

Development of Site-specific Media Protection Standards (MPS) for Volatile Organic Compounds (VOCs) and Site Metals in Groundwater

Table 1  
Input Parameters for Method 2 GW-2 MPS for Residential Exposures

PARAMETER	UNITS	MCP DEFAULT VALUE	SITE-SPECIFIC RESIDENTIAL	RATIONALE FOR SITE-SPECIFIC VALUE
Average Groundwater Temperature	°C	10	14	Based on site-specific observations
Depth Below Grade to Bottom of Enclosed Space	cm	183	183	
Depth Below Grade to Water Table	cm	213	259	7 feet used as default. Alternate value based on site-specific observations. Average depth to groundwater from land surface in northern plume adjacent to/under building is 8.5 feet.
Soil Conservation Service (SCS) Soil Type Directly Above Water Table	Unitless	Sand	Sandy Loam	Based on site-specific observations
Vadose Zone Soil Dry Bulk Density	g/cm <sup>3</sup>	1.5	1.5	
Vadose Zone Soil Total Porosity	Unitless	0.43	0.43	
Vadose Zone Water Filled Porosity	cm <sup>3</sup> /cm <sup>3</sup>	0.06	0.06	
Enclosed Space Floor Thickness	cm	15	15	
Soil - Building pressure differential	g/cm-s <sup>2</sup>	40	40	
Enclosed Space Floor Length	cm	961	1056	Based on American Society of Heating, Refrigerating, and Air Conditioning Engineers (ASHRAE) August 1996 Public Review Draft of Standard 62-1989R, Ventilation for Acceptable Indoor Air Quality
Enclosed Space Floor Width	cm	961	1056	
Enclosed Space Floor Height	cm	488	488	
Floor-Wall Seam Crack Width	cm	0.1	0.1	
Indoor Air Exchange Rate	l/hour	0.45	1	Based on ASHRAE August 1996 Public Review Draft of Standard 62-1989R, Ventilation for Acceptable Indoor Air Quality.
Averaging Time – Noncarcinogens	days	10,950	10,950	
Exposure Duration	years	30	30	
Exposure Frequency	days/year	365	365	
Target HQ – Noncarcinogens	Unitless	0.2	1	Appropriate target HQ for a limited and known list of constituents of concern (COCs).
Target Risk – Carcinogens	Unitless	1 x 10 <sup>-6</sup>	1 x 10 <sup>-6</sup>	