Concentration of Ammoniacal_N in groundwater [mg/l]

At 30 years

01% of values less than 0.06
05% of values less than 0.06
10% of values less than 0.06
50% of values less than 0.06
90% of values less than 0.06
95% of values less than 0.06
99% of values less than 0.06

Minimum 0.06	Maximum 0.06	
Mean 0.06	Std. Dev. 7.16485E-009	Variance -5.13351E-017

At 100 years

01% of values less than 0.06
05% of values less than 0.06
10% of values less than 0.06
50% of values less than 0.06
90% of values less than 0.06
95% of values less than 0.06
99% of values less than 0.06

Minimum 0.06	Maximum 0.06	
Mean 0.06	Std. Dev. 4.47089E-009	Variance -1.99889E-017

At 300 years

01% of values less than 0.06
05% of values less than 0.06
10% of values less than 0.06
50% of values less than 0.06
90% of values less than 0.06
95% of values less than 0.06
99% of values less than 0.06

Minimum 0.06	Maximum 0.06	
Mean 0.06	Std. Dev. 6.21409E-009	Variance -3.86149E-017

At 1000 years

01% of values less than 0.06
05% of values less than 0.06
10% of values less than 0.06
50% of values less than 0.06
90% of values less than 0.06
95% of values less than 0.06
99% of values less than 0.06

Minimum 0.06	Maximum 0.06	
Mean 0.06	Std. Dev. 6.97204E-009	Variance -4.86094E-017

Concentration of Ammoniacal_N in groundwater [mg/l]

At infinity

01% of values less than 0.06
05% of values less than 0.06
10% of values less than 0.06
50% of values less than 0.06
90% of values less than 0.06
95% of values less than 0.06
99% of values less than 0.06

Minimum 0.06	Maximum 0.06	
Mean 0.06	Std. Dev. 7.13308E-009	Variance -5.08808E-017

Concentration of Cadmium in groundwater [mg/l]

At 30 years

01% of values less than 0
05% of values less than 0
10% of values less than 0
50% of values less than 0
90% of values less than 0
95% of values less than 0
99% of values less than 0

Minimum 0	Maximum 0	
Mean 0	Std. Dev. 0	Variance 0

At 100 years

01% of values less than 0
05% of values less than 0
10% of values less than 0
50% of values less than 0
90% of values less than 0
95% of values less than 0
99% of values less than 0

Minimum 0	Maximum 0	
Mean 0	Std. Dev. 0	Variance 0

At 300 years

01% of values less than 0
05% of values less than 0
10% of values less than 0
50% of values less than 0
90% of values less than 0
95% of values less than 0
99% of values less than 0

Minimum 0	Maximum 0	
Mean 0	Std. Dev. 0	Variance 0

At 1000 years

01% of values less than 0
05% of values less than 0
10% of values less than 0
50% of values less than 0
90% of values less than 0
95% of values less than 0
99% of values less than 0

Minimum 0	Maximum 0	
Mean 0	Std. Dev. 0	Variance 0

Concentration of Cadmium in groundwater [mg/l]

At infinity

01% of values less than 0

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

99% of values less than 0

Minimum 0	Maximum 0	
Mean 0	Std. Dev. 0	Variance 0

Concentration of Chloride in groundwater [mg/l]

At 30 years

01% of values less than 32.0807
05% of values less than 33.4244
10% of values less than 34.4767
50% of values less than 41.8104
90% of values less than 54.0614
95% of values less than 58.5243
99% of values less than 65.9079

Minimum 29.0828	Maximum 81.5103	
Mean 43.3127	Std. Dev. 7.85569	Variance 61.7119

At 100 years

01% of values less than 31.2343
05% of values less than 32.4264
10% of values less than 33.2345
50% of values less than 38.0953
90% of values less than 47.2917
95% of values less than 51.035
99% of values less than 59.9307

Minimum 30.0596	Maximum 76.1852	
Mean 39.5921	Std. Dev. 6.1038	Variance 37.2564

At 300 years

01% of values less than 30.5775
05% of values less than 31.358
10% of values less than 31.8487
50% of values less than 34.589
90% of values less than 39.454
95% of values less than 41.4713
99% of values less than 46.4405

Minimum 29.6844	Maximum 52.5923	
Mean 35.3812	Std. Dev. 3.29632	Variance 10.8657

At 1000 years

01% of values less than 29.3611
05% of values less than 29.6697
10% of values less than 29.8912
50% of values less than 31.1443
90% of values less than 32.5775
95% of values less than 33.5844
99% of values less than 36.1311

Minimum 29.1694	Maximum 41.2634	
Mean 31.29	Std. Dev. 1.33041	Variance 1.77

Concentration of Chloride in groundwater [mg/l]

At infinity

01% of values less than 29.0168
05% of values less than 29.1145
10% of values less than 29.2317
50% of values less than 30.2306
90% of values less than 31.1907
95% of values less than 31.3204
99% of values less than 31.3864

Minimum 29.0001	Maximum 31.3959	
Mean 30.2211	Std. Dev. 0.701399	Variance 0.491961

Concentration of Copper in groundwater [mg/l]

At 30 years

01% of values less than 0
05% of values less than 0
10% of values less than 0
50% of values less than 0
90% of values less than 0
95% of values less than 0
99% of values less than 0

Minimum 0	Maximum 0	
Mean 0	Std. Dev. 0	Variance 0

At 100 years

01% of values less than 0
05% of values less than 0
10% of values less than 0
50% of values less than 0
90% of values less than 0
95% of values less than 0
99% of values less than 0

Minimum 0	Maximum 0	
Mean 0	Std. Dev. 0	Variance 0

At 300 years

01% of values less than 0
05% of values less than 0
10% of values less than 0
50% of values less than 0
90% of values less than 0
95% of values less than 0
99% of values less than 0

Minimum 0	Maximum 0	
Mean 0	Std. Dev. 0	Variance 0

At 1000 years

01% of values less than 0
05% of values less than 0
10% of values less than 0
50% of values less than 0
90% of values less than 0
95% of values less than 0
99% of values less than 0

Minimum 0	Maximum 0	
Mean 0	Std. Dev. 0	Variance 0

Concentration of Copper in groundwater [mg/l]

At infinity

01% of values less than 0

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

99% of values less than 0

Minimum 0	Maximum 0	
Mean 0	Std. Dev. 0	Variance 0

Concentration of Mercury in groundwater [mg/l]

At 30 years

01% of values less than 5.17396E-005
05% of values less than 6.03909E-005
10% of values less than 7.02368E-005
50% of values less than 0.000147989
90% of values less than 0.000219549
95% of values less than 0.000228954
99% of values less than 0.000238243

Minimum 5.01392E-005	Maximum 0.000239936	
Mean 0.000146638	Std. Dev. 5.41572E-005	Variance 2.933E-009

At 100 years

01% of values less than 5.17396E-005
05% of values less than 6.03909E-005
10% of values less than 7.02368E-005
50% of values less than 0.000147989
90% of values less than 0.000219549
95% of values less than 0.000228954
99% of values less than 0.000238243

Minimum 5.01392E-005	Maximum 0.000239936	
Mean 0.000146638	Std. Dev. 5.41572E-005	Variance 2.933E-009

At 300 years

01% of values less than 5.17396E-005
05% of values less than 6.03909E-005
10% of values less than 7.02368E-005
50% of values less than 0.000147989
90% of values less than 0.000219549
95% of values less than 0.000228954
99% of values less than 0.000238243

Minimum 5.01392E-005	Maximum 0.000239936	
Mean 0.000146638	Std. Dev. 5.41572E-005	Variance 2.933E-009

At 1000 years

01% of values less than 5.17396E-005
05% of values less than 6.03909E-005
10% of values less than 7.02368E-005
50% of values less than 0.000147989
90% of values less than 0.000219549
95% of values less than 0.000228954
99% of values less than 0.000238243

Minimum 5.01392E-005	Maximum 0.000239936	
Mean 0.000146638	Std. Dev. 5.41572E-005	Variance 2.933E-009

Concentration of Mercury in groundwater [mg/l]

At infinity

01% of values less than 5.17396E-005
05% of values less than 6.0391E-005
10% of values less than 7.02368E-005
50% of values less than 0.000147989
90% of values less than 0.000219549
95% of values less than 0.000228954
99% of values less than 0.000238243

Minimum 5.01392E-005	Maximum 0.000239936	
Mean 0.000146638	Std. Dev. 5.41572E-005	Variance 2.933E-009

Concentration of Naphthalene in groundwater [mg/l]

At 30 years

01% of values less than 0
05% of values less than 0
10% of values less than 0
50% of values less than 0
90% of values less than 0
95% of values less than 0
99% of values less than 0

Minimum 0	Maximum 0	
Mean 0	Std. Dev. 0	Variance 0

At 100 years

01% of values less than 0
05% of values less than 0
10% of values less than 0
50% of values less than 0
90% of values less than 0
95% of values less than 0
99% of values less than 0

Minimum 0	Maximum 0	
Mean 0	Std. Dev. 0	Variance 0

At 300 years

01% of values less than 0
05% of values less than 0
10% of values less than 0
50% of values less than 0
90% of values less than 0
95% of values less than 0
99% of values less than 0

Minimum 0	Maximum 0	
Mean 0	Std. Dev. 0	Variance 0

At 1000 years

01% of values less than 0
05% of values less than 0
10% of values less than 0
50% of values less than 0
90% of values less than 0
95% of values less than 0
99% of values less than 0

Minimum 0	Maximum 0	
Mean 0	Std. Dev. 0	Variance 0

Concentration of Naphthalene in groundwater [mg/l]

At infinity

01% of values less than 0

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

99% of values less than 0

Minimum 0	Maximum 0	
Mean 0	Std. Dev. 0	Variance 0

Concentration of Toluene in groundwater [mg/l]

At 30 years

01% of values less than 0
05% of values less than 0
10% of values less than 0
50% of values less than 0
90% of values less than 0
95% of values less than 0
99% of values less than 0

Minimum 0	Maximum 0	
Mean 0	Std. Dev. 0	Variance 0

At 100 years

01% of values less than 0
05% of values less than 0
10% of values less than 0
50% of values less than 0
90% of values less than 0
95% of values less than 0
99% of values less than 0

Minimum 0	Maximum 0	
Mean 0	Std. Dev. 0	Variance 0

At 300 years

01% of values less than 0
05% of values less than 0
10% of values less than 0
50% of values less than 0
90% of values less than 0
95% of values less than 0
99% of values less than 0

Minimum 0	Maximum 0	
Mean 0	Std. Dev. 0	Variance 0

At 1000 years

01% of values less than 0
05% of values less than 0
10% of values less than 0
50% of values less than 0
90% of values less than 0
95% of values less than 0
99% of values less than 0

Minimum 0	Maximum 0	
Mean 0	Std. Dev. 0	Variance 0

Concentration of Toluene in groundwater [mg/l]

At infinity

01% of values less than 0

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

99% of values less than 0

Minimum 0	Maximum 0	
Mean 0	Std. Dev. 0	Variance 0

Concentration of Zinc in groundwater [mg/l]

At 30 years

01% of values less than 0.0314495
05% of values less than 0.0351241
10% of values less than 0.0405148
50% of values less than 0.0903446
90% of values less than 0.134053
95% of values less than 0.138946
99% of values less than 0.144073

Minimum 0.0300386	Maximum 0.144825	
Mean 0.0883738	Std. Dev. 0.0337989	Variance 0.00114236

At 100 years

01% of values less than 0.0314495
05% of values less than 0.0351241
10% of values less than 0.0405148
50% of values less than 0.0903446
90% of values less than 0.134053
95% of values less than 0.138946
99% of values less than 0.144073

Minimum 0.0300386	Maximum 0.144825	
Mean 0.0883738	Std. Dev. 0.0337989	Variance 0.00114236

At 300 years

01% of values less than 0.0314495
05% of values less than 0.0351241
10% of values less than 0.0405148
50% of values less than 0.0903446
90% of values less than 0.134053
95% of values less than 0.138946
99% of values less than 0.144073

Minimum 0.0300386	Maximum 0.144825	
Mean 0.0883738	Std. Dev. 0.0337989	Variance 0.00114236

At 1000 years

01% of values less than 0.0314495
05% of values less than 0.0351241
10% of values less than 0.0405148
50% of values less than 0.0905411
90% of values less than 0.134117
95% of values less than 0.138999
99% of values less than 0.144137

Minimum 0.0300386	Maximum 0.153233	
Mean 0.0884936	Std. Dev. 0.0338681	Variance 0.00114705

Concentration of Zinc in groundwater [mg/l]

At infinity

01% of values less than 0.031646
05% of values less than 0.0368263
10% of values less than 0.0418801
50% of values less than 0.0922989
90% of values less than 0.135275
95% of values less than 0.139981
99% of values less than 0.144751

Minimum 0.0300387	Maximum 0.159548	
Mean 0.0896919	Std. Dev. 0.0337199	Variance 0.00113703

Project: Woodcote Quarry Landfill

Project Number: Risk 0060

Customer: Woodcote Quarry Landfill

Write Project Notes Here

Calculation Settings

Number of iterations: 1001

Results calculated using sampled PDFs

Full Calculation

Clay Liner:

Retarded values used for simulation

Biodegradation

Unsaturated Pathway:

Retarded values used for simulation

Biodegradation

Saturated Vertical Pathway:

No Vertical Pathway

Aquifer Pathway:

Retarded values used for simulation

Biodegradation

Timeslices at: 30, 100, 300, 1000

Decline in Contaminant Concentration in Leachate

Ammoniacal_N	Non-Volatile
c (kg/l): 0.59	m (kg/l): 0
Cadmium	Non-Volatile
c (kg/l): 0.1589	m (kg/l): 0.0823
Chloride	Non-Volatile
c (kg/l): 0.2919	m (kg/l): 0.0298
Copper	Non-Volatile
c (kg/l): -0.0488	m (kg/l): 0.0664
Mercury	Non-Volatile
c (kg/l): 0.1643	m (kg/l): 0.0767
Naphthalene	Volatile
Half life (years): 10	
Toluene	Volatile
Half life (years): 10	
Zinc	Non-Volatile
c (kg/l): 0.0561	m (kg/l): 0.0403

Contaminant Half-lives (years)

Clay Liner:

Ammoniacal_N	SINGLE(6)
Cadmium	SINGLE(1e+009)
Chloride	SINGLE(1e+009)
Copper	SINGLE(1e+009)
Mercury	SINGLE(1e+009)
Naphthalene	SINGLE(0.69)
Toluene	UNIFORM(0.16,0.57)
Zinc	SINGLE(1e+009)

Unsaturated Pathway:

Ammoniacal_N	SINGLE(6)
Cadmium	SINGLE(1e+009)
Chloride	SINGLE(1e+009)
Copper	SINGLE(1e+009)
Mercury	SINGLE(1e+009)
Naphthalene	SINGLE(0.06)
Toluene	UNIFORM(0.14,1.5)
Zinc	SINGLE(1e+009)

Aquifer Pathway:

Ammoniacal_N	SINGLE(6)
Cadmium	SINGLE(6e-005)
Chloride	SINGLE(1e+009)
Copper	LOGTRIANGULAR(0.009,0.02125,0.076)
Mercury	SINGLE(1e+009)
Naphthalene	SINGLE(0.387)
Toluene	UNIFORM(0.1,0.2)
Zinc	SINGLE(1e+009)

Background Concentrations of Contaminants

Justification for Contaminant Properties

WAC Soil Testing and Leachate tests at Chadwich Lane

All units in milligrams per litre

Ammoniacal_N	SINGLE(0.06)
Chloride	UNIFORM(29,31.4)
Mercury	UNIFORM(5e-005,0.00024)
Zinc	UNIFORM(0.03,0.145)

Phase: Phase 1

Infiltration Information

Cap design infiltration (mm/year):	SINGLE(50)
Infiltration to waste (mm/year):	SINGLE(160)
Infiltration to grassland (mm/year):	SINGLE(50)
End of filling (years from start of waste deposit):	10
Start of cap degradation (years from end of waste deposit):	100
End of cap degradation (years from end of waste deposit):	1000

Justification for Specified Infiltration
Based on ESID and Met Office Data

Duration of management control (years from the start of waste disposal): 18

Cell dimensions

Cell width (m):	500
Cell length (m):	750
Cell top area (ha):	39.375
Cell base area (ha):	37.5
Number of cells:	1
Total base area (ha):	37.5
Total top area (ha):	39.375
Head of Leachate when surface water breakout occurs (m)	SINGLE(17)
Waste porosity (fraction)	SINGLE(0.1)
Final waste thickness (m):	TRIANGULAR(17,30,43)
Field capacity (fraction):	SINGLE(0.3)
Waste dry density (kg/l)	SINGLE(2)

Justification for Landfill Geometry
Based on HRA 2 and HRA 3

Source concentrations of contaminants

All units in milligrams per litre

Declining source term

Ammoniacal_N	LOGTRIANGULAR(0.1,0.6,1.6)
	Data are spot measurements of Leachate Quality
Cadmium	LOGTRIANGULAR(0.0001,0.0016,0.004)
	Substance to be treated as List 1
Chloride	LOGTRIANGULAR(0.01,19.1,160)
	Data are spot measurements of Leachate Quality
Copper	LOGTRIANGULAR(0.009,0.016,0.076)
	Data are spot measurements of Leachate Quality
Mercury	LOGTRIANGULAR(1e-005,4.5e-005,0.0001)
	Substance to be treated as List 1
Naphthalene	LOGTRIANGULAR(0.01,0.1,0.2)
	Substance to be treated as List 1
Toluene	LOGTRIANGULAR(0.01,0.05,0.15)
	Substance to be treated as List 1
Zinc	LOGTRIANGULAR(0.01,0.023,0.4)
	Data are spot measurements of Leachate Quality

Justification for Species Concentration in Leachate

Based on Half life degreadtion rates as per EA report on ammonia and Toluene, Napthalene

Drainage Information

Fixed Head.

Head on EBS is given as (m): SINGLE(1)

Justification for Specified Head

1metre limit assumed above geological barrier

Barrier Information

There is a single clay barrier

Justification for Engineered Barrier Type
1 metre geological barrier

Design thickness of clay (m):	SINGLE(1)
Density of clay (kg/l):	SINGLE(1.9)
Pathway moisture content (fraction):	UNIFORM(0.19,0.2)

Justification for Clay: Liner Thickness
CQA Design Spacification

Hydraulic conductivity of liner (m/s):	TRIANGULAR(1e-009,1e-008,1e-007)
Pathway longitudinal dispersivity (m):	SINGLE(0.1)

Justification for Clay: Hydraulics Properties
Source Evaluation Testing on adjoining phase

Retardation parameters for clay liner

Uncertainty in Kd (l/kg):	
Ammoniacal_N	UNIFORM(7.3,8.5)
Cadmium	SINGLE(222.2)
Chloride	SINGLE(0)
Copper	SINGLE(126.8)
Mercury	SINGLE(3835.5)
Naphthalene	LOGTRIANGULAR(488,1102,2309)
Toluene	LOGTRIANGULAR(57,130,272)
Zinc	SINGLE(20.7)

Justification for Liner Kd Values by Species
EA 2003 and USEPA1999

Sherwood Sandstone pathway parameters

Modelled as unsaturated pathway

Pathway length (m):	TRIANGULAR(0.5,3,5)
Flow Model:	porous medium
Pathway moisture content (fraction):	UNIFORM(0.15,0.2)
Pathway Density (kg/l):	SINGLE(1.9)

Justification for Unsat Zone Geometry
New unsaturated zone

Pathway hydraulic conductivity values (m/s):	TRIANGULAR(1.95e-005,2.46e-005,0.0001007)

Justification for Unsat Zone Hydraulics Properties
Site investigations Appendices 1-3

Pathway longitudinal dispersivity (m):	UNIFORM(0.05,0.13)

Justification for Unsat Zone Dispersion Properties
10% of pathway length

Retardation parameters for Sherwood Sandstone pathway
Modelled as unsaturated pathway
Uncertainty in Kd (l/kg):

Ammoniacal_N	LOGUNIFORM(0.43,1.79)
Cadmium	SINGLE(240)
Chloride	SINGLE(0)
Copper	SINGLE(295)
Mercury	SINGLE(450)
Naphthalene	LOGTRIANGULAR(488,1102,2309)
Toluene	LOGTRIANGULAR(57,130,272)
Zinc	LOGTRIANGULAR(1.1,200,600)

Justification for Kd Values by Species
EA2003 and USEPA 1999

Aquifer Pathway Dimensions for Phase

Pathway length (m):	UNIFORM(1000,1200)
Pathway width (m):	SINGLE(200)

pathway parameters

No Vertical Pathway

Sherwood Sandstone pathway parameters

Modelled as aquifer pathway.

Mixing zone (m):	SINGLE(50)

Justification for Aquifer Geometry
HRA 2

Pathway regional gradient (-):	SINGLE(0.0143)
Pathway hydraulic conductivity values (m/s):	UNIFORM(4.6e-006,8e-006)
Pathway porosity (fraction):	SINGLE(0.2)

Justification for Aquifer Hydraulics Properties
Appendices HRA1-3

Pathway longitudinal dispersivity (m):	SINGLE(60)
Pathway transverse dispersivity (m):	SINGLE(18)

Justification for Aquifer Dispersion Details
10% of pathway length and 3% transverse [CHANGED]

Retardation parameters for Sherwood Sandstone pathway
Modelled as aquifer pathway.
Uncertainty in Kd (l/kg):

Ammoniacal_N	UNIFORM(0.43,1.79)
Cadmium	LOGTRIANGULAR(3.7,74,1500)
Chloride	SINGLE(0)
Copper	SINGLE(295)
Mercury	SINGLE(450)
Naphthalene	LOGTRIANGULAR(488,1102,2309)
Toluene	LOGTRIANGULAR(57,130,272)
Zinc	LOGTRIANGULAR(1.1,200,600)

Justification for Aquifer Kd Values by Species
EA 2003 and USEPA 1999

Pathway Density (kg/l):	SINGLE(1.9)

Phase: Phase 1

Concentration of Ammoniacal_N at Phase Monitor Well [mg/l]

At 30 years

01% of values less than 0.06
05% of values less than 0.06
10% of values less than 0.06
50% of values less than 0.06
90% of values less than 0.06
95% of values less than 0.06
99% of values less than 0.06

Minimum 0.06	Maximum 0.06	
Mean 0.06	Std. Dev. 0	Variance 0

At 100 years

01% of values less than 0.0600001
05% of values less than 0.0600002
10% of values less than 0.0600003
50% of values less than 0.0600018
90% of values less than 0.0600126
95% of values less than 0.0600194
99% of values less than 0.060038

Minimum 0.06	Maximum 0.0601265	
Mean 0.0600046	Std. Dev. 8.39261E-006	Variance 7.0436E-011

At 300 years

01% of values less than 0.06
05% of values less than 0.06
10% of values less than 0.06
50% of values less than 0.06
90% of values less than 0.06
95% of values less than 0.0600027
99% of values less than 0.0600221

Minimum 0.06	Maximum 0.0600365	
Mean 0.0600006	Std. Dev. 3.38593E-006	Variance 1.14645E-011

At 1000 years

01% of values less than 0.06
05% of values less than 0.06
10% of values less than 0.06
50% of values less than 0.06
90% of values less than 0.06
95% of values less than 0.06
99% of values less than 0.0600082

Minimum 0.06	Maximum 0.0600252	
Mean 0.0600002	Std. Dev. 1.74776E-006	Variance 3.05468E-012

Phase: Phase 1

Concentration of Ammoniacal_N at Phase Monitor Well [mg/l]

At infinity

01% of values less than 0.06
05% of values less than 0.06
10% of values less than 0.06
50% of values less than 0.06
90% of values less than 0.06
95% of values less than 0.06
99% of values less than 0.060002

Minimum 0.06	Maximum 0.0600115	
Mean 0.0600001	Std. Dev. 5.71594E-007	Variance 3.2672E-013

Phase: Phase 1

Concentration of Cadmium at Phase Monitor Well [mg/l]

At 30 years

01% of values less than 0
05% of values less than 0
10% of values less than 0
50% of values less than 0
90% of values less than 0
95% of values less than 0
99% of values less than 0

Minimum 0	Maximum 0	
Mean 0	Std. Dev. 0	Variance 0

At 100 years

01% of values less than 0
05% of values less than 0
10% of values less than 0
50% of values less than 0
90% of values less than 0
95% of values less than 0
99% of values less than 0

Minimum 0	Maximum 0	
Mean 0	Std. Dev. 0	Variance 0

At 300 years

01% of values less than 0
05% of values less than 0
10% of values less than 0
50% of values less than 0
90% of values less than 0
95% of values less than 0
99% of values less than 0

Minimum 0	Maximum 0	
Mean 0	Std. Dev. 0	Variance 0

At 1000 years

01% of values less than 0
05% of values less than 0
10% of values less than 0
50% of values less than 0
90% of values less than 0
95% of values less than 0
99% of values less than 0

Minimum 0	Maximum 0	
Mean 0	Std. Dev. 0	Variance 0

Phase: Phase 1

Concentration of Cadmium at Phase Monitor Well [mg/l]

At infinity

01% of values less than 0
05% of values less than 0
10% of values less than 0
50% of values less than 0
90% of values less than 0
95% of values less than 0
99% of values less than 0

Minimum 0	Maximum 0	
Mean 0	Std. Dev. 0	Variance 0

Phase: Phase 1

Concentration of Chloride at Phase Monitor Well [mg/l]

At 30 years

01% of values less than 31.1987
05% of values less than 32.1289
10% of values less than 32.9523
50% of values less than 37.4445
90% of values less than 45.4778
95% of values less than 48.5022
99% of values less than 54.4949

Minimum 29.9749	Maximum 65.3258	
Mean 38.531	Std. Dev. 5.118	Variance 26.194

At 100 years

01% of values less than 30.4562
05% of values less than 31.1124
10% of values less than 31.6422
50% of values less than 34.1626
90% of values less than 38.4655
95% of values less than 39.9351
99% of values less than 43.1619

Minimum 29.6342	Maximum 48.3464	
Mean 34.695	Std. Dev. 2.75002	Variance 7.56263

At 300 years

01% of values less than 30.0128
05% of values less than 30.5331
10% of values less than 30.8861
50% of values less than 32.6881
90% of values less than 35.372
95% of values less than 36.3119
99% of values less than 38.8445

Minimum 29.3831	Maximum 41.6722	
Mean 32.9831	Std. Dev. 1.8332	Variance 3.36062

At 1000 years

01% of values less than 29.2725
05% of values less than 29.4803
10% of values less than 29.6806
50% of values less than 30.7899
90% of values less than 31.9043
95% of values less than 32.312
99% of values less than 33.7582

Minimum 29.153	Maximum 37.3428	
Mean 30.8477	Std. Dev. 0.97383	Variance 0.948346

Phase: Phase 1

Concentration of Chloride at Phase Monitor Well [mg/l]

At infinity

01% of values less than 29.0168
05% of values less than 29.1145
10% of values less than 29.2317
50% of values less than 30.2306
90% of values less than 31.1907
95% of values less than 31.3204
99% of values less than 31.3864

Minimum 29.0001	Maximum 31.3959	
Mean 30.2211	Std. Dev. 0.701395	Variance 0.491955

Phase: Phase 1

Concentration of Copper at Phase Monitor Well [mg/l]

At 30 years

01% of values less than 0
05% of values less than 0
10% of values less than 0
50% of values less than 0
90% of values less than 0
95% of values less than 0
99% of values less than 0

Minimum 0	Maximum 0	
Mean 0	Std. Dev. 0	Variance 0

At 100 years

01% of values less than 0
05% of values less than 0
10% of values less than 0
50% of values less than 0
90% of values less than 0
95% of values less than 0
99% of values less than 0

Minimum 0	Maximum 0	
Mean 0	Std. Dev. 0	Variance 0

At 300 years

01% of values less than 0
05% of values less than 0
10% of values less than 0
50% of values less than 0
90% of values less than 0
95% of values less than 0
99% of values less than 0

Minimum 0	Maximum 0	
Mean 0	Std. Dev. 0	Variance 0

At 1000 years

01% of values less than 0
05% of values less than 0
10% of values less than 0
50% of values less than 0
90% of values less than 0
95% of values less than 0
99% of values less than 0

Minimum 0	Maximum 0	
Mean 0	Std. Dev. 0	Variance 0

Phase: Phase 1

Concentration of Copper at Phase Monitor Well [mg/l]

At infinity

01% of values less than 0

05% of values less than 0

10% of values less than 0

50% of values less than 0

90% of values less than 0

95% of values less than 0

99% of values less than 0

Minimum 0	Maximum 0	
Mean 0	Std. Dev. 0	Variance 0

Phase: Phase 1

Concentration of Mercury at Phase Monitor Well [mg/l]

At 30 years

01% of values less than 5.17396E-005
05% of values less than 6.03909E-005
10% of values less than 7.02368E-005
50% of values less than 0.000147989
90% of values less than 0.000219549
95% of values less than 0.000228954
99% of values less than 0.000238243

Minimum 5.01392E-005	Maximum 0.000239936	
Mean 0.000146638	Std. Dev. 5.41572E-005	Variance 2.933E-009

At 100 years

01% of values less than 5.17396E-005
05% of values less than 6.03909E-005
10% of values less than 7.02368E-005
50% of values less than 0.000147989
90% of values less than 0.000219549
95% of values less than 0.000228954
99% of values less than 0.000238243

Minimum 5.01392E-005	Maximum 0.000239936	
Mean 0.000146638	Std. Dev. 5.41572E-005	Variance 2.933E-009

At 300 years

01% of values less than 5.17396E-005
05% of values less than 6.03909E-005
10% of values less than 7.02368E-005
50% of values less than 0.000147989
90% of values less than 0.000219549
95% of values less than 0.000228954
99% of values less than 0.000238243

Minimum 5.01392E-005	Maximum 0.000239936	
Mean 0.000146638	Std. Dev. 5.41572E-005	Variance 2.933E-009

At 1000 years

01% of values less than 5.17396E-005
05% of values less than 6.03909E-005
10% of values less than 7.02368E-005
50% of values less than 0.000147989
90% of values less than 0.000219549
95% of values less than 0.000228954
99% of values less than 0.000238243

Minimum 5.01392E-005	Maximum 0.000239936	
Mean 0.000146638	Std. Dev. 5.41572E-005	Variance 2.933E-009

Phase: Phase 1

Concentration of Mercury at Phase Monitor Well [mg/l]

At infinity

01% of values less than 5.42434E-005
05% of values less than 6.29393E-005
10% of values less than 7.25237E-005
50% of values less than 0.000151049
90% of values less than 0.000222038
95% of values less than 0.000232024
99% of values less than 0.00024265

Minimum 5.0145E-005	Maximum 0.00024626	
Mean 0.000150036	Std. Dev. 5.42484E-005	Variance 2.94289E-009

Phase: Phase 1

Concentration of Naphthalene at Phase Monitor Well [mg/l]

At 30 years

01% of values less than 0
05% of values less than 0
10% of values less than 0
50% of values less than 0
90% of values less than 0
95% of values less than 0
99% of values less than 0

Minimum 0	Maximum 0	
Mean 0	Std. Dev. 0	Variance 0

At 100 years

01% of values less than 0
05% of values less than 0
10% of values less than 0
50% of values less than 0
90% of values less than 0
95% of values less than 0
99% of values less than 0

Minimum 0	Maximum 0	
Mean 0	Std. Dev. 0	Variance 0

At 300 years

01% of values less than 0
05% of values less than 0
10% of values less than 0
50% of values less than 0
90% of values less than 0
95% of values less than 0
99% of values less than 0

Minimum 0	Maximum 0	
Mean 0	Std. Dev. 0	Variance 0

At 1000 years

01% of values less than 0
05% of values less than 0
10% of values less than 0
50% of values less than 0
90% of values less than 0
95% of values less than 0
99% of values less than 0

Minimum 0	Maximum 0	
Mean 0	Std. Dev. 0	Variance 0

Phase: Phase 1

Concentration of Naphthalene at Phase Monitor Well [mg/l]

At infinity

01% of values less than 0
05% of values less than 0
10% of values less than 0
50% of values less than 0
90% of values less than 0
95% of values less than 0
99% of values less than 0

Minimum 0	Maximum 0	
Mean 0	Std. Dev. 0	Variance 0

Phase: Phase 1

Concentration of Toluene at Phase Monitor Well [mg/l]

At 30 years

01% of values less than 0
05% of values less than 0
10% of values less than 0
50% of values less than 0
90% of values less than 0
95% of values less than 0
99% of values less than 0

Minimum 0	Maximum 0	
Mean 0	Std. Dev. 0	Variance 0

At 100 years

01% of values less than 0
05% of values less than 0
10% of values less than 0
50% of values less than 0
90% of values less than 0
95% of values less than 0
99% of values less than 0

Minimum 0	Maximum 0	
Mean 0	Std. Dev. 0	Variance 0

At 300 years

01% of values less than 0
05% of values less than 0
10% of values less than 0
50% of values less than 0
90% of values less than 0
95% of values less than 0
99% of values less than 0

Minimum 0	Maximum 0	
Mean 0	Std. Dev. 0	Variance 0

At 1000 years

01% of values less than 0
05% of values less than 0
10% of values less than 0
50% of values less than 0
90% of values less than 0
95% of values less than 0
99% of values less than 0

Minimum 0	Maximum 0	
Mean 0	Std. Dev. 0	Variance 0

Phase: Phase 1

Concentration of Toluene at Phase Monitor Well [mg/l]

At infinity

01% of values less than 0
05% of values less than 0
10% of values less than 0
50% of values less than 0
90% of values less than 0
95% of values less than 0
99% of values less than 0

Minimum 0	Maximum 0	
Mean 0	Std. Dev. 0	Variance 0

Phase: Phase 1

Concentration of Zinc at Phase Monitor Well [mg/l]

At 30 years

01% of values less than 0.0314495
05% of values less than 0.0351241
10% of values less than 0.0405148
50% of values less than 0.0903446
90% of values less than 0.134053
95% of values less than 0.138946
99% of values less than 0.144073

Minimum 0.0300386	Maximum 0.144825	
Mean 0.0883738	Std. Dev. 0.0337989	Variance 0.00114236

At 100 years

01% of values less than 0.0314495
05% of values less than 0.0351241
10% of values less than 0.0405148
50% of values less than 0.0903446
90% of values less than 0.134053
95% of values less than 0.138946
99% of values less than 0.144073

Minimum 0.0300386	Maximum 0.144825	
Mean 0.0883738	Std. Dev. 0.0337989	Variance 0.00114236

At 300 years

01% of values less than 0.0314495
05% of values less than 0.0353106
10% of values less than 0.0407675
50% of values less than 0.0905411
90% of values less than 0.134117
95% of values less than 0.139321
99% of values less than 0.144105

Minimum 0.0300386	Maximum 0.146497	
Mean 0.088482	Std. Dev. 0.0338215	Variance 0.00114389

At 1000 years

01% of values less than 0.0314512
05% of values less than 0.0365666
10% of values less than 0.0419889
50% of values less than 0.0955368
90% of values less than 0.140758
95% of values less than 0.150457
99% of values less than 0.185533

Minimum 0.0300386	Maximum 0.2132	
Mean 0.0947081	Std. Dev. 0.037683	Variance 0.00142001

Phase: Phase 1

Concentration of Zinc at Phase Monitor Well [mg/l]

At infinity

01% of values less than 0.0314805
05% of values less than 0.0351251
10% of values less than 0.0408061
50% of values less than 0.0903446
90% of values less than 0.134471
95% of values less than 0.138946
99% of values less than 0.144074

Minimum 0.0300386	Maximum 0.145848	
Mean 0.088461	Std. Dev. 0.03379	Variance 0.00114177

Approx. time to Peak Conc. Ammoniacal_N at Offsite Compliance Point [years]

01% of values less than 0
05% of values less than 0
10% of values less than 0
50% of values less than 190
90% of values less than 232
95% of values less than 282
99% of values less than 2050

Minimum 0	Maximum 2050	
Mean 243.664	Std. Dev. 404.127	Variance 163319

Approx. time to Peak Conc. Cadmium at Offsite Compliance Point [years]

01% of values less than 0
05% of values less than 0
10% of values less than 0
50% of values less than 0
90% of values less than 0
95% of values less than 0
99% of values less than 0

Minimum 0	Maximum 0	
Mean 0	Std. Dev. 0	Variance 0

Approx. time to Peak Conc. Chloride at Offsite Compliance Point [years]

01% of values less than 43
05% of values less than 43
10% of values less than 43
50% of values less than 47
90% of values less than 52
95% of values less than 52
99% of values less than 52

Minimum 43	Maximum 70	
Mean 48.0559	Std. Dev. 3.10497	Variance 9.64087

Approx. time to Peak Conc. Copper at Offsite Compliance Point [years]

01% of values less than 0
05% of values less than 0
10% of values less than 0
50% of values less than 0
90% of values less than 0
95% of values less than 0
99% of values less than 0

Minimum 0	Maximum 0	
Mean 0	Std. Dev. 0	Variance 0

Approx. time to Peak Conc. Mercury at Offsite Compliance Point [years]

01% of values less than 0
05% of values less than 0
10% of values less than 0
50% of values less than 20000
90% of values less than 20000
95% of values less than 20000
99% of values less than 20000

Minimum 0	Maximum 20000	
Mean 17682.3	Std. Dev. 6404.92	Variance 4.1023E+007

Approx. time to Peak Conc. Naphthalene at Offsite Compliance Point [years]

01% of values less than 0
05% of values less than 0
10% of values less than 0
50% of values less than 0
90% of values less than 0
95% of values less than 0
99% of values less than 0

Minimum 0	Maximum 0	
Mean 0	Std. Dev. 0	Variance 0

Approx. time to Peak Conc. Toluene at Offsite Compliance Point [years]

01% of values less than 0
05% of values less than 0
10% of values less than 0
50% of values less than 0
90% of values less than 0
95% of values less than 0
99% of values less than 0

Minimum 0	Maximum 0	
Mean 0	Std. Dev. 0	Variance 0

Approx. time to Peak Conc. Zinc at Offsite Compliance Point [years]

01% of values less than 0
05% of values less than 0
10% of values less than 1024
50% of values less than 4100
90% of values less than 20000
95% of values less than 20000
99% of values less than 20000

Minimum 0	Maximum 20000	
Mean 6772.39	Std. Dev. 6493.27	Variance 4.21625E+007

Phase: Phase 1

Approx. time to Peak Conc. Ammoniacal_N at Phase Monitor Well [years]

01% of values less than 70
05% of values less than 70
10% of values less than 70
50% of values less than 78
90% of values less than 116
95% of values less than 128
99% of values less than 190

Minimum 64	Maximum 282	
Mean 86.01	Std. Dev. 23.7919	Variance 566.056

Approx. time to Peak Conc. Cadmium at Phase Monitor Well [years]

01% of values less than 0
05% of values less than 0
10% of values less than 0
50% of values less than 0
90% of values less than 0
95% of values less than 0
99% of values less than 0

Minimum 0	Maximum 0	
Mean 0	Std. Dev. 0	Variance 0

Approx. time to Peak Conc. Chloride at Phase Monitor Well [years]

01% of values less than 21
05% of values less than 21
10% of values less than 21
50% of values less than 21
90% of values less than 21
95% of values less than 21
99% of values less than 21

Minimum 21	Maximum 30	
Mean 21.015	Std. Dev. 0.30459	Variance 0.0927752

Approx. time to Peak Conc. Copper at Phase Monitor Well [years]

01% of values less than 0
05% of values less than 0
10% of values less than 0
50% of values less than 0
90% of values less than 0
95% of values less than 0
99% of values less than 0

Minimum 0	Maximum 0	
Mean 0	Std. Dev. 0	Variance 0

Phase: Phase 1

Approx. time to Peak Conc. Mercury at Phase Monitor Well [years]

01% of values less than 20000
05% of values less than 20000
10% of values less than 20000
50% of values less than 20000
90% of values less than 20000
95% of values less than 20000
99% of values less than 20000

Minimum 0	Maximum 20000	
Mean 19920.1	Std. Dev. 1262.38	Variance 1.59361E+006

Approx. time to Peak Conc. Naphthalene at Phase Monitor Well [years]

01% of values less than 0
05% of values less than 0
10% of values less than 0
50% of values less than 0
90% of values less than 0
95% of values less than 0
99% of values less than 0

Minimum 0	Maximum 0	
Mean 0	Std. Dev. 0	Variance 0

Approx. time to Peak Conc. Toluene at Phase Monitor Well [years]

01% of values less than 0
05% of values less than 0
10% of values less than 0
50% of values less than 0
90% of values less than 0
95% of values less than 0
99% of values less than 0

Minimum 0	Maximum 0	
Mean 0	Std. Dev. 0	Variance 0

Approx. time to Peak Conc. Zinc at Phase Monitor Well [years]

01% of values less than 840
05% of values less than 1024
10% of values less than 1131
50% of values less than 1856
90% of values less than 5519
95% of values less than 6728
99% of values less than 11039

Minimum 761	Maximum 20000	
Mean 2770.37	Std. Dev. 2293.79	Variance 5.26149E+006

Project: Woodcote Quarry Landfill

Project Number: Risk 0060

Customer: Woodcote Quarry Landfill

Write Project Notes Here

Phase: Phase 1

Approx. time to Peak Conc. Ammoniacal_N at Base of Unsaturated Zone [years]

01% of values less than 57
05% of values less than 57
10% of values less than 57
50% of values less than 64
90% of values less than 95
95% of values less than 116
99% of values less than 172

Minimum 52	Maximum 256	
Mean 70.1199	Std. Dev. 21.3249	Variance 454.752

Approx. time to Peak Conc. Cadmium at Base of Unsaturated Zone [years]

01% of values less than 4999
05% of values less than 5519
10% of values less than 6094
50% of values less than 7428
90% of values less than 9056
95% of values less than 11039
99% of values less than 18114

Minimum 4100	Maximum 20000	
Mean 7758.68	Std. Dev. 2105.55	Variance 4.43335E+006

Approx. time to Peak Conc. Chloride at Base of Unsaturated Zone [years]

01% of values less than 19
05% of values less than 19
10% of values less than 19
50% of values less than 19
90% of values less than 19
95% of values less than 19
99% of values less than 19

Minimum 19	Maximum 26	
Mean 19.007	Std. Dev. 0.221249	Variance 0.048951

Approx. time to Peak Conc. Copper at Base of Unsaturated Zone [years]

01% of values less than 3714
05% of values less than 4527
10% of values less than 4527
50% of values less than 6094
90% of values less than 8202
95% of values less than 9999
99% of values less than 18114

Minimum 3363	Maximum 20000	
Mean 6780.29	Std. Dev. 2286.67	Variance 5.22886E+006

Approx. time to Peak Conc. Mercury at Base of Unsaturated Zone [years]

01% of values less than 20000
05% of values less than 20000
10% of values less than 20000
50% of values less than 20000
90% of values less than 20000
95% of values less than 20000

Phase: Phase 1

Approx. time to Peak Conc. Mercury at Base of Unsaturated Zone [years]

01% of values less than 20000
05% of values less than 20000
10% of values less than 20000
50% of values less than 20000
90% of values less than 20000
95% of values less than 20000
99% of values less than 20000

Minimum 0	Maximum 20000	
Mean 19980	Std. Dev. 632.14	Variance 399600

Approx. time to Peak Conc. Naphthalene at Base of Unsaturated Zone [years]

01% of values less than 0
05% of values less than 0
10% of values less than 0
50% of values less than 0
90% of values less than 0
95% of values less than 0
99% of values less than 0

Minimum 0	Maximum 0	
Mean 0	Std. Dev. 0	Variance 0

Approx. time to Peak Conc. Toluene at Base of Unsaturated Zone [years]

01% of values less than 0
05% of values less than 0
10% of values less than 0
50% of values less than 0
90% of values less than 0
95% of values less than 0
99% of values less than 0

Minimum 0	Maximum 0	
Mean 0	Std. Dev. 0	Variance 0

Approx. time to Peak Conc. Zinc at Base of Unsaturated Zone [years]

01% of values less than 624
05% of values less than 624
10% of values less than 624
50% of values less than 1379
90% of values less than 4527
95% of values less than 5519
99% of values less than 9056

Minimum 624	Maximum 20000	
Mean 1942.1	Std. Dev. 1966.56	Variance 3.86735E+006

Phase: Phase 1

Concentration of Ammoniacal_N at base of Unsaturated Zone [mg/l]

At 30 years

01% of values less than 1.36617E-017
05% of values less than 4.50987E-011
10% of values less than 9.41742E-010
50% of values less than 7.69847E-007
90% of values less than 5.90394E-006
95% of values less than 9.10342E-006
99% of values less than 1.35819E-005

Minimum 0	Maximum 2.29631E-005	
Mean 2.08343E-006	Std. Dev. 3.07835E-006	Variance 9.47622E-012

At 100 years

01% of values less than 5.01685E-010
05% of values less than 1.06827E-009
10% of values less than 1.21766E-009
50% of values less than 3.74924E-009
90% of values less than 0.000182035
95% of values less than 0.000440697
99% of values less than 0.000824495

Minimum 0	Maximum 0.00229907	
Mean 5.82064E-005	Std. Dev. 0.000192357	Variance 3.70011E-008

At 300 years

01% of values less than 0
05% of values less than 0
10% of values less than 0
50% of values less than 0
90% of values less than 6.04534E-013
95% of values less than 4.94772E-005
99% of values less than 0.000414541

Minimum 0	Maximum 0.00106498	
Mean 1.49433E-005	Std. Dev. 7.98738E-005	Variance 6.37982E-009

At 1000 years

01% of values less than 0
05% of values less than 0
10% of values less than 2.89957E-018
50% of values less than 5.07824E-016
90% of values less than 3.34353E-015
95% of values less than 1.66132E-014
99% of values less than 0.000242006

Minimum 0	Maximum 0.000702569	
Mean 5.95553E-006	Std. Dev. 4.60981E-005	Variance 2.12504E-009

Phase: Phase 1

Concentration of Ammoniacal_N at base of Unsaturated Zone [mg/l]

At infinity

01% of values less than 0
05% of values less than 0
10% of values less than 0
50% of values less than 0
90% of values less than 0
95% of values less than 6.97473E-019
99% of values less than 4.12023E-005

Minimum 0	Maximum 0.000245752	
Mean 1.3619E-006	Std. Dev. 1.2344E-005	Variance 1.52374E-010

Phase: Phase 1

Concentration of Cadmium at base of Unsaturated Zone [mg/l]

At 30 years

01% of values less than 0
05% of values less than 0
10% of values less than 0
50% of values less than 0
90% of values less than 0
95% of values less than 0
99% of values less than 0

Minimum 0	Maximum 0	
Mean 0	Std. Dev. 0	Variance 0

At 100 years

01% of values less than 0
05% of values less than 0
10% of values less than 0
50% of values less than 0
90% of values less than 0
95% of values less than 0
99% of values less than 0

Minimum 0	Maximum 0	
Mean 0	Std. Dev. 0	Variance 0

At 300 years

01% of values less than 0
05% of values less than 0
10% of values less than 0
50% of values less than 0
90% of values less than 0
95% of values less than 0
99% of values less than 0

Minimum 0	Maximum 0	
Mean 0	Std. Dev. 0	Variance 0

At 1000 years

01% of values less than 0
05% of values less than 0
10% of values less than 0
50% of values less than 0
90% of values less than 0
95% of values less than 0
99% of values less than 6.2058E-018

Minimum 0	Maximum 2.32083E-012	
Mean 2.57156E-015	Std. Dev. 7.35766E-014	Variance 5.41352E-027

Phase: Phase 1

Concentration of Cadmium at base of Unsaturated Zone [mg/l]

At infinity

01% of values less than 8.47246E-006
05% of values less than 1.01095E-005
10% of values less than 1.19527E-005
50% of values less than 3.15654E-005
90% of values less than 8.72213E-005
95% of values less than 0.000126745
99% of values less than 0.000391433

Minimum 7.62027E-006	Maximum 0.0019745	
Mean 5.24956E-005	Std. Dev. 0.00011174	Variance 1.24858E-008

Phase: Phase 1

Concentration of Chloride at base of Unsaturated Zone [mg/l]

At 30 years

01% of values less than 2.08687
05% of values less than 3.19524
10% of values less than 4.44309
50% of values less than 11.6552
90% of values less than 24.0636
95% of values less than 27.7433
99% of values less than 35.8472

Minimum 0.633365	Maximum 51.1279	
Mean 13.0588	Std. Dev. 7.7056	Variance 59.3762

At 100 years

01% of values less than 1.73148
05% of values less than 2.67282
10% of values less than 3.64844
50% of values less than 9.35973
90% of values less than 19.23
95% of values less than 22.5352
99% of values less than 28.7543

Minimum 0.495888	Maximum 41.8789	
Mean 10.5388	Std. Dev. 6.18173	Variance 38.2138

At 300 years

01% of values less than 0.983013
05% of values less than 1.57468
10% of values less than 2.12113
50% of values less than 5.43589
90% of values less than 11.4581
95% of values less than 13.5818
99% of values less than 19.2052

Minimum 0.265163	Maximum 25.8442	
Mean 6.24401	Std. Dev. 3.84328	Variance 14.7708

At 1000 years

01% of values less than 0.0879909
05% of values less than 0.202576
10% of values less than 0.270634
50% of values less than 0.834743
90% of values less than 2.4423
95% of values less than 3.67966
99% of values less than 7.40731

Minimum 0.0252467	Maximum 16.8215	
Mean 1.2559	Std. Dev. 1.50111	Variance 2.25332

Phase: Phase 1

Concentration of Chloride at base of Unsaturated Zone [mg/l]

At infinity

01% of values less than 5.44593E-010
05% of values less than 1.07271E-009
10% of values less than 1.51106E-009
50% of values less than 4.26772E-009
90% of values less than 9.73691E-009
95% of values less than 1.45791E-008
99% of values less than 2.07651E-005

Minimum 0	Maximum 0.0404932	
Mean 9.46662E-005	Std. Dev. 0.00171441	Variance 2.93921E-006

Phase: Phase 1

Concentration of Copper at base of Unsaturated Zone [mg/l]

At 30 years

01% of values less than 0
05% of values less than 0
10% of values less than 0
50% of values less than 0
90% of values less than 0
95% of values less than 0
99% of values less than 0

Minimum 0	Maximum 0	
Mean 0	Std. Dev. 0	Variance 0

At 100 years

01% of values less than 0
05% of values less than 0
10% of values less than 0
50% of values less than 0
90% of values less than 0
95% of values less than 0
99% of values less than 0

Minimum 0	Maximum 0	
Mean 0	Std. Dev. 0	Variance 0

At 300 years

01% of values less than 0
05% of values less than 0
10% of values less than 0
50% of values less than 0
90% of values less than 0
95% of values less than 0
99% of values less than 0

Minimum 0	Maximum 0	
Mean 0	Std. Dev. 0	Variance 0

At 1000 years

01% of values less than 0
05% of values less than 0
10% of values less than 0
50% of values less than 0
90% of values less than 0
95% of values less than 0
99% of values less than 3.0642E-015

Minimum 0	Maximum 1.40961E-006	
Mean 1.64821E-009	Std. Dev. 4.51772E-008	Variance 2.04098E-015

Phase: Phase 1

Concentration of Copper at base of Unsaturated Zone [mg/l]

At infinity

01% of values less than 2.36893E-005
05% of values less than 2.61873E-005
10% of values less than 2.81128E-005
50% of values less than 3.86454E-005
90% of values less than 0.000100563
95% of values less than 0.000446763
99% of values less than 0.00870753

Minimum 2.11263E-005	Maximum 0.0252271	
Mean 0.000310963	Std. Dev. 0.00175277	Variance 3.0722E-006

Phase: Phase 1

Concentration of Mercury at base of Unsaturated Zone [mg/l]

At 30 years

01% of values less than 0
05% of values less than 0
10% of values less than 0
50% of values less than 0
90% of values less than 0
95% of values less than 0
99% of values less than 0

Minimum 0	Maximum 0	
Mean 0	Std. Dev. 0	Variance 0

At 100 years

01% of values less than 0
05% of values less than 0
10% of values less than 0
50% of values less than 0
90% of values less than 0
95% of values less than 0
99% of values less than 0

Minimum 0	Maximum 0	
Mean 0	Std. Dev. 0	Variance 0

At 300 years

01% of values less than 0
05% of values less than 0
10% of values less than 0
50% of values less than 0
90% of values less than 0
95% of values less than 0
99% of values less than 0

Minimum 0	Maximum 0	
Mean 0	Std. Dev. 0	Variance 0

At 1000 years

01% of values less than 0
05% of values less than 0
10% of values less than 0
50% of values less than 0
90% of values less than 0
95% of values less than 0
99% of values less than 0

Minimum 0	Maximum 0	
Mean 0	Std. Dev. 0	Variance 0

Phase: Phase 1

Concentration of Mercury at base of Unsaturated Zone [mg/l]

At infinity

01% of values less than 7.50127E-012
05% of values less than 6.24702E-008
10% of values less than 9.20656E-007
50% of values less than 8.85873E-006
90% of values less than 1.87797E-005
95% of values less than 2.10123E-005
99% of values less than 2.5956E-005

Minimum 0	Maximum 2.94556E-005	
Mean 9.64574E-006	Std. Dev. 6.35515E-006	Variance 4.0388E-011

Phase: Phase 1

Concentration of Naphthalene at base of Unsaturated Zone [mg/l]

At 30 years

01% of values less than 0
05% of values less than 0
10% of values less than 0
50% of values less than 0
90% of values less than 0
95% of values less than 0
99% of values less than 0

Minimum 0	Maximum 0	
Mean 0	Std. Dev. 0	Variance 0

At 100 years

01% of values less than 0
05% of values less than 0
10% of values less than 0
50% of values less than 0
90% of values less than 0
95% of values less than 0
99% of values less than 0

Minimum 0	Maximum 0	
Mean 0	Std. Dev. 0	Variance 0

At 300 years

01% of values less than 0
05% of values less than 0
10% of values less than 0
50% of values less than 0
90% of values less than 0
95% of values less than 0
99% of values less than 0

Minimum 0	Maximum 0	
Mean 0	Std. Dev. 0	Variance 0

At 1000 years

01% of values less than 0
05% of values less than 0
10% of values less than 0
50% of values less than 0
90% of values less than 0
95% of values less than 0
99% of values less than 0

Minimum 0	Maximum 0	
Mean 0	Std. Dev. 0	Variance 0

Phase: Phase 1

Concentration of Naphthalene at base of Unsaturated Zone [mg/l]

At infinity

01% of values less than 0
05% of values less than 0
10% of values less than 0
50% of values less than 0
90% of values less than 0
95% of values less than 0
99% of values less than 0

Minimum 0	Maximum 0	
Mean 0	Std. Dev. 0	Variance 0

Phase: Phase 1

Concentration of Toluene at base of Unsaturated Zone [mg/l]

At 30 years

01% of values less than 0
05% of values less than 0
10% of values less than 0
50% of values less than 0
90% of values less than 0
95% of values less than 0
99% of values less than 0

Minimum 0	Maximum 0	
Mean 0	Std. Dev. 0	Variance 0

At 100 years

01% of values less than 0
05% of values less than 0
10% of values less than 0
50% of values less than 0
90% of values less than 0
95% of values less than 0
99% of values less than 0

Minimum 0	Maximum 0	
Mean 0	Std. Dev. 0	Variance 0

At 300 years

01% of values less than 0
05% of values less than 0
10% of values less than 0
50% of values less than 0
90% of values less than 0
95% of values less than 0
99% of values less than 0

Minimum 0	Maximum 0	
Mean 0	Std. Dev. 0	Variance 0

At 1000 years

01% of values less than 0
05% of values less than 0
10% of values less than 0
50% of values less than 0
90% of values less than 0
95% of values less than 0
99% of values less than 0

Minimum 0	Maximum 0	
Mean 0	Std. Dev. 0	Variance 0

Phase: Phase 1

Concentration of Toluene at base of Unsaturated Zone [mg/l]

At infinity

01% of values less than 0
05% of values less than 0
10% of values less than 0
50% of values less than 0
90% of values less than 0
95% of values less than 0
99% of values less than 0

Minimum 0	Maximum 0	
Mean 0	Std. Dev. 0	Variance 0

Phase: Phase 1

Concentration of Zinc at base of Unsaturated Zone [mg/l]

At 30 years

01% of values less than 0
05% of values less than 0
10% of values less than 0
50% of values less than 0
90% of values less than 0
95% of values less than 3.31912E-017
99% of values less than 1.18601E-014

Minimum 0	Maximum 3.40842E-014	
Mean 3.24575E-016	Std. Dev. 2.34737E-015	Variance 5.51017E-030

At 100 years

01% of values less than 0
05% of values less than 0
10% of values less than 0
50% of values less than 0
90% of values less than 3.1178E-008
95% of values less than 4.16206E-006
99% of values less than 4.92404E-005

Minimum 0	Maximum 0.000143388	
Mean 1.80183E-006	Std. Dev. 1.0812E-005	Variance 1.16899E-010

At 300 years

01% of values less than 0
05% of values less than 0
10% of values less than 0
50% of values less than 2.77851E-010
90% of values less than 0.0471231
95% of values less than 0.0713158
99% of values less than 0.104868

Minimum 0	Maximum 0.161299	
Mean 0.0113553	Std. Dev. 0.0248236	Variance 0.000616209

At 1000 years

01% of values less than 0
05% of values less than 1.57434E-017
10% of values less than 1.9337E-012
50% of values less than 0.0536418
90% of values less than 0.150356
95% of values less than 0.16976
99% of values less than 0.201862

Minimum 0	Maximum 0.279302	
Mean 0.0615299	Std. Dev. 0.062442	Variance 0.00389901

Phase: Phase 1

Concentration of Zinc at base of Unsaturated Zone [mg/l]

At infinity

01% of values less than 2.06563E-009
05% of values less than 2.61137E-009
10% of values less than 3.05344E-009
50% of values less than 5.29629E-009
90% of values less than 1.1923E-007
95% of values less than 4.6888E-006
99% of values less than 0.00135224

Minimum 1.54286E-009	Maximum 0.0194738	
Mean 8.8475E-005	Std. Dev. 0.000989617	Variance 9.79341E-007