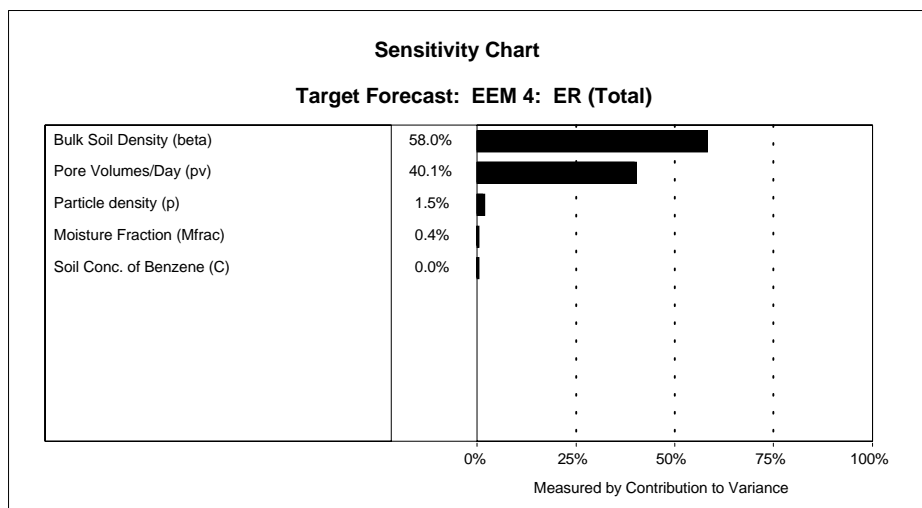


## EEM 4 Uncertainty/Sensitivity Analysis

Simulation started on 9/27/96 at 13:13:29

Simulation stopped on 9/27/96 at 13:15:09



## Forecast: Air-Filled Porosity

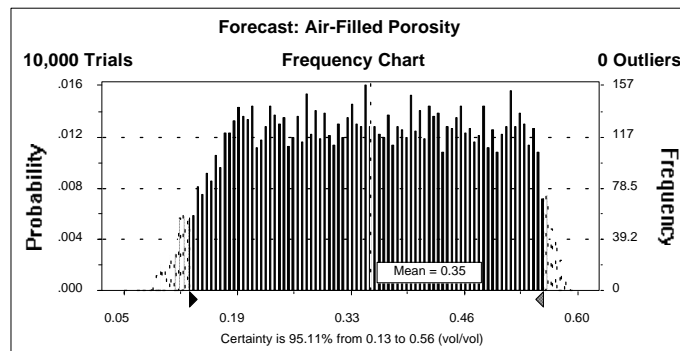
Cell: B22

### Summary:

Certainty Level is 95.11%  
Certainty Range is from 0.13 to 0.56 (vol/vol)  
Display Range is from 0.05 to 0.60 (vol/vol)  
Entire Range is from 0.08 to 0.59 (vol/vol)  
After 10,000 Trials, the Std. Error of the Mean is 0.00

### Statistics:

	<u>Value</u>
Trials	10000
Mean	0.35
Median	0.35
Mode	---
Standard Deviation	0.13
Variance	0.02
Skewness	-0.03
Kurtosis	1.88
Coeff. of Variability	0.36
Range Minimum	0.08
Range Maximum	0.59
Range Width	0.52
Mean Std. Error	0.00



### Percentiles:

<u>Percentile</u>	<u>(vol/vol)</u>
0%	0.08
10%	0.18
20%	0.22
30%	0.26
40%	0.31
50%	0.35

**Forecast: Air-Filled Porosity (cont'd)**

**Cell: B22**

<u>Percentile</u>	<u>(vol/vol)</u>
60%	0.39
70%	0.43
80%	0.48
90%	0.52
100%	0.59

End of Forecast

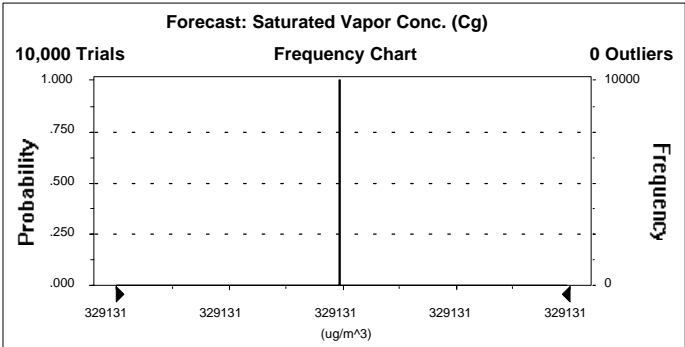
**Forecast: Saturated Vapor Conc. (Cg)**

**Cell: B27**

**Summary:**

Display Range is from 329131 to 329131 (ug/m^3)  
Entire Range is from 329131 to 329131 (ug/m^3)  
After 10,000 Trials, the Std. Error of the Mean is 0

Statistics:	Value
Trials	10000
Mean	329131
Median	329131
Mode	329131
Standard Deviation	0
Variance	0
Skewness	0.00
Kurtosis	+Infinity
Coeff. of Variability	0.00
Range Minimum	329131
Range Maximum	329131
Range Width	0
Mean Std. Error	0.00



**Percentiles:**

Percentile	(ug/m^3)
0%	329131
10%	329131
20%	329131
30%	329131
40%	329131
50%	329131
60%	329131
70%	329131

**Forecast: Saturated Vapor Conc. (Cg) (cont'd)**

**Cell: B27**

<u>Percentile</u>	<u>(ug/m^3)</u>
80%	329131
90%	329131
100%	329131

End of Forecast

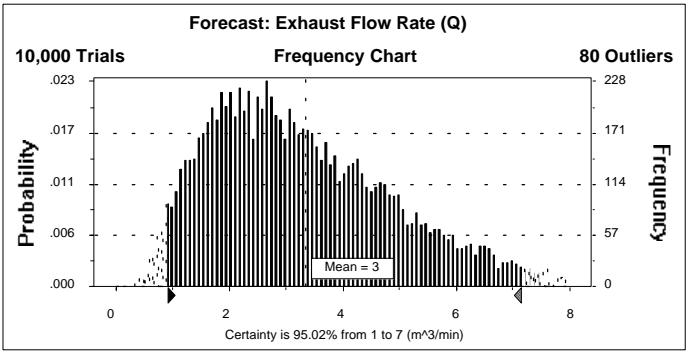
**Forecast: Exhaust Flow Rate (Q)**

**Cell: B28**

**Summary:**

Certainty Level is 95.02%  
Certainty Range is from 1 to 7 (m<sup>3</sup>/min)  
Display Range is from 0 to 8 (m<sup>3</sup>/min)  
Entire Range is from 0 to 10 (m<sup>3</sup>/min)  
After 10,000 Trials, the Std. Error of the Mean is 0

Statistics:	Value
Trials	10000
Mean	3
Median	3
Mode	---
Standard Deviation	2
Variance	3
Skewness	0.71
Kurtosis	3.05
Coeff. of Variability	0.50
Range Minimum	0
Range Maximum	10
Range Width	9
Mean Std. Error	0.02



**Percentiles:**

Percentile	(m <sup>3</sup> /min)
0%	0
10%	1
20%	2
30%	2
40%	3
50%	3

**Forecast: Exhaust Flow Rate (Q) (cont'd)**

**Cell: B28**

<u>Percentile</u>	<u>(m<sup>3</sup>/min)</u>
60%	3
70%	4
80%	5
90%	6
100%	10

End of Forecast

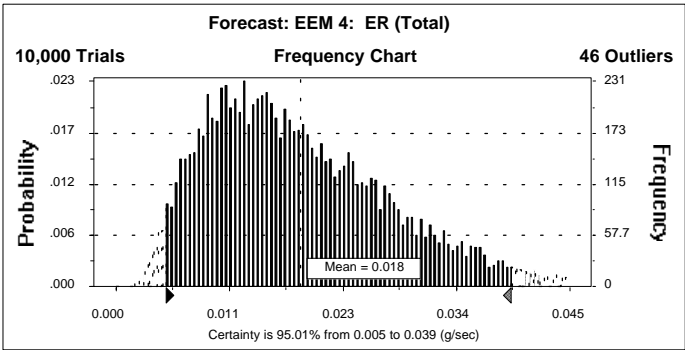
Forecast: EEM 4: ER (Total)

Cell: B29

Summary:

Certainty Level is 95.01%  
Certainty Range is from 0.005 to 0.039 (g/sec)  
Display Range is from 0.000 to 0.045 (g/sec)  
Entire Range is from 0.002 to 0.052 (g/sec)  
After 10,000 Trials, the Std. Error of the Mean is 0.000

Statistics:	Value
Trials	10000
Mean	0.018
Median	0.017
Mode	---
Standard Deviation	0.009
Variance	0.000
Skewness	0.71
Kurtosis	3.05
Coeff. of Variability	0.50
Range Minimum	0.002
Range Maximum	0.052
Range Width	0.051
Mean Std. Error	0.000



Percentiles:

Percentile	(g/sec)
0%	0.002
10%	0.008
20%	0.010
30%	0.012
40%	0.014
50%	0.017

**Forecast: EEM 4: ER (Total) (cont'd)**

**Cell: B29**

<u>Percentile</u>	<u>(g/sec)</u>
60%	0.019
70%	0.022
80%	0.026
90%	0.031
100%	0.052

End of Forecast

## Assumptions

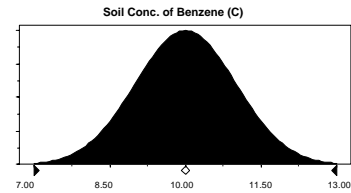
### **Assumption: Soil Conc. of Benzene (C)**

**Cell: C5**

Normal distribution with parameters:

Mean	10.00
Standard Dev.	1.00

Selected range is from -Infinity to +Infinity  
Mean value in simulation was 10.00



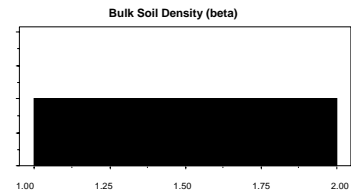
### **Assumption: Bulk Soil Density (beta)**

**Cell: C8**

Uniform distribution with parameters:

Minimum	1.00
Maximum	2.00

Mean value in simulation was 1.50



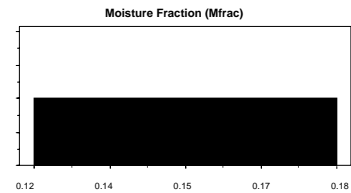
### **Assumption: Moisture Fraction (Mfrac)**

**Cell: C9**

Uniform distribution with parameters:

Minimum	0.12
Maximum	0.18

Mean value in simulation was 0.15



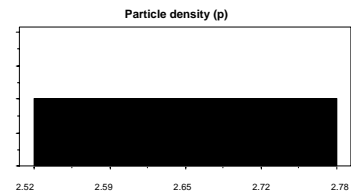
### **Assumption: Particle density (p)**

**Cell: B23**

Uniform distribution with parameters:

Minimum	2.52
Maximum	2.78

Mean value in simulation was 2.65



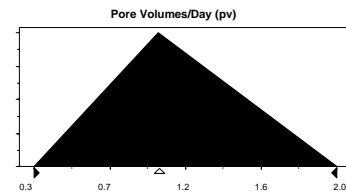
**Assumption: Pore Volumes/Day (pv)**

**Cell: B24**

Triangular distribution with parameters:

Minimum	0.3
Likeliest	1.0
Maximum	2.0

Selected range is from 0.3 to 2.0  
Mean value in simulation was 1.1



End of Assumptions