EBR-10

SUMMARY OF RISK AND HAZARD INDEX

Source	Pathway	Resident Child		Resident Adult		Commercial Worker	
		Risk	HI	Risk	HI	Risk	HI
Surficial Soil	Dermal Contact, Ingestion, and Inhalation	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**
Subsurface Soil	Indoor Inhalation	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Outdoor Inhalation	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Sub-total	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**
Groundwater	Ingestion	2.62E-07	7.88E-01	1.84E-07	5.52E-01	0.00E+00	0.00E+00
	Indoor Inhalation	5.55E-07	3.15E-02	3.70E-07	2.10E-02	0.00E+00	0.00E+00
	Outdoor Inhalation	5.58E-10	3.16E-05	3.72E-10	2.11E-05	0.00E+00	0.00E+00
	Sub-total	**8.18E-07**	**8.19E-01**	**5.54E-07**	**5.73E-01**	**0.00E+00**	**0.00E+00**
TOTAL		**8.18E-07**	**8.19E-01**	**5.54E-07**	**5.73E-01**	**0.00E+00**	**0.00E+00**

Chemical of Concern	CARCINOGENIC RISK FOR RESIDENT ADULT						
	Surficial Soil: Ingestion, Inhalation, and Dermal Contact	Subsurface Soil: Indoor Inhalation	Subsurface Soil: Outdoor Inhalation	Groundwater: Ingestion	Groundwater: Indoor Inhalation	Groundwater: Outdoor Inhalation	Cumulative Risk
Volatile Organic Compounds							
Benzene	NC	NC	NC	1.66E-07	1.28E-07	1.28E-10	**2.94E-07**
Toluene	NC	NC	NC	-	-	-	**0.00E+00**
Ethylbenzene	NC	NC	NC	-	-	-	**0.00E+00**
Xylenes (mixed)	NC	NC	NC	-	-	-	**0.00E+00**
Ethylene Dibromide (EDB)	NC	NC	NC	NC	NC	NC	**NC**
1,2 Dichloroethane (EDC)	NC	NC	NC	NC	NC	NC	**NC**
Methyl Tert-Butyl Ether (MTBE)	NC	NC	NC	NC	NC	NC	**NC**
PAH Compounds							
Acenapthene	NC	NC	NC	-	-	-	**0.00E+00**
Anthracene	NC	NC	NC	-	-	-	**0.00E+00**
Benzo(a)pyrene	NC	NC	NC	1.44E-08	2.05E-07	2.06E-10	**2.20E-07**
Benzo(b)fluoranthene	NC	NC	NC	1.18E-09	1.40E-08	1.40E-11	**1.52E-08**
Benzo(k)fluoranthene	NC	NC	NC	6.38E-11	1.73E-09	1.74E-12	**1.80E-09**
Benzo(a)anthracene	NC	NC	NC	1.63E-09	2.15E-08	2.16E-11	**2.31E-08**
Benzo(g,h,i)perylene	NC	NC	NC	-	-	-	**0.00E+00**
Chrysene	NC	NC	NC	6.14E-12	1.41E-10	1.42E-13	**1.47E-10**
Fluorene	NC	NC	NC	-	-	-	**0.00E+00**
Fluoranthene	NC	NC	NC	-	-	-	**0.00E+00**
Naphthalene	NC	NC	NC	-	-	-	**0.00E+00**
Phenanthrene	NC	NC	NC	-	-	-	**0.00E+00**
Pyrene	NC	NC	NC	-	-	-	**0.00E+00**
User-specified Compounds							
Try this	NC	NC	NC	NC	NC	NC	**NC**
Chemical 2	NC	NC	NC	NC	NC	NC	**NC**
Chemical 3	NC	NC	NC	NC	NC	NC	**NC**
Chemical 4	NC	NC	NC	NC	NC	NC	**NC**
Chemical 5	NC	NC	NC	NC	NC	NC	**NC**
TOTAL	**0.00E+00**	**0.00E+00**	**0.00E+00**	**1.84E-07**	**3.70E-07**	**3.72E-10**	**5.54E-07**

Chemical of Concern	HAZARD QUOTIENTS FOR RESIDENT ADULT						
	Surficial Soil: Ingestion, Inhalation, and Dermal Contact	Subsurface Soil: Indoor Inhalation	Subsurface Soil: Outdoor Inhalation	Groundwater: Ingestion	Groundwater: Indoor Inhalation	Groundwater: Outdoor Inhalation	Cumulative Hazard Index
Volatile Organic Compounds							
Benzene	NC	NC	NC	-	2.00E-02	2.01E-05	**2.01E-02**
Toluene	NC	NC	NC	1.77E-04	3.55E-04	3.56E-07	**5.32E-04**
Ethylbenzene	NC	NC	NC	2.09E-03	1.45E-04	1.45E-07	**2.24E-03**
Xylenes (mixed)	NC	NC	NC	3.43E-04	1.73E-04	1.73E-07	**5.16E-04**
Ethylene Dibromide (EDB)	NC	NC	NC	NC	NC	NC	**NC**
1,2 Dichloroethane (EDC)	NC	NC	NC	NC	NC	NC	**NC**
Methyl Tert-Butyl Ether (MTBE)	NC	NC	NC	NC	NC	NC	**NC**
PAH Compounds							
Acenapthene	NC	NC	NC	2.77E-03	1.19E-04	1.20E-07	**2.89E-03**
Anthracene	NC	NC	NC	1.27E-04	1.22E-06	1.22E-09	**1.28E-04**
Benzo(a)pyrene	NC	NC	NC	-	-	-	**0.00E+00**
Benzo(b)fluoranthene	NC	NC	NC	-	-	-	**0.00E+00**
Benzo(k)fluoranthene	NC	NC	NC	-	-	-	**0.00E+00**
Benzo(a)anthracene	NC	NC	NC	-	-	-	**0.00E+00**
Benzo(g,h,i)perylene	NC	NC	NC	3.01E-08	5.39E-05	5.43E-08	**5.40E-05**
Chrysene	NC	NC	NC	-	-	-	**0.00E+00**
Fluorene	NC	NC	NC	1.81E-02	1.05E-05	1.05E-08	**1.81E-02**
Fluoranthene	NC	NC	NC	4.68E-04	4.89E-06	4.91E-09	**4.73E-04**
Naphthalene	NC	NC	NC	5.08E-01	4.94E-05	4.96E-08	**5.08E-01**
Phenanthrene	NC	NC	NC	1.88E-02	7.65E-06	7.69E-09	**1.88E-02**
Pyrene	NC	NC	NC	2.76E-04	7.67E-06	7.71E-09	**2.84E-04**
User-specified Compounds							
Try this	NC	NC	NC	NC	NC	NC	**NC**
Chemical 2	NC	NC	NC	NC	NC	NC	**NC**
Chemical 3	NC	NC	NC	NC	NC	NC	**NC**
Chemical 4	NC	NC	NC	NC	NC	NC	**NC**
Chemical 5	NC	NC	NC	NC	NC	NC	**NC**
TOTAL	**0.00E+00**	**0.00E+00**	**0.00E+00**	**5.52E-01**	**2.10E-02**	**2.11E-05**	**5.73E-01**

Chemical of Concern	CARCINOGENIC RISK FOR RESIDENT CHILD						
	Surficial Soil: Ingestion, Inhalation, and Dermal Contact	Subsurface Soil: Indoor Inhalation	Subsurface Soil: Outdoor Inhalation	Groundwater: Ingestion	Groundwater: Indoor Inhalation	Groundwater: Outdoor Inhalation	Cumulative Risk
Volatile Organic Compounds							
Benzene	NC	NC	NC	2.38E-07	1.92E-07	1.92E-10	**4.30E-07**
Toluene	NC	NC	NC	-	-	-	**0.00E+00**
Ethylbenzene	NC	NC	NC	-	-	-	**0.00E+00**
Xylenes (mixed)	NC	NC	NC	-	-	-	**0.00E+00**
Ethylene Dibromide (EDB)	NC	NC	NC	NC	NC	NC	**NC**
1,2 Dichloroethane (EDC)	NC	NC	NC	NC	NC	NC	**NC**
Methyl Tert-Butyl Ether (MTBE)	NC	NC	NC	NC	NC	NC	**NC**
PAH Compounds							
Acenapthene	NC	NC	NC	-	-	-	**0.00E+00**
Anthracene	NC	NC	NC	-	-	-	**0.00E+00**
Benzo(a)pyrene	NC	NC	NC	2.06E-08	3.07E-07	3.09E-10	**3.28E-07**
Benzo(b)fluoranthene	NC	NC	NC	1.69E-09	2.09E-08	2.10E-11	**2.26E-08**
Benzo(k)fluoranthene	NC	NC	NC	9.12E-11	2.60E-09	2.61E-12	**2.69E-09**
Benzo(a)anthracene	NC	NC	NC	2.33E-09	3.22E-08	3.24E-11	**3.46E-08**
Benzo(g,h,i)perylene	NC	NC	NC	-	-	-	**0.00E+00**
Chrysene	NC	NC	NC	8.78E-12	2.11E-10	2.13E-13	**2.20E-10**
Fluorene	NC	NC	NC	-	-	-	**0.00E+00**
Fluoranthene	NC	NC	NC	-	-	-	**0.00E+00**
Naphthalene	NC	NC	NC	-	-	-	**0.00E+00**
Phenanthrene	NC	NC	NC	-	-	-	**0.00E+00**
Pyrene	NC	NC	NC	-	-	-	**0.00E+00**
User-specified Compounds							
Try this	NC	NC	NC	NC	NC	NC	**NC**
Chemical 2	NC	NC	NC	NC	NC	NC	**NC**
Chemical 3	NC	NC	NC	NC	NC	NC	**NC**
Chemical 4	NC	NC	NC	NC	NC	NC	**NC**
Chemical 5	NC	NC	NC	NC	NC	NC	**NC**
TOTAL	**0.00E+00**	**0.00E+00**	**0.00E+00**	**2.62E-07**	**5.55E-07**	**5.58E-10**	**8.18E-07**

Chemical of Concern	HAZARD QUOTIENTS FOR RESIDENT CHILD						
	Surficial Soil: Ingestion, Inhalation, and Dermal Contact	Subsurface Soil: Indoor Inhalation	Subsurface Soil: Outdoor Inhalation	Groundwater: Ingestion	Groundwater: Indoor Inhalation	Groundwater: Outdoor Inhalation	Cumulative Hazard Index
Volatile Organic Compounds							
Benzene	NC	NC	NC	-	3.01E-02	3.02E-05	**3.01E-02**
Toluene	NC	NC	NC	2.53E-04	5.32E-04	5.35E-07	**7.86E-04**
Ethylbenzene	NC	NC	NC	2.99E-03	2.17E-04	2.18E-07	**3.21E-03**
Xylenes (mixed)	NC	NC	NC	4.90E-04	2.59E-04	2.60E-07	**7.49E-04**
Ethylene Dibromide (EDB)	NC	NC	NC	NC	NC	NC	**NC**
1,2 Dichloroethane (EDC)	NC	NC	NC	NC	NC	NC	**NC**
Methyl Tert-Butyl Ether (MTBE)	NC	NC	NC	NC	NC	NC	**NC**
PAH Compounds							
Acenapthene	NC	NC	NC	3.96E-03	1.79E-04	1.80E-07	**4.14E-03**
Anthracene	NC	NC	NC	1.82E-04	1.83E-06	1.84E-09	**1.83E-04**
Benzo(a)pyrene	NC	NC	NC	-	-	-	**0.00E+00**
Benzo(b)fluoranthene	NC	NC	NC	-	-	-	**0.00E+00**
Benzo(k)fluoranthene	NC	NC	NC	-	-	-	**0.00E+00**
Benzo(a)anthracene	NC	NC	NC	-	-	-	**0.00E+00**
Benzo(g,h,i)perylene	NC	NC	NC	4.29E-08	8.09E-05	8.14E-08	**8.10E-05**
Chrysene	NC	NC	NC	-	-	-	**0.00E+00**
Fluorene	NC	NC	NC	2.58E-02	1.57E-05	1.58E-08	**2.58E-02**
Fluoranthene	NC	NC	NC	6.69E-04	7.33E-06	7.37E-09	**6.77E-04**
Naphthalene	NC	NC	NC	7.26E-01	7.40E-05	7.44E-08	**7.26E-01**
Phenanthrene	NC	NC	NC	2.69E-02	1.15E-05	1.15E-08	**2.69E-02**
Pyrene	NC	NC	NC	3.95E-04	1.15E-05	1.16E-08	**4.06E-04**
User-specified Compounds							
Try this	NC	NC	NC	NC	NC	NC	**NC**
Chemical 2	NC	NC	NC	NC	NC	NC	**NC**
Chemical 3	NC	NC	NC	NC	NC	NC	**NC**
Chemical 4	NC	NC	NC	NC	NC	NC	**NC**
Chemical 5	NC	NC	NC	NC	NC	NC	**NC**
TOTAL	**0.00E+00**	**0.00E+00**	**0.00E+00**	**7.88E-01**	**3.15E-02**	**3.16E-05**	**8.19E-01**

SUMMARY OF REPRESENTATIVE CONCENTRATIONS OF CHEMICALS IN SOIL AND GROUNDWATER

Chemical of Concern	Surficial Soil			Subsurface Soil			Groundwater			CRF unsat. zone	Leaching to Groundwater (from External Model)	
	Conc. [mg/kg]	No. of Samples	Method of Calculation	Conc. [mg/kg]	No. of Samples	Method of Calculation	Conc. [mg/L]	No. of Samples	Method of Calculation	[-]	Wet Soil Conc. [mg/kg]	Mass Leaching [g/yr]
Volatile Organic Compounds												
☑ Benzene	0	0		0.05	1		1			1	1	35.01
☑ Toluene	0	0		0.05	1		1			1	1	27.44
☑ Ethylbenzene	0	0		0.9	1		1			1	1	10.79
☑ Xylenes (mixed)	0	0		3	1		1			1	1	11.42
☐ Ethylene Dibromide (EDB)	0	0		0	0		1			1	1	70.12
☐ 1,2 Dichloroethane (EDC)	0	0		0	0		1			1	1	65.41
☐ Methyl Tert-Butyl Ether (MTBE)	0	0		0	0		1			1	1	70.33
PAH Compounds												
☑ Acenapthene	0	0		4.18	1		1			1	1	3.98
☑ Anthracene	0	0		3.8	1		1			1	1	
☑ Benzo(a)pyrene	0	0		0.1596	1		1			1	1	
☑ Benzo(b)fluoranthene	0	0		0.03686	1		1			1	1	
☑ Benzo(k)fluoranthene	0	0		0.03705	1		1			1	1	
☑ Benzo(a)anthracene	0	0		0.1273	1		1			1	1	
☑ Benzo(g,h,i)perylene	0	0		0.0076	1		1			1	1	
☑ Chrysene	0	0		0.00855	1		1			1	1	
☑ Fluorene	0	0		28.5	1		1			1	1	3.98
☑ Fluoranthene	0	0		3.8	1		1			1	1	
☑ Naphthalene	0	0		152	1		1			1	1	16.82
☑ Phenanthrene	0	0		57	1		1			1	1	2.11
☑ Pyrene	0	0		2.85	1		1			1	1	
User-specified Compounds												
☐ Try this												
☐ Chemical 2												
☐ Chemical 3												
☐ Chemical 4												
☐ Chemical 5												

Note: See Guidance Document or discuss with IDEQ Project Officer for definition of Representative Concentrations
CRF = Concentration Reduction Factor. Refer to Guidance Document for details. Default value = 1

FATE AND TRANSPORT PARAMETERS FOR PATHWAYS

Parameter	Symbol	Units	Tier 1 Default Values	Values Used	Comment
Page 1 of 2					
SITE PARAMETERS:					
Source Area	A	cm^2	2250000	2250000	=Tier 1
Width of Source Area	W	cm	1500	1500	=Tier 1
Depth to Subsurface Soil Sources	Ls	ft	3 or 15	3	=Tier 1
Thickness of Subsurface Soil Source	ds	ft	6	6	=Tier 1
AMBIENT AIR PARAMETERS:					
Ambient Air Mixing Zone Height	δ_a	cm	200	200	=Tier 1
Wind Speed in Ambient Air Mixing Zone	Ua	cm/s	225	225	=Tier 1
Averaging Time for Vapor Flux - Residential	τ	sec	283800000	283800000	=Tier 1
Averaging Time for Vapor Flux - Commercial	τ	sec	126130000	126130000	=Tier 1
SOIL PARAMETERS:					
Dry Soil Bulk Density	ρ_s	g/cm^3	1.64	1.8	Justification Req'd
Fractional Organic Carbon Content					
Surficial Soil	foc	g-C/g-soil	0.01	0.01	=Tier 1
Subsurface Soil	foc	g-C/g-soil	0.001	0.001	=Tier 1
Thickness of Capillary Fringe	hcapi	cm	5	5	=Tier 1
Thickness of Vadose Zone	hv	cm	variable	19495	Calculated
Total Soil Porosity	θ_T	-	0.38	0.3	Justification Req'd
Volumetric Water Content in Capillary Fringe	$\theta_{w\,cap}$	-	0.342	0.28	Justification Req'd
Volumetric Water Content in Vadose Zone	θ_{ws}	-	0.21 / 0.26	0.21	=Tier 1
Volumetric Water Content in Foundation/Wall Cracks	$\theta_{w\,crack}$	-	0.21 / 0.26	0.21	=Tier 1
Volumetric Air Content in Capillary Fringe	$\theta_{a\,cap}$	-	0.038	0.02	Calculated
Volumetric Air Content in Vadose Zone	θ_{as}	-	0.17 / 0.12	0.09	Calculated
Volumetric Air Content in Foundation/Wall Cracks	$\theta_{a\,crack}$	-	0.17 / 0.12	0.09	Calculated

FATE AND TRANSPORT PARAMETERS FOR PATHWAYS

Parameter	Symbol	Units	Tier 1 Default Values	Values Used	Comment
Page 2 of 2					
GROUNDWATER PARAMETERS:					
Depth to Groundwater	Lgw	cm	variable	19500	Calculated
Total Soil Porosity in the Saturated Zone	θ_T	-	0.38	0.38	=Tier 1
Dry Soil Bulk Density in the Saturated Zone	ρ_s	g/cm^3	1.64	1.8	Justification Req'd
Fractional Organic Carbon Content in the Sat. Zone	foc	g-C/g-soil	0.001	0.001	=Tier 1
Dispersivities for Groundwater Modeling					
Longitudinal	α_x	cm	variable	304.8	Calculated
Transverse	α_y	cm	variable	101.6	Calculated
Vertical	α_z	cm	variable	15.24	Calculated
Dispersivities for Surface Water Modeling					
Longitudinal	α_x	cm	variable	609.6	Calculated
Transverse	α_y	cm	variable	203.2	Calculated
Vertical	α_z	cm	variable	30.48	Calculated
Groundwater Darcy Velocity	Ugw	cm/year	Zone-specific	585	Zone-specific
Groundwater Mixing Zone Thickness	δ_{gw}	cm	152	152	=Tier 1
Infiltration Rate of Water through Soil	IR	cm/year	Zone-specific	4.3	Zone-specific
ENCLOSED SPACE PARAMETERS:					
Enclosed Space Air Exchange Rate					
Residential	ER	1/sec	0.00014	0.00014	=Tier 1
Commercial	ER	1/sec	0.00023	0.00023	=Tier 1
Enclosed Space Volume/Infiltration Area Ratio					
Residential	Lb	cm	200	200	=Tier 1
Commercial	Lb	cm	300	300	=Tier 1
Enclosed Space Foundation or Wall Thickness					
Residential	Lcrack	cm	15	15	=Tier 1
Commercial	Lcrack	cm	15	15	=Tier 1
Areal Fraction of Cracks in Foundation/Walls					
Residential	η	-	0.01	0.01	=Tier 1
Commercial	η	-	0.01	0.01	=Tier 1

Ref IDEQ. 1996. RBCA Guidance Document for Petroleum Releases

EXPOSURE PARAMETERS FOR ROUTES OF EXPOSURE

Parameter	Symbol	Units	Tier 1 Default Values	Values Used	Comment
Page 1 of 2					
GLOBAL PARAMETERS:					
Acceptable Risk Level	TR	-	1.00E-06	1.00E-06	=Tier 1
Acceptable Hazard Quotient (Tier 1) / Index (Tier 2)	THQ/THI	-	0.2	1	= Tier 2
Body Weight - Adult	BW	kg	70	70	=Tier 1
Body Weight - Child	BW	kg	35	35	=Tier 1
ROUTE-SPECIFIC PARAMETERS:					
INGESTION OF, DERMAL CONTACT WITH, AND INHALATION OF VAPORS FROM SURFICIAL SOIL					
Exposure Duration:					
Residential - Adult	ED	year	9	9	=Tier 1
Residential - Child	ED	year	9	9	=Tier 1
Commercial	ED	year	4	4	=Tier 1
Exposure Frequency:					
Residential - Adult	EF	day/year	180	180	=Tier 1
Residential - Child	EF	day/year	180	180	=Tier 1
Commercial	EF	day/year	40	40	=Tier 1
Inhalation Rate:					
Residential - Adult	IRa	m^3/day	20	20	=Tier 1
Residential - Child	IRa	m^3/day	15	15	=Tier 1
Commercial	IRa	m^3/day	20	20	=Tier 1
Ingestion Rate:					
Residential - Adult	IRs	mg/day	100	100	=Tier 1
Residential - Child	IRs	mg/day	200	200	=Tier 1
Commercial	IRs	mg/day	50	50	=Tier 1
Soil to Skin Adherence Factor	M	mg/cm^2	1	1	=Tier 1
Skin Surface Area:					
Residential - Adult	SA	cm^2/day	4538	4538	=Tier 1
Residential - Child	SA	cm^2/day	2328	2328	=Tier 1
Commercial	SA	cm^2/day	1815	1815	=Tier 1

EXPOSURE PARAMETERS FOR ROUTES OF EXPOSURE

Parameter	Symbol	Units	Tier 1 Default Values	Values Used	Comment
Page 2 of 2					
INHALATION OF VAPORS FROM SUBSURFACE SOIL AND GROUNDWATER					
Inhalation Rate:					
Residential - Adult	IRa	m^3/day	20	20	=Tier 1
Residential - Child	IRa	m^3/day	15	15	=Tier 1
Commercial	IRa	m^3/day	20	20	=Tier 1
Exposure Duration:					
Residential - Adult	ED	year	9	9	=Tier 1
Residential - Child	ED	year	9	9	=Tier 1
Commercial	ED	year	4	4	=Tier 1
Exposure Frequency:					
Residential - Adult	EF	day/year	350	350	=Tier 1
Residential - Child	EF	day/year	350	350	=Tier 1
Commercial	EF	day/year	250	250	=Tier 1
INGESTION OF GROUNDWATER					
Ingestion Rate:					
Residential - Adult	IRw	L/day	1.4	1.4	=Tier 1
Residential - Child	IRw	L/day	1	1	=Tier 1
Commercial	IRw	L/day	1	1	=Tier 1
Exposure Duration:					
Residential - Adult	ED	year	9	9	=Tier 1
Residential - Child	ED	year	9	9	=Tier 1
Commercial	ED	year	4	4	=Tier 1
Exposure Frequency:					
Residential - Adult	EF	day/year	350	350	=Tier 1
Residential - Child	EF	day/year	350	350	=Tier 1
Commercial	EF	day/year	250	250	=Tier 1

Ref: IDEQ, 1996 RBCA Guidance Document for Petroleum Releases

COMPLETE PATHWAY(S) AND ROUTE(S) OF EXPOSURE

Receptor, Source, and Route	Residental (Child and Adult)		Commercial	
Surficial Soil (Ingestion, Inhalation, and Dermal Contact)	☐	NO	☐	NO
Subsurface Soil				
Outdoor Inhalation of Volatile Emission	☐	NO	☐	NO
Indoor Inhalation of Volatile Emission	☐	NO	☐	NO
Groundwater				
Outdoor Inhalation of Volatile Emission	☑	YES	☐	NO
Indoor Inhalation of Volatile Emission	☑	YES	☐	NO
Protection of Groundwater	☑	YES	☐	NO
Distance to the Target Well [ft] **100.0**				
Groundwater Class: ○ 1 ◉ 2 ○ 3				
Estimation of groundwater source concentration (choose 1 of the 3 options)				
1. Known Subsurface Soil Conc. and known CRFunsaturated ◉				
2. Specified Loading from an External Model ○				
3. Known On-site (Source) Groundwater Concentration ○				
Protection of Surface Water			☐	NO
Distance to the Target Surface Water [ft] **200.0**				
Surface Water Class: ◉ Domestic Water Supplies ○ Other				
Estimation of groundwater source concentration (choose 1 of the 3 options)				
1. Known Subsurface Soil Conc. and known CRFunsaturated ◉				
2. Specified Loading from an External Model ○				
3. Known On-site (Source) Groundwater Concentration ○				