

**Table A.3**  
**Detects Only Probability Plot Correlation Coefficient**  
**Arsenic Concentrations Detected in Glen Rose Formation Limestone**  
**Camp Stanley Storage Activity, Texas**

Order(i)	Uniform Order	Normal Order		
	Statistic Medians	Statistic Medians	$M_i - M_{avg}$	$(M_i - M_{avg})^2$
i	$m_i$	$M_i$	$M_i - M_{avg}$	$(M_i - M_{avg})^2$
1	0.04516	-1.69373	-1.69373	2.869
2	0.10950	-1.22918	-1.22918	1.511
3	0.17459	-0.93620	-0.93620	0.876
4	0.23967	-0.70737	-0.70737	0.500
5	0.30475	-0.51078	-0.51078	0.261
6	0.36983	-0.33229	-0.33229	0.110
7	0.43492	-0.16387	-0.16387	0.027
8	0.50000	0.00000	0.00000	0.000
9	0.56508	0.16387	0.16387	0.027
10	0.63017	0.33229	0.33229	0.110
Total:				6.155
$M_{avg} =$		0.0000		

Lognormal			
Ln of Ordered Concentrations (mg/kg)			
$\ln(x_{(i)})$	$X_i - X_{avg}$	$(X_i - X_{avg})^2$	$(X_i - X_{avg}) * (M_i - M_{avg})$
-0.27	-0.274	0.075	0.464822
-0.11	-0.105	0.011	0.129507
-0.06	-0.062	0.004	0.057928
0.00	0.000	0.000	0.000000
0.03	0.030	0.001	-0.015098
0.14	0.140	0.020	-0.046442
0.18	0.182	0.033	-0.029877
0.25	0.247	0.061	0.000000
0.58	0.577	0.332	0.094489
0.65	0.647	0.419	0.215028
			nondetect
			nondetect
			nondetect
0.74	0.742	0.550	0.378970
			nondetect
0.78	0.779	0.607	0.551271
			nondetect
			nondetect
			nondetect
0.99	0.993	0.987	0.929882
1.04	1.037	1.075	1.274337
1.46	1.459	2.128	2.470498
Sum:		6.159	5.914476
$X_{avg} =$		0.0000	
$r =$		0.960647	

**Probability Plot Correlation Coefficient<sup>a,b</sup>**

$$r = \frac{\sum_{i=1}^n (X_i - X_{avg}) * (M_i - M_{avg})}{\sqrt{\sum_{i=1}^n (X_i - X_{avg})^2 * \sum_{i=1}^n (M_i - M_{avg})^2}}$$

$M_i = \Phi^{-1}(m_i) =$  ith Normal order statistic median  
 where  $\Phi^{-1} =$  inverse of standard Normal cumulative distribution  
 $= f(z, 0, 1)^{-1} = \sqrt{2p} e^{z^2/2}$

$$m_i = \begin{cases} 1 - (.5)^{1/n} & \text{for } i = 1 \\ (i - .3175) / (n + .365) & \text{for } 1 < i < n \\ (.5)^{1/n} & \text{for } i = n \end{cases}$$

$M_{avg} =$  average of  $M_i$   
 $X_{avg} =$  average of  $X_i$