Shapiro-Wilk Test of Normality
Lead Detected in Brackett-Tarrant Association Soils
(Excluding Outlier Values)
Camp Stanley Storage Activity, Texas

Number of Samples, n	Ordered Concentration x(i)	Reverse Ordered Concentration x(n-i+1)	Difference x(n-i+1)-x(i)	a(n-i+1)	b(i)	ln of Ordered Concentrations ln x(i)	ln of Reverse Ordered Concentrations ln x(n-i+1)	Difference ln x(n-i+1)- ln x(i)	a(n-i+1)	b(i)
1	5.30	13.00	7.70	0.6052	4.66	1.67	2.56	0.90	0.6052	0.54
2	5.30	12.00	6.70	0.3164	2.12	1.67	2.48	0.82	0.3164	0.26
3	6.00	8.90	2.90	0.1743	0.51	1.79	2.19	0.39	0.1743	0.07
4	6.90	7.30	0.40	0.0561	0.02	1.93	1.99	0.06	0.0561	0.00
5	7.30	6.90	-0.40	b=	7.31	1.99	1.93	-0.06	b=	0.87
6	8.90	6.00	-2.90			2.19	1.79	-0.39		
7	12.00	5.30	-6.70	S=	2.78	2.48	1.67	-0.82	S=	0.326
8	13.00	5.30	-7.70	W=	0.861	2.56	1.67	-0.90	W=	0.900
				W(0.05,8)=	0.818				W(0.05,8)=	0.818
				Normality=	Normal				Normality=	Lognormal

*** Distribution is lognormal because of higher W value.

a From An Analysis of Variance Test for Normality (complete samples), by S.S. Shapiro and M.B.Wilk, Biometrika, vol. 52, pp. 591-611.
b b(i) = [x(n-i+1) - x(i)] * a(n-i+1)
c W = b*b/S*S*n