

Appendix B

545713

NUCLEAR WASTE MANAGEMENT PROCEDURE Sandia National Laboratories	Parameter Problem Report (PPR)	Form Number: NP 9-2-2 Page 1 of 1
Material Abbreviated Name: <u>S_HALITE, DRZ_0</u> Property Abbreviated Name: <u>POROSITY</u> Associated Analysis: (CCA, PAVT, etc.) <u>AP-133</u> Effective Date: <u>04/04/2007</u>		
Description of Problem The Preliminary Performance Assessment for the Waste Isolation Pilot Plant (SAND92-0700) states, on p. 2-42, that "the PA assumed median porosity to be 0.01 based on an unpublished report about electromagnetic and DC resistivity measurements (Skokan, C. J. Starett, and H. T. Andersen. 1988. Final Report: Feasibility Study of Seismic Tomography to Monitor Underground Pillar Integrity at the WIPP Site.)" It also states that "the high value of 0.03 is suggested by the low end of the resistivity measurements in the unpublished report by Skokan et al." However, the cited report does not report porosity measurements; the correct report should be SAND87-7174, "Studies of Electrical and Electromagnetic Methods for Characterizing Salt Properties at the WIPP Site, New Mexico." In addition, the 3.0 percent value given by Skokan et al. in SAND87-7174 is a weight percent, not a volume fraction. The expected volume fraction for 3.0 percent mass should be approximately 6.0 percent porosity, not 3.0 percent.		
Concurrence of Problem		
A. E. Ismail <u>[Signature]</u> <u>4/4/2007</u> Eric Virgin <u>[Signature]</u> <u>4/4/07</u> PPR Initiator (Print, Sign and Date) Requester (Print, Sign and Date) Condition Adverse to Quality? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (Initiate NP 16 -1 if yes)		
Problem Resolution and Justification for no Condition Adverse to Quality		
A new analysis for the porosity is being carried out in accordance with AP-133. That analysis shows that porosities in S_HALITE and DRZ_0 are both significantly lower than the range currently used in PA, with medians of approximately 0.5 percent instead of 1.0 percent, and with a very small fraction of points (<1 %) exceeding 3.0 percent porosity. Since LHS truncates probability distributions at the 99 th percentile, the range of porosities from 3.0 to 6.0+ percent will not be sampled under the new parameter set.		
Concurrence		
<u>Moo Lee</u> <u>[Signature]</u> <u>4/4/07</u> PA Manager (Print) SNL WIPP PA Manager (Sign and Date) <u>Mario Chavez</u> <u>2007-02</u> QA Staff (Print, Sign and Date) <u>4/4/07</u> Parameter Problem Report No. (PPR)		

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