APPENDIX C

Exposure Dose Calculations for Exposure to TCE in Water from the Utility Sink in Scituate Town Hall
Scituate, Massachusetts

1. Ingestion of Town Hall Water Containing TCE by Adults

$$WD = \frac{[C]_{\text{town hall water}} \times IR \times EF}{BW}$$

Where:

WD	= Water Ingestion Exposure Dose (mg/kg/day)
$[C]_{\text{town hall water}}$	= Maximum TCE Concentration in Town Hall Water (mg/L)
IR	= Water Ingestion Rate (L/day)
EF	= Exposure Factor (unitless)
BW	= Body Weight (kg)

Assumptions:

1) The receptor evaluated was an adult ingesting water from the utility sink in Scituate Town Hall.
2) The maximum concentration of TCE detected in water from the utility sink in Scituate Town Hall was assumed as the TCE concentration.
3) The amount of water ingested was assumed to be 2 liters per day.
4) The exposure factor was determined assuming the receptor consumed water from the utility sink 7 days per week for 70 years.
5) The average body weight of an adult was assumed to be 70 kilograms.

Exposure Dose Calculation:

$$WD = \frac{0.0096\ \text{mg/L} \times 2\ \text{L/day} \times 1}{70\ \text{kg}} = 0.0003\ \text{mg/kg/day}$$