- 0.0030)	-11.7 o/oo
SAMPLE : NC-GWE-OV-1 ANALYSIS : AMS-Standard delivery MATERIAL/PRETREATMENT : (water DIC): carbonate precipitation		
Beta - 296311	1610 +/- 30 BP (Fmdn 0.8184 +/- 0.0030)	-11.7 o/oo
SAMPLE : NC-GF1-D ANALYSIS : AMS-Standard delivery MATERIAL/PRETREATMENT : (water DIC): carbonate precipitation		
Beta - 296312	1540 +/- 30 BP (Fmdn 0.8255 +/- 0.0030)	-11.7 o/oo
SAMPLE : OV-South Spring ANALYSIS : AMS-Standard delivery MATERIAL/PRETREATMENT : (water DIC): carbonate precipitation		
Beta - 296313	400 +/- 30 BP (Fmdn 0.9514 +/- 0.0035)	-11.6 o/oo
SAMPLE : OV-North Spring ANALYSIS : AMS-Standard delivery MATERIAL/PRETREATMENT : (water DIC): carbonate precipitation		

Dates are reported as RCBP (radiocarbon years before present, "present" = AD 1950). By international convention, the modern reference standard was 95% the ¹⁴C activity of the National Institute of Standards and Technology (NIST) Oxalic Acid (SRM 4990C) and calculated using the Libby ¹⁴C half-life (5568 years). Quoted errors represent 1 relative standard deviation statistics (68% probability) counting errors based on the combined measurements of the sample, background, and modern reference standards. Measured ¹³C/¹²C ratios (delta ¹³C) were calculated relative to the PDB-1 standard.

The Conventional Radiocarbon Age represents the Measured Radiocarbon Age corrected for isotopic fractionation, calculated using the delta ¹³C. On rare occasion where the Conventional Radiocarbon Age was calculated using an assumed delta ¹³C, the ratio and the Conventional Radiocarbon Age will be followed by "****". The Conventional Radiocarbon Age is not calendar calibrated. When available, the Calendar Calibrated result is calculated from the Conventional Radiocarbon Age and is listed as the "Two Sigma Calibrated Result" for each sample.