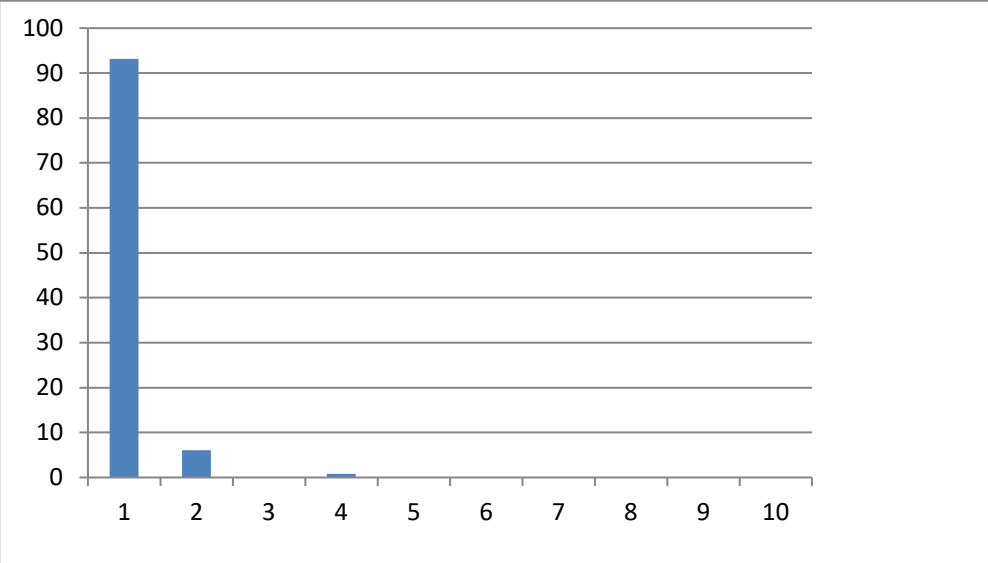


Measurement Uncertainty Estimation Form															
Measurement:		Overall Length Measurement													
Range of measurement values:		0 to 36"													
Procedure name and revision:		Overall Length													
Estimation prepared by:		Paul Slocum						Date Prepared:		5/5/2026					
Line Item	Uncertainty Component	Value	Units	Distribution	Type	Divisor	Degrees Freedom (n-1)	Standard Uncertainty	Component Contribution %						
1	Standard Deviation	0.03029800	inches	Normal	A	1.00	1	0.044743	93						
2	Measurement Calibration	0.00500000	inches	Rectangular	B	1.73	1	0.002890173	6						
3	Aldinger Calibration	0.00000000	inches	Normal	A	1.00	1	0	0						
4	Thermal Expansion	0.00068000	inches	Rectangular	B	1.73	1	0.000393064	1						
5						1.00		0	0						
6						1.00		0	0						
7						1.00		0	0						
8						1.00		0	0						
9						1.00		0	0						
10						1.00		0	0						
	Combined Standard Unc	u_c						0.044837971	100						
	Expanded Unc	$U (k=2)$						0.089675942							
	Expanded Unc	$U (k=3)$						0.134513913							
	Reported Uncertainty:	0.090		$k=2$											
	Reported Uncertainty:	0.135		$k=3$											
NOTE: Regardless of the number of digits that are showing in a cell, Excel carries the maximum number of significant figures in the background and will use the entire number for further calculations															
The basis for the data above:															
1	10 measurements conducted by P. Slocum, L. Peterson and S. Siu														
2	Scale error provided on GEI Certificate of Calibration														
3	Aldinger Calibration Certificate														
4	Thermal Expansion of Stainless Steel 304														
5															
6															
7															
8															
9															
10															
Revision:															