June 2009 **All Values in mg/kg**

BAE SYSTEMS

BAE Systems Environmental: Generic Site Assessment Criteria - Human Health

	Sandy Soil; 1% Soil Organic Matter			
Substance	Residential with Plant Uptake	Recreational Open Space		Commercial
	CDA Residential	**CDA ROS**	**Country Park**	**CDA Commercial & Retained Land**
Metals & Metalloids				
Arsenic	22	93	160	330
Beryllium	16	190	520	220
Cadmium	28	180	320	290
Chromium (hexavalent)	37	800	1500	330
Copper	660	15000	33000	45000
Lead	450	450	450	750
Mercury	170	730	1200	3600
Nickel	110	930	1600	980
Selenium	350	1400	3000	13000
Vanadium	140	290	770	4800
Zinc	2100	58000	120000	560000
PAH				
Acenaphthene	3.9	9000	20000	520
Acenaphthylene	3.2	200	490	380
Anthracene	8500	50000	110000	540000
Benz[a]anthracene	7.0	32	74	140
Benzo[a]pyrene	0.85	3.3	7.5	14
Benzo[b]fluoranthene	8.1	33	75	140
Benzo[g,h,i]perylene	2200	5000	11000	54000
Benzo[k]fluoranthene	8.7	33	75	140
Chrysene	66	320	740	1400
Dibenz[a,h]anthracene	0.9	3.3	7.5	14
Fluoranthene	820	6700	15000	72000
Fluorene	670	6700	15000	71000
Ideno[1,2,3-c,d]pyrene	7.7	33	75	140
Naphthalene	5.5	2500	6200	1000
Phenanthrene	940	6600	15000	71000
Pyrene	680	6000	11000	54000
Total Petroleum Hydrocarbons				
Aliphatic >C5-C6	21	260000	620000	4100
Aliphatic >C6-C8	49	290000	680000	9700
Aliphatic >C8-C10	6.8	17000	38000	1800
Aliphatic >C10-C12	40	18000	40000	10000
Aliphatic >C12-C16	200	19000	41000	42000
Aliphatic >C16-C35	37000	380000	830000	100%
Aliphatic >C35-C44	37000	380000	830000	100%
Aromatic >EC5-EC7 (Benzene)	0.054	55	110	15
Aromatic >EC7-EC8 (Toluene)	92	42000	92000	35000
Aromatic >EC8-EC10	10	7100	15000	2000
Aromatic >EC10-EC12	54	7500	16000	11000
Aromatic >EC12-EC16	190	7600	16000	41000
Aromatic >EC16-EC21	500	5800	12000	53000
Aromatic >EC21-EC35	1700	5800	12000	56000
Aromatic >EC35-EC44	1700	5800	12000	56000
Aliphatic & Aromatic >EC44-EC70	2300	5800	12000	56000
BTEX				
Benzene	0.054	55	110	15
Toluene	92	42000	92000	35000
Ethylbenzene	42	18000	41000	9600
Xylenes	19	29000	66000	34000
Other VOC				
CT - Carbon Tetrachloride	0.0077	250	560	1.7
DCA - 1,2-Dichloroethane	0.0022	21	47	0.35
PCA - 1,1,2,2-Tetrachloroethane	0.77	1000	2300	150

BAE Systems Environmental: Generic Site Assessment Criteria - Human Health

	Sandy Soil; 1% Soil Organic Matter			
PCE - Tetrachloroethene	0.53	2500	5600	90
TCA - 1,1,1-Trichloroethane	2.6	98000	220000	390
TCE - Trichloroethene	0.045	900	2000	6.6
VC - Vinyl Chloride	0.00024	2.6	5.8	0.04
Explosives				
EGDN	n/a [1]	620	1300	n/a [1]
HMX	9.5	970	2100	9400
HNS	n/a [1]	n/a [1]	n/a [1]	n/a [1]
NG	2.6	170	370	1600
PA	0.36	190	420	1800
PETN	94	4200	9200	10000 [2]
Picrite	1.6	10000 [2]	10000 [2]	10000 [2]
RDX	3.2	580	1200	5600
Tetryl	72	2500	5400	10000 [2]
TNT	1.3	97	210	940
Others				
Cyanide (free)	20 [3]	20 [3]	20 [3]	20 [3]
Phenol	400	126000	280000	100%

Notes

1 - Insufficient physio-chemical or toxicological data is available to derive a criterion for this scenario.

2 - GSAC for an explosive compound is set to 10,000 mg/kg (1%) where this calculated human health values exceed this value. The adopted GSAC is based on a conservative explosive threshold for explosives in soils.

3 - Value derived from acute toxicity data in Tox5; value to apply to all scenarios to protect one-off exposure to child visitor