ANEXO II

Resultados de la Evaluación de Riesgos a la Salud y el Ambiente - Salud Humana

Compuestos de preocupación

CHEMICAL DATA FOR SELECTED COCs

Physical Property Data

Orange = One or more parameter differs from User Chemical Database

Constituent	CAS Number	Type	Molecular Weight (g/mole)		Aqueous Solubility (@ 20 - 25 C) (mg/L)		Soil Saturation Limit Calculated (mg/kg)	Vapor Pressure (@ 20 - 25 C) (mm Hg)		Henry's Constant (@ 20 - 25 C) (unitless)		log (Koc) or log (Kd) (@ 20 - 25 C) log(L/kg)		
TPH - Aliph >C06-C08	T-al0608	OT	***100***	***TPH CWC***	***5,4***	***TPH CWC***	5,17E+01	2,66E+02	TPH	3,25E+01	TPH	2,90E+00	Koc	TPH
TPH - Aliph >C08-C10	T-al0810	OT	130	TPH	0,43	TPH	7,38E+01	4,79E+00	TPH	7,85E+01	TPH	4,50E+00	Koc	TPH
TPH - Aliph >C10-C12	T-al1012	OT	160	TPH	0,034	TPH	4,34E+01	4,79E-01	TPH	1,22E+02	TPH	5,40E+00	Koc	TPH
TPH - Aliph >C12-C16	T-al1216	OT	200	TPH	0,00076	TPH	1,91E+01	3,65E-02	TPH	5,21E+02	TPH	6,70E+00	Koc	TPH
TPH - Aliph >C16-C21	T-al1621	OT	270	TPH	0,0000025	TPH	7,89E+00	8,36E-04	TPH	4,90E+03	TPH	8,80E+00	Koc	TPH
TPH - Aliph >C21-C34	T-al2134	OT	400	-	0,0000025	-	7,89E+00	3,34E-07	-	7,26E+03	-	8,80E+00	Koc	-
TPH - Arom >C07-C08	T-ar0708	OT	92	TPH	520	TPH	7,14E+02	2,89E+01	TPH	2,77E-01	TPH	2,40E+00	Koc	TPH
TPH - Arom >C08-C10	T-ar0810	OT	120	TPH	65	TPH	5,25E+02	4,79E+00	TPH	4,80E-01	TPH	3,20E+00	Koc	TPH
TPH - Arom >C10-C12	T-ar1012	OT	130	TPH	25	TPH	3,16E+02	4,79E-01	TPH	1,35E-01	TPH	3,40E+00	Koc	TPH
TPH - Arom >C12-C16	T-ar1216	OT	150	TPH	5,8	TPH	1,46E+02	3,65E-02	TPH	5,12E-02	TPH	3,70E+00	Koc	TPH
TPH - Arom >C16-C21	T-ar1621	OT	190	TPH	0,65	TPH	5,16E+01	8,36E-04	TPH	1,33E-02	TPH	4,20E+00	Koc	TPH
TPH - Arom >C21-C35	T-ar2134	OT	240	TPH	0,0066	TPH	4,15E+00	3,34E-07	TPH	6,60E-04	TPH	5,10E+00	Koc	TPH
Arsenic	7440-38-2	M	74,9216	TX11	0	TX11	1,00E+06	0,00E+00	TX11	0,00E+00	TX11	f(pH)	Kd	-
Barium	7440-39-3	M	137,33	TX11	0	TX11	1,00E+06	0,00E+00	TX11	0,00E+00	TX11	f(pH)	Kd	-
Chromium (total)	7440-47-3	M	51,99610138	TX11	0	TX11	1,00E+06	0,00E+00	TX11	0,00E+00	TX11	3,08E+00	Kd	TX11
Lead (inorganic)	7439-92-1	M	207,2	TX11	0	TX11	1,00E+06	0,00E+00	TX11	0,00E+00	TX11	1,00E+00	Kd	TX11
Mercury	7439-97-6	M	200,59	TX11	0,03	TX11	1,00E+06	1,30E-03	TX11	4,74E-01	TX11	f(pH)	Kd	-
Cobalt	7440-48-4	M	58,9332	TX11	0	TX11	1,00E+06	0,00E+00	TX11	0,00E+00	TX11	1,65E+00	Kd	TX11
Copper	7440-50-8	M	63,546	TX11	0	TX11	1,00E+06	0,00E+00	TX11	0,00E+00	TX11	1,60E+00	Kd	TX11
Nickel	7440-02-0	M	58,69	TX11	0	TX11	1,00E+06	0,00E+00	TX11	0,00E+00	TX11	f(pH)	Kd	-
Vanadium	7440-62-2	M	50,9415	TX11	0	TX11	1,00E+06	0,00E+00	TX11	0,00E+00	TX11	3,00E+00	Kd	TX11
Zinc	7440-66-6	M	65,39	TX11	0	TX11	1,00E+06	0,00E+00	TX11	0,00E+00	TX11	f(pH)	Kd	TX11

Site Name: Recinto Folche_inhalación
Site Location: LOTE X
Job ID: 62288
Date Completed: 1-dic-yy
Completed By: TEMA LITOCLEAN

CHEMICAL DATA FOR SELECTED COCs

Physical Property Data

Orange = One or more parameter differs from User Chemical Database

Constituent	pH specific Kd for non-organics: Surface Soil Column Slope	Surface Soil Column y-Intercept	Surface Soil Column logKd_pH (L/kg)	Water Bearing Unit Slope	Water Bearing Unit y-Intercept	Water Bearing Unit logKd_pH (L/kg)		log(Kow) (@ 20 - 25 C) log(L/kg)		Diffusion Coefficients: Air (cm^2/s)		Water (cm^2/s)	
TPH - Aliph >C06-C08	-	-	-	-	-	-	-	-	-	1,00E-01	TPH	1,00E-05	TPH
TPH - Aliph >C08-C10	-	-	-	-	-	-	-	-	-	1,00E-01	TPH	1,00E-05	TPH
TPH - Aliph >C10-C12	-	-	-	-	-	-	-	-	-	1,00E-01	TPH	1,00E-05	TPH
TPH - Aliph >C12-C16	-	-	-	-	-	-	-	-	-	1,00E-01	TPH	1,00E-05	TPH
TPH - Aliph >C16-C21	-	-	-	-	-	-	-	-	-	1,00E-01	TPH	1,00E-05	TPH
TPH - Aliph >C21-C34	-	-	-	-	-	-	-	-	-	1,00E-01	-	1,00E-05	-
TPH - Arom >C07-C08	-	-	-	-	-	-	-	-	-	1,00E-01	TPH	1,00E-05	TPH
TPH - Arom >C08-C10	-	-	-	-	-	-	-	-	-	1,00E-01	TPH	1,00E-05	TPH
TPH - Arom >C10-C12	-	-	-	-	-	-	-	-	-	1,00E-01	TPH	1,00E-05	TPH
TPH - Arom >C12-C16	-	-	-	-	-	-	-	-	-	1,00E-01	TPH	1,00E-05	TPH
TPH - Arom >C16-C21	-	-	-	-	-	-	-	-	-	1,00E-01	TPH	1,00E-05	TPH
TPH - Arom >C21-C35	-	-	-	-	-	-	-	-	-	1,00E-01	TPH	1,00E-05	TPH
Arsenic	3,05E-02	1,25E+00	1,50E+00	3,05E-02	1,25E+00	1,50E+00	E2	6,79E-01	TX11	0,00E+00	TX11	0,00E+00	TX11
Barium	8,96E-02	1,00E+00	1,72E+00	8,96E-02	1,00E+00	1,72E+00	E2	0,00E+00	TX11	0,00E+00	TX11	0,00E+00	TX11
Chromium (total)	-	-	-	-	-	-	-	0,00E+00	TX11	0,00E+00	TX11	0,00E+00	TX11
Lead (inorganic)	-	-	-	-	-	-	-	7,29E-01	TX11	0,00E+00	TX11	0,00E+00	TX11
Mercury	7,70E-01	-3,52E+00	2,69E+00	1,70E+00	-9,73E+00	3,95E+00	E2	-4,71E-01	TX11	3,07E-02	TX11	6,30E-06	TX11
Cobalt	-	-	-	-	-	-	-	0,00E+00	TX11	0,00E+00	TX11	0,00E+00	TX11
Copper	-	-	-	-	-	-	-	-5,71E-01	TX11	0,00E+00	TX11	0,00E+00	TX11
Nickel	6,24E-01	-2,43E+00	2,60E+00	2,04E-01	3,80E-01	2,02E+00	E2	-5,71E-01	TX11	0,00E+00	TX11	0,00E+00	TX11
Vanadium	-	-	-	-	-	-	-	0,00E+00	TX11	0,00E+00	TX11	0,00E+00	TX11
Zinc	2,37E-01	1,80E-01	2,09E+00	2,37E-01	1,80E-01	2,09E+00	E2	-4,71E-01	TX11	0,00E+00	TX11	0,00E+00	TX11

Site Name: Recinto Folche_inhalación
Site Location: LOTE X
Job ID: 62288
Date Completed: 1-dic-yy
Completed By: TEMA LITOCLEAN

CHEMICAL DATA FOR SELECTED COCs

Miscellaneous Parameters

Orange = One or more parameter differs from User Chemical Database

Constituent	Analytical Detection Limits: Groundwater (mg/L)		Analytical Detection Limits: Soil (mg/kg)		Half Life (First-Order Decay): Saturated (days)	Half Life (First-Order Decay): Unsaturated (days)		Soil-to-Plant Biotransfer Factors: Above-grd (unitless)	Soil-to-Plant Biotransfer Factors: Below-grd (unitless)		Relative Bioavailability Factor		Leaf Concen. Factor Calculated (mg/kg)/(mg/L)	Root Concen. Factor Calculated (mg/kg)/(mg/L)	Bioconcentration Factor	
TPH - Aliph >C06-C08	-	-	-	-	-	-	-	-	-	-	1,00E+00	TX11	-	-	82	LY
TPH - Aliph >C08-C10	-	-	-	-	-	-	-	-	-	-	1,00E+00	TX11	-	-	990	LY
TPH - Aliph >C10-C12	-	-	-	-	-	-	-	-	-	-	1,00E+00	TX11	-	-	4200	LY
TPH - Aliph >C12-C16	-	-	-	-	-	-	-	-	-	-	1,00E+00	TX11	-	-	35000	LY
TPH - Aliph >C16-C21	-	-	-	-	-	-	-	-	-	-	1,00E+00	TX11	-	-	890000	LY
TPH - Aliph >C21-C34	-	-	-	-	-	-	-	-	-	-	1,00E+00	TX11	-	-	890000	LY
TPH - Arom >C07-C08	-	-	-	-	-	-	-	-	-	-	1,00E+00	TX11	-	-	18	LY
TPH - Arom >C08-C10	-	-	-	-	-	-	-	-	-	-	1,00E+00	TX11	-	-	59	LY
TPH - Arom >C10-C12	-	-	-	-	-	-	-	-	-	-	1,00E+00	TX11	-	-	100	LY
TPH - Arom >C12-C16	-	-	-	-	-	-	-	-	-	-	1,00E+00	TX11	-	-	230	LY
TPH - Arom >C16-C21	-	-	-	-	-	-	-	-	-	-	1,00E+00	TX11	-	-	790	LY
TPH - Arom >C21-C35	-	-	-	-	-	-	-	-	-	-	1,00E+00	TX11	-	-	10000	LY
Arsenic	1,00E-02	S	5,30E-02	S	-	-	-	1,00E-02	8,00E-03	TX11	***6,00E-01***	***EPA***	-	-	-	-
Barium	1,00E-01	MC	-	-	-	-	-	4,90E-02	1,50E-02	TX11	1,00E+00	TX11	-	-	-	-
Chromium (total)	-	-	-	-	-	-	-	-	-	-	1,00E+00	TX11	-	-	-	-
Lead (inorganic)	-	-	-	-	-	-	-	-	-	-	***6,00E-01***	***EPA***	-	-	-	-
Mercury	2,00E-04	MC	-	-	-	-	-	5,50E-03	1,40E-02	TX08	1,00E+00	TX11	-	-	-	-
Cobalt	-	-	-	-	-	-	-	1,00E-02	7,00E-03	TX11	1,00E+00	TX11	-	-	-	-
Copper	6,00E-02	S	6,00E-03	S	-	-	-	2,90E-01	2,50E-01	TX11	1,00E+00	TX11	-	-	-	-
Nickel	5,00E-02	S	1,50E-02	S	-	-	-	2,50E-02	8,00E-03	TX08	1,00E+00	TX11	-	-	-	-
Vanadium	4,00E-02	S	8,00E-03	S	-	-	-	3,60E-03	3,00E-03	TX11	1,00E+00	TX11	-	-	-	-
Zinc	5,00E-03	S	2,00E-03	S	-	-	-	9,00E-02	4,40E-02	TX11	1,00E+00	TX11	-	-	-	-

Site Name: Recinto Folche_inhalación
Site Location: LOTE X
Job ID: 62288
Date Completed: 1-dic-yy
Completed By: TEMA LITOCLEAN

CHEMICAL DATA FOR SELECTED COCs

Dermal Exposure

Orange = One or more parameter differs from User Chemical Database

Constituent	Water Dermal Permeability Data: Dermal Permeability Coeff. (cm/hr)	Lag time for Dermal Exposure (hr)	Critical Exposure Time (hr)	Relative Contr of Derm Perm Coeff	Water/Skin Derm Ads. Fact Calculated	
TPH - Aliph >C06-C08	-	-	-	-	-	-
TPH - Aliph >C08-C10	-	-	-	-	-	-
TPH - Aliph >C10-C12	-	-	-	-	-	-
TPH - Aliph >C12-C16	-	-	-	-	-	-
TPH - Aliph >C16-C21	-	-	-	-	-	-
TPH - Aliph >C21-C34	-	-	-	-	-	-
TPH - Arom >C07-C08	-	-	-	-	-	-
TPH - Arom >C08-C10	-	-	-	-	-	-
TPH - Arom >C10-C12	-	-	-	-	-	-
TPH - Arom >C12-C16	-	-	-	-	-	-
TPH - Arom >C16-C21	-	-	-	-	-	-
TPH - Arom >C21-C35	-	-	-	-	-	-
Arsenic	0,001	-	-	-	-	D
Barium	-	-	-	-	-	-
Chromium (total)	-	-	-	-	-	-
Lead (inorganic)	-	-	-	-	-	-
Mercury	-	-	-	-	-	-
Cobalt	-	-	-	-	-	-
Copper	0,001	-	-	-	-	D
Nickel	0,0001	-	-	-	-	D
Vanadium	0,001	-	-	-	-	D
Zinc	0,0006	-	-	-	-	D

Site Name: Recinto Folche_inhalación
Site Location: LOTE X
Job ID: 62288
Date Completed: 1-dic-yy
Completed By: TEMA LITOCLEAN

CHEMICAL DATA FOR SELECTED COCs

Orange = One or more parameter differs from User Chemical Database Constituent	Dermal Relative Abs. Factor Calculated	Absorbtion Fraction		
		Dermal (unitless)	Gastrointestinal (unitless)	
TPH - Aliph >C06-C08	0	0	0,8	TX11
TPH - Aliph >C08-C10	0	0	0,8	TX11
TPH - Aliph >C10-C12	0,2	0,1	0,5	TX11
TPH - Aliph >C12-C16	0,2	0,1	0,5	TX11
TPH - Aliph >C16-C21	0,2	0,1	0,5	TX11
TPH - Aliph >C21-C34	0,2	0,1	0,5	TX11
TPH - Arom >C07-C08	0	0	0,97	TX11
TPH - Arom >C08-C10	0	0	0,8	TX11
TPH - Arom >C10-C12	0,2	0,1	0,5	TX11
TPH - Arom >C12-C16	0,2	0,1	0,5	TX11
TPH - Arom >C16-C21	0,146067416	0,13	0,89	TX11
TPH - Arom >C21-C35	0,146067416	0,13	0,89	TX11
Arsenic	0,031578947	0,03	0,95	TX11
Barium	0,142857143	0,01	0,07	TX11
Chromium (total)	-	-	-	-
Lead (inorganic)	0,066666667	0,01	0,15	TX11
Mercury	0,142857143	0,01	0,07	TX11
Cobalt	0,0125	0,01	0,8	TX11
Copper	0,01754386	0,01	0,57	TX11
Nickel	0,25	0,01	0,04	TX11
Vanadium	0,384615385	0,01	0,026	TX11
Zinc	0,05	0,01	0,2	TX11

Site Name: Recinto Folche_inhalación
Site Location: LOTE X
Job ID: 62288
Date Completed: 1-dic-yy
Completed By: TEMA LITOCLEAN

CHEMICAL DATA FOR SELECTED COCs

	Regulatory Standards								
					UK Soil Guideline Values				
Orange = One or more parameter differs from User Chemical Database Constituent	Maximum Contaminant Level (mg/L)		Time-Weighted Average Workplace Criteria (mg/m^3)		Residential/Plant mg/kg	Residential/No Plant mg/kg	Allotments mg/kg	Commercial/Ind. mg/kg	
TPH - Aliph >C06-C08	-	-	-	-	-	-	-	-	-
TPH - Aliph >C08-C10	-	-	-	-	-	-	-	-	-
TPH - Aliph >C10-C12	-	-	-	-	-	-	-	-	-
TPH - Aliph >C12-C16	-	-	-	-	-	-	-	-	-
TPH - Aliph >C16-C21	-	-	-	-	-	-	-	-	-
TPH - Aliph >C21-C34	-	-	-	-	-	-	-	-	-
TPH - Arom >C07-C08	-	-	-	-	-	-	-	-	-
TPH - Arom >C08-C10	-	-	-	-	-	-	-	-	-
TPH - Arom >C10-C12	-	-	-	-	-	-	-	-	-
TPH - Arom >C12-C16	-	-	-	-	-	-	-	-	-
TPH - Arom >C16-C21	-	-	-	-	-	-	-	-	-
TPH - Arom >C21-C35	-	-	-	-	-	-	-	-	-
Arsenic	0,01	MC	0,5	OS	-	-	-	-	-
Barium	2	MC	0,5	OS	-	-	-	-	-
Chromium (total)	-	-	-	-	-	-	-	-	-
Lead (inorganic)	0,015	MC	50	OS	-	-	-	-	-
Mercury	0,002	MC	0,1	OS	-	-	-	-	-
Cobalt	-	-	0,1	OS	-	-	-	-	-
Copper	1,3	MC	1	OS	-	-	-	-	-
Nickel	0,1	MC	1	OS	1	1	2	12	UK8
Vanadium	0,02	MC	0,05	AC	-	-	-	-	-
Zinc	-	-	-	-	-	-	-	-	-

Site Name: Recinto Folche_inhalación
Site Location: LOTE X
Job ID: 62288
Date Completed: 1-dic-yy
Completed By: TEMA LITOCLEAN

CHEMICAL DATA FOR SELECTED COCs

	Regulatory Standards									
	Surface Water Quality Criteria									
Orange = One or more parameter differs from User Chemical Database	Aquatic Life Protection				Human Health Protection					
	Freshwater		Marine		Drink & Freshwater Fish		Freshwater Fish		Saltwater Fish	
Constituent	(mg/L)		(mg/L)		(mg/L)		(mg/L)		(mg/L)	
TPH - Aliph >C06-C08	-	-	-	-	-	-	-	-	-	-
TPH - Aliph >C08-C10	-	-	-	-	-	-	-	-	-	-
TPH - Aliph >C10-C12	-	-	-	-	-	-	-	-	-	-
TPH - Aliph >C12-C16	-	-	-	-	-	-	-	-	-	-
TPH - Aliph >C16-C21	-	-	-	-	-	-	-	-	-	-
TPH - Aliph >C21-C34	-	-	-	-	-	-	-	-	-	-
TPH - Arom >C07-C08	-	-	-	-	-	-	-	-	-	-
TPH - Arom >C08-C10	-	-	-	-	-	-	-	-	-	-
TPH - Arom >C10-C12	-	-	-	-	-	-	-	-	-	-
TPH - Arom >C12-C16	-	-	-	-	-	-	-	-	-	-
TPH - Arom >C16-C21	-	-	-	-	-	-	-	-	-	-
TPH - Arom >C21-C35	-	-	-	-	-	-	-	-	-	-
Arsenic	0,19	T1	0,078	T1	0,05	T3	0,00014	E	0,00014	E
Barium	-	-	-	-	2	T3	-	-	-	-
Chromium (total)	-	-	-	-	-	-	-	-	-	-
Lead (inorganic)	-	-	0,0053	T1	0,00498	T3	0,025	T3	0,0169	T3
Mercury	0,0013	T1	0,0011	T1	0,0000122	T3	0,0000122	T3	0,000025	T3
Cobalt	-	-	-	-	-	-	-	-	-	-
Copper	-	-	0,0036	T1	1,3	E	-	-	-	-
Nickel	-	-	0,0132	T1	0,61	E	4,6	E	4,6	E
Vanadium	-	-	-	-	-	-	-	-	-	-
Zinc	-	-	0,0842	T1	9,1	E	69	E	69	E

Site Name: Recinto Folche_inhalación
Site Location: LOTE X
Job ID: 62288
Date Completed: 1-dic-yy
Completed By: TEMA LITOCLEAN

CHEMICAL DATA FOR SELECTED COCs

	Toxicity Parameters											
Orange = One or more parameter differs from User Chemical Database Constituent	Oral RfD or TDSI (mg/kg/day)		Dermal RfD or TDSI (mg/kg/day)		Inhalation Equivalent RfC or TCA (mg/m^3)		Oral Equivalent Slope Factor 1/(mg/kg/day)		Dermal Equivalent Slope Factor 1/(mg/kg/day)		Inhalation Equivalent Unit Risk Factor 1/($\mu g/m^3$)	
TPH - Aliph >C06-C08	0,06	TX11	0,06	D2	18	TX11	-	-	-	-	-	-
TPH - Aliph >C08-C10	0,1	TX11	0,1	D2	***1***	***TPH CWC***	-	-	-	-	-	-
TPH - Aliph >C10-C12	0,1	TX11	0,1	D2	***1***	***TPH CWC***	-	-	-	-	-	-
TPH - Aliph >C12-C16	0,1	TX11	0,1	D2	***1***	***TPH CWC***	-	-	-	-	-	-
TPH - Aliph >C16-C21	2	TX11	2	D2	-	-	-	-	-	-	-	-
TPH - Aliph >C21-C34	1,6	TX11	1,6	D2	-	-	-	-	-	-	-	-
TPH - Arom >C07-C08	0,1	TX11	0,1	D2	1,9	TX11	-	-	-	-	-	-
TPH - Arom >C08-C10	0,04	TX11	0,04	D2	0,2	TX11	-	-	-	-	-	-
TPH - Arom >C10-C12	0,04	TPH	0,04	D2	0,2	TX11	-	-	-	-	-	-
TPH - Arom >C12-C16	0,04	TPH	0,04	D2	0,2	TX11	-	-	-	-	-	-
TPH - Arom >C16-C21	0,03	TPH	0,03	D2	-	-	-	-	-	-	-	-
TPH - Arom >C21-C35	0,03	TPH	0,03	D2	-	-	-	-	-	-	-	-
Arsenic	0,0003	EPA-I	***0,000015***	***RAIS***	-	-	1,5	EPA-I	1,5	D2	0,0043	EPA-I
Barium	0,2	EPA-I	0,2	D2	-	-	-	-	-	-	-	-
Chromium (total)	1,5	EPA-I	1,5	D2	0,00014	TX11	-	-	-	-	-	-
Lead (inorganic)	-	-	-	-	-	-	***0,0085***	***RAIS***	***0,0085***	***RAIS***	***0,000012***	***RAIS***
Mercury	***0,00016***	***RAIS***	***0,00016***	***RAIS***	0,0003	EPA-I	-	-	-	-	-	-
Cobalt	0,0003	TX11	0,0003	D2	0,000006	TX11	-	-	-	-	0,009	TX11
Copper	0,04	TX11	0,04	D2	-	-	-	-	-	-	-	-
Nickel	0,02	EPA-I	0,02	D2	0,00009	A	-	-	-	-	0,00048	EPA-I
Vanadium	***0,00504***	***RAIS***	***0,00504***	***RAIS***	***-***	***RAIS***	-	-	-	-	-	-
Zinc	0,3	EPA-I	0,3	D2	-	-	-	-	-	-	-	-

Site Name: Recinto Folche_inhalación
Site Location: LOTE X
Job ID: 62288
Date Completed: 1-dic-yy
Completed By: TEMA LITOCLEAN

Concentraciones de interés Recinto Folche

RBCA SITE ASSESSMENT	User-Specified COC Data

REPRESENTATIVE COC CONCENTRATIONS IN SOURCE MEDIA

CONSTITUENT	Representative COC Concentration			
	Groundwater		Soils (0 - 2 m)	
	value (mg/L)	note	value (mg/kg)	note
TPH - Aliph >C06-C08 *			5,9E+0	61586-FO-CS74-0,50
TPH - Aliph >C08-C10 *			5,9E+0	61586-FO-CS74-0,50
TPH - Aliph >C10-C12 *			1,8E+3	61586-FO-CS74-0,50
TPH - Aliph >C12-C16 *			1,8E+3	61586-FO-CS74-0,50
TPH - Aliph >C16-C21			1,8E+3	61586-FO-CS74-0,50
TPH - Aliph >C21-C34			1,0E+4	61586-FO-CS74-0,50
TPH - Arom >C07-C08			5,9E+0	61586-FO-CS74-0,50
TPH - Arom >C08-C10			5,9E+0	61586-FO-CS74-0,50
TPH - Arom >C10-C12			1,8E+3	61586-FO-CS74-0,50
TPH - Arom >C12-C16			1,8E+3	61586-FO-CS74-0,50
TPH - Arom >C16-C21			1,8E+3	61586-FO-CS74-0,50
TPH - Arom >C21-C35			1,0E+4	61586-FO-CS74-0,50
Arsenic *			1,1E+1	61586-FO-CS45-2,00
Barium			1,8E+3	61586-FO-CS42-2,00
Chromium (total)			4,0E+1	61586-FO-CS22-2,00
Lead (inorganic) *			5,3E+1	61586-FO-CS67-2,00
Mercury *			3,2E-1	61586-FO-CS15-2,00
Cobalt			1,5E+1	61586-FO-CS74-0,50
Copper			5,0E+1	61586-FO-CS13-0,0
Nickel			3,4E+1	61586-FO-CS74-0,50
Vanadium *			6,0E+1	61586-FO-CS74-0,50
Zinc			1,3E+2	61586-FO-CS74-0,50

Escenario *ON SITE* - Etapa de mejora ambiental

Inhalación de vapores y partículas en espacios abiertos

RBCA SITE ASSESSMENT

Input Parameter Summary

Site Name: Recinto Folche_inhalación
Site Location: LOTE X

Completed By: TEMA LITOCLEAN
Date Completed: 1-dic-yy

Exposure Parameters		Residential				Commercial/Industrial		User Defined
		Child*	Adolescent	Adult	Age Adjusted**	Adult	Construct.	
ATc	Averaging time for carcinogens (yr)	74,5	74,5	74,5	NA	74,5	74,5	74,5
ATn	Averaging time for non-carcinogens (yr)	6	12	30	NA	24	1	2
BW	Body weight (kg)	15	35	70	NA	65	70	65
ED	Exposure duration (yr)	6	12	30	NA	24	1	2
τ	Averaging time for vapor flux (yr)	30	30	30	NA	30	30	30
EF	Exposure frequency (days/yr)	350	350	350	NA	230	180	230
EFD	Exposure frequency for dermal exposure	350	350	350	NA	230	180	230
IRw	Ingestion rate of water (L/day)	1	1	2	2,5	1	NA	1
IRs	Ingestion rate of soil (mg/day)	200	200	100	387	50	100	50
SA	Skin surface area (dermal) (cm^2)	2023	2023	3160	4771	3160	3160	3160
M	Soil to skin adherence factor	0,5	0,5	0,5	NA	0,5	0,5	0,5
ETswim	Swimming exposure time (hr/event)	1	3	3	NA	NA	NA	NA
EVswim	Swimming event frequency (events/yr)	12	12	12	NA	NA	NA	NA
IRswim	Water ingestion while swimming (L/hr)	0,5	0,5	0,05	0,3	NA	NA	NA
SAswim	Skin surface area for swimming (cm^2)	3500	8100	23000	15680	NA	NA	NA
IRfish	Ingestion rate of fish (kg/yr)	0,025	0,025	0,025	0,053	NA	NA	NA
FIfish	Contaminated fish fraction (unitless)	1	1	1	NA	NA	NA	NA
IRbg	Below-ground vegetable ingestion	0,002	0,002	0,006	2,053	NA	NA	NA
IRabg	Above-ground vegetable ingestion	0,001	0,001	0,002	0,887	NA	NA	NA
VGbg	Above-ground Veg. Ingest. Correction Factor	0,01	0,01	0,01	NA	NA	NA	NA
VGabg	Below-ground Veg. Ingest. Correction Factor	0,01	0,01	0,01	NA	NA	NA	NA

* = Child Receptor used for Non-Carcinogens
** = Age-adjusted rate is effective value corresponding to adult exposure factors.

Complete Exposure Pathways and Receptors	On-site	Off-site 1	Off-site 2
Groundwater:			
Groundwater Ingestion	None	None	None
Soil Leaching to Groundwater Ingestion	None	None	None
Apply MCL Values	No	No	No
Applicable Surface Water Exposure Routes:			
Swimming	NA	NA	None
Fish Consumption	NA	NA	None
Aquatic Life Protection	NA	NA	None
Soil:			
Direct Contact: direct combined pathways	None	NA	NA
Apply CLEA- UK SGV levels		No	
Outdoor Air:			
Particulates from Surface Soils	User Defined	None	None
Volatilization from Soils	User Defined	None	None
Volatilization from Groundwater	None	None	None
Indoor Air:			
Volatilization from Soils	None	NA	NA
Volatilization from Groundwater	None	None	None
Soil Leaching to Groundwater Volatilization	None	None	None

Receptor Distance from Source Media	On-site	Off-site 1	Off-site 2	(Units)
Groundwater receptor	NA	NA	NA	(m)
Outdoor air inhalation receptor	0	NA	NA	(m)
Indoor air inhalation receptor	NA	NA	NA	(m)

Target Health Risk Values		Individual	Cumulative
TR	Target Risk (carcinogens)	1,0E-5	1,0E-5
THQ	Target Hazard Quotient (non-carcinogenic risk)	1,0E+0	1,0E+0

Modeling Options	
RBCA tier	Tier 2
Outdoor air volatilization model	Surface & Subsurface Models: ASTM Model
Indoor air volatilization model	NA
Soil leaching model	NA
Use soil attenuation model (SAM) for leachate?	NA
Use dual equilibrium desorption model?	No
Apply Mass Balance Limit for Soil Volatilization?	No
Apply UK (CLEA) SGV as soil concentration limit	No
Vegetable calculation options	NA
Air dilution factor	NA
Groundwater dilution-attenuation factor	NA

NOTE: NA = Not applicable
Orange = Site-specific value (different from current default value)

RBCA SITE ASSESSMENT

Input Parameter Summary

Site Name: Recinto Folche_inhalación
Site Location: LOTE X

Completed By: TEMA LITOCLEAN
Date Completed: 1-dic-yy

Surface Soil Column Parameters		Value			(Units)
h_{cap}	Capillary zone thickness	NA			(m)
h_v	Vadose zone thickness	NA			(m)
ρ_s	Soil bulk density	1,7			(g/cm^3)
f_{oc}	Fraction organic carbon	***0,005***			(-)
θ_T	Soil total porosity	***0,41***			(-)
		capillary	**vadose**	**foundation**	
θ_w	Volumetric water content	***0,369***	0,12	0,12	(-)
θ_a	Volumetric air content	***0,041***	***0,29***	0,26	(-)
K_{vs}	Vertical hydraulic conductivity	***86,4***			(cm/d)
k_v	Vapor permeability	***1E-13***			(m^2)
L_{gw}	Depth to groundwater	NA			(m)
pH	Soil/groundwater pH	***8,06***			(-)
W	Length of source-zone area parallel to wind	***300***			(m)
W_{gw}	Length of source-zone area parallel to GW flow	NA			(m)
L_{ss}	Thickness of affected surface soils	1			(m)
A	Source zone area	2025			(m^2)
L_s	Depth to top of affected soils	0			(m)
L_{base}	Depth to base of affected soils	***2***			(m)
L_{subs}	Thickness of affected soils	***2***			(m)

Outdoor Air Parameters		Value	(Units)
U_{air}	Ambient air velocity in mixing zone	***3,4***	(m/s)
δ_{air}	Air mixing zone height	2	(m)
Q/C	Inverse mean concentration at the center of source	NA	
P_a	Areal particulate emission rate	6,9E-14	(g/cm^2/s)
V	Fraction of vegetative cover	NA	
U_m	Mean annual airvelocity at 7m	NA	
U_t	Equivalent 7m air velocity threshold value	NA	
F(x)	Windspeed function dependant on Um/Ut	NA	
PEF	Partculate Emission Factor	3,04412E-11	

Building Parameters		Residential	Commercial	(Units)
L_b	Building volume/area ratio	NA	NA	(m)
A_b	Foundation area	NA	NA	(m^2)
X_{crk}	Foundation perimeter	NA	NA	(m)
ER	Building air exchange rate	NA	NA	(1/s)
L_{crk}	Foundation thickness	NA	NA	(m)
Z_{crk}	Depth to bottom of foundation slab	NA	NA	(m)
η	Foundation crack fraction	NA	NA	(-)
dP	Indoor/outdoor differential pressure	NA	NA	(g/cm/s^2)
Q_s	Convective air flow through slab	NA	NA	(m^3/s)
θ_{wcrack}	Volumetric water content of cracks	NA	NA	(-)
θ_{acrack}	Volumetric air content of cracks	NA	NA	(-)
BV	Building Volume	NA	NA	(m^3)
w	Building Width Perpendicular to GW flow	NA	NA	(m)
L	Building Length Parallel to GW flow	NA	NA	(m)
v	Saturated Soil Zone Porosity	NA	NA	(-)

Groundwater Parameters		Value	(Units)
δ_{gw}	Groundwater mixing zone depth	NA	(m)
I_f	Net groundwater infiltration rate	NA	(cm/yr)
U_{gw}	Groundwater Darcy velocity	NA	(cm/d)
V_{gw}	Groundwater seepage velocity	NA	(cm/d)
K_s	Saturated hydraulic conductivity	NA	(cm/d)
i	Groundwater gradient	NA	(-)
S_w	Width of groundwater source zone	NA	(m)
S_d	Depth of groundwater source zone	NA	(m)
θ_{eff}	Effective porosity in water-bearing unit	NA	(-)
$f_{oc\text{-}sat}$	Fraction organic carbon in water-bearing unit	NA	(-)
pH_{sat}	Groundwater pH	NA	(-)
	Biodegradation considered?	NA	

Transport Parameters		Off-site 1	Off-site 2	Off-site 1	Off-site 2	(Units)
Lateral Groundwater Transport		**Groundwater Ingestion**		**Groundwater to Indoor Air**		
α_x	Longitudinal dispersivity	NA	NA	NA	NA	(m)
α_y	Transverse dispersivity	NA	NA	NA	NA	(m)
α_z	Vertical dispersivity	NA	NA	NA	NA	(m)
Lateral Outdoor Air Transport		**Soil to Outdoor Air Inhal.**		**GW to Outdoor Air Inhal.**		
σ_y	Transverse dispersion coefficient	NA	NA	NA	NA	(m)
σ_z	Vertical dispersion coefficient	NA	NA	NA	NA	(m)
ADF	Air dispersion factor	NA	NA	NA	NA	(-)

Surface Water Parameters		Off-site 2	(Units)
Q_{sw}	Surface water flowrate	NA	(m^3/s)
W_{pi}	Width of GW plume at SW discharge	NA	(m)
δ_{pi}	Thickness of GW plume at SW discharge	NA	(m)
DF_{sw}	Groundwater-to-surface water dilution factor	NA	(-)

NOTE: NA = Not applicable

Orange = Site-specific value (different from current default value)

RBCA SITE ASSESSMENT

TIER 2 EXPOSURE CONCENTRATION AND INTAKE CALCULATION

OUTDOOR AIR EXPOSURE PATHWAYS ■ **(Checked if Pathway is Complete)**

SURFACE SOILS (0 - 1 m):
VAPOR AND DUST INHALATION

Constituents of Concern	1) Source Medium	2) NAF Value (m^3/kg) Receptor				3) Exposure Medium Outdoor Air: POE Conc. (mg/m^3) (1) / (2)			
	Soil Conc. (mg/kg)	On-site (0 m)		Off-site 1 (0 m)	Off-site 2 (0 m)	On-site (0 m)		Off-site 1 (0 m)	Off-site 2 (0 m)
		User Defined	Construction Worker	None	None	User Defined	Construction Worker	None	None
TPH - Aliph >C06-C08 *	5,9E+0	6,3E+3				9,3E-4			
TPH - Aliph >C08-C10 *	5,9E+0	6,3E+3				9,3E-4			
TPH - Aliph >C10-C12 *	1,8E+3	6,3E+3				2,9E-1			
TPH - Aliph >C12-C16 *	1,8E+3	6,3E+3				2,9E-1			
TPH - Aliph >C16-C21	1,8E+3	1,2E+4				1,5E-1			
TPH - Aliph >C21-C34	1,0E+4	1,0E+4				1,0E+0			
TPH - Arom >C07-C08	5,9E+0	6,3E+3				9,3E-4			
TPH - Arom >C08-C10	5,9E+0	6,3E+3				9,3E-4			
TPH - Arom >C10-C12	1,8E+3	6,3E+3				2,9E-1			
TPH - Arom >C12-C16	1,8E+3	1,1E+4				1,7E-1			
TPH - Arom >C16-C21	1,8E+3	3,7E+4				4,8E-2			
TPH - Arom >C21-C35	1,0E+4	4,7E+5				2,1E-2			
Arsenic *	1,1E+1	3,3E+10				3,4E-10			
Barium	1,8E+3	3,3E+10				5,4E-8			
Chromium (total)	4,0E+1	3,3E+10				1,2E-9			
Lead (inorganic) *	5,3E+1	3,3E+10				1,6E-9			
Mercury *	3,2E-1	2,8E+4				1,1E-5			
Cobalt	1,5E+1	3,3E+10				4,5E-10			
Copper	5,0E+1	3,3E+10				1,5E-9			
Nickel	3,4E+1	3,3E+10				1,0E-9			
Vanadium *	6,0E+1	3,3E+10				1,8E-9			
Zinc	1,3E+2	3,3E+10				4,1E-9			

NOTE: NAF = Natural attenuation factor POE = Point of exposure

RBCA SITE ASSESSMENT

TIER 2 EXPOSURE CONCENTRATION AND INTAKE CALCULATION

OUTDOOR AIR EXPOSURE PATHWAYS ■ **(Checked if Pathway is Complete)**

SURFACE SOILS (0 - 1 m):

VAPOR AND DUST INHALATION

	1) Source Medium	2) NAF Value (m^3/kg) Receptor				3) Exposure Medium Outdoor Air: POE Conc. (mg/m^3) (1) / (2)			
	Soil Conc. (mg/kg)	On-site (0 m)		Off-site 1 (0 m)	Off-site 2 (0 m)	On-site (0 m)		Off-site 1 (0 m)	Off-site 2 (0 m)
Constituents of Concern		User Defined	Construction Worker	None	None	User Defined	Construction Worker	None	None

Site Name: Recinto Folche_inhalación
Site Location: LOTE X
Completed By: TEMA LITOCLEAN

Date Completed: 1-dic-yy
Job ID: 62288

RBCA SITE ASSESSMENT

TIER 2 EXPOSURE CONCENTRATION AND INTAKE CALCULATION

OUTDOOR AIR EXPOSURE PATHWAYS

SURFACE SOILS (0 - 1 m):

VAPOR AND DUST INHALATION (cont'd)

	4) Exposure Multiplier (EFxED)/(ATx365) (unitless)				5) Average Inhalation Exposure Concentration (mg/m^3) (3) X (4)			
	On-site (0 m)		Off-site 1 (0 m)	Off-site 2 (0 m)	On-site (0 m)		Off-site 1 (0 m)	Off-site 2 (0 m)
Constituents of Concern	User Defined	Construction Worker	None	None	User Defined	Construction Worker	None	None
TPH - Aliph >C06-C08 *	6,3E-1				5,9E-4			
TPH - Aliph >C08-C10 *	6,3E-1				5,9E-4			
TPH - Aliph >C10-C12 *	6,3E-1				1,8E-1			
TPH - Aliph >C12-C16 *	6,3E-1				1,8E-1			
TPH - Aliph >C16-C21	6,3E-1				9,3E-2			
TPH - Aliph >C21-C34	6,3E-1				6,3E-1			
TPH - Arom >C07-C08	6,3E-1				5,9E-4			
TPH - Arom >C08-C10	6,3E-1				5,9E-4			
TPH - Arom >C10-C12	6,3E-1				1,8E-1			
TPH - Arom >C12-C16	6,3E-1				1,1E-1			
TPH - Arom >C16-C21	6,3E-1				3,0E-2			
TPH - Arom >C21-C35	6,3E-1				1,3E-2			
Arsenic *	1,7E-2				5,8E-12			
Barium	6,3E-1				3,4E-8			
Chromium (total)	6,3E-1				7,6E-10			
Lead (inorganic) *	1,7E-2				2,7E-11			
Mercury *	6,3E-1				7,2E-6			
Cobalt	1,7E-2				7,7E-12			
Copper	6,3E-1				9,5E-10			
Nickel	1,7E-2				1,7E-11			
Vanadium *	6,3E-1				1,1E-9			
Zinc	6,3E-1				2,6E-9			

* = Chemical with user-specified data

NOTE: AT = Averaging time (days) EF = Exposure frequency (days/yr) ED = Exposure duration (yr)

RBCA SITE ASSESSMENT

TIER 2 EXPOSURE CONCENTRATION AND INTAKE CALCULATION

OUTDOOR AIR EXPOSURE PATHWAYS

SURFACE SOILS (0 - 1 m):

VAPOR AND DUST INHALATION (cont'd)

	4) Exposure Multiplier (EFxED)/(ATx365) (unitless)				5) Average Inhalation Exposure Concentration (mg/m^3) (3) X (4)			
	On-site (0 m)		Off-site 1 (0 m)	Off-site 2 (0 m)	On-site (0 m)		Off-site 1 (0 m)	Off-site 2 (0 m)
Constituents of Concern	User Defined	Construction Worker	None	None	User Defined	Construction Worker	None	None

Site Name: Recinto Folche_inhalación
Site Location: LOTE X
Completed By: TEMA LITOCLEAN

Date Completed: 1-dic-yy
Job ID: 62288

RBCA SITE ASSESSMENT

TIER 2 EXPOSURE CONCENTRATION AND INTAKE CALCULATION

OUTDOOR AIR EXPOSURE PATHWAYS ■ **(Checked if Pathway is Complete)**

SUBSURFACE SOILS (1 - 2 m):

VAPOR INHALATION

Constituents of Concern	1) Source Medium	2) NAF Value (m^3/kg) Receptor			3) Exposure Medium Outdoor Air: POE Conc. (mg/m^3) (1) / (2)		
	Soil Conc. (mg/kg)	On-site (0 m) User Defined	Off-site 1 (0 m) None	Off-site 2 (0 m) None	On-site (0 m) User Defined	Off-site 1 (0 m) None	Off-site 2 (0 m) None
TPH - Aliph >C06-C08 *	5,9E+0	6,3E+3			9,3E-4		
TPH - Aliph >C08-C10 *	5,9E+0	6,3E+3			9,3E-4		
TPH - Aliph >C10-C12 *	1,8E+3	6,3E+3			2,9E-1		
TPH - Aliph >C12-C16 *	1,8E+3	6,3E+3			2,9E-1		
TPH - Aliph >C16-C21	1,8E+3	1,5E+4			1,2E-1		
TPH - Aliph >C21-C34	1,0E+4	1,0E+4			9,8E-1		
TPH - Arom >C07-C08	5,9E+0	6,3E+3			9,3E-4		
TPH - Arom >C08-C10	5,9E+0	6,3E+3			9,3E-4		
TPH - Arom >C10-C12	1,8E+3	6,3E+3			2,9E-1		
TPH - Arom >C12-C16	1,8E+3	1,2E+4			1,6E-1		
TPH - Arom >C16-C21	1,8E+3	1,4E+5			1,3E-2		
TPH - Arom >C21-C35	1,0E+4	2,2E+7			4,5E-4		
Arsenic *	1,1E+1	VFsamb					
Barium	1,8E+3	VFsamb					
Chromium (total)	4,0E+1	VFsamb					
Lead (inorganic) *	5,3E+1	VFsamb					
Mercury *	3,2E-1	7,8E+4			4,1E-6		
Cobalt	1,5E+1	VFsamb					
Copper	5,0E+1	VFsamb					
Nickel	3,4E+1	VFsamb					
Vanadium *	6,0E+1	VFsamb					
Zinc	1,3E+2	VFsamb					

NOTE: NAF = Natural attenuation factor POE = Point of exposure

RBCA SITE ASSESSMENT

TIER 2 EXPOSURE CONCENTRATION AND INTAKE CALCULATION

OUTDOOR AIR EXPOSURE PATHWAYS ■ **(Checked if Pathway is Complete)**

SUBSURFACE SOILS (1 - 2 m):

VAPOR INHALATION

	1) Source Medium	2) NAF Value (m^3/kg) Receptor			3) Exposure Medium Outdoor Air: POE Conc. (mg/m^3) (1) / (2)		
Constituents of Concern	Soil Conc. (mg/kg)	On-site (0 m)	Off-site 1 (0 m)	Off-site 2 (0 m)	On-site (0 m)	Off-site 1 (0 m)	Off-site 2 (0 m)
		User Defined	None	None	User Defined	None	None

Site Name: Recinto Folche_inhalación
Site Location: LOTE X
Completed By: TEMA LITOCLEAN

Date Completed: 1-dic-yy
Job ID: 62288

RBCA SITE ASSESSMENT

TIER 2 EXPOSURE CONCENTRATION AND INTAKE CALCULATION

OUTDOOR AIR EXPOSURE PATHWAYS

SUBSURFACE SOILS (1 - 2 m):

VAPOR INHALATION (cont'd)

	4) Exposure Multiplier (EFxED)/(ATx365) (unitless)			5) Average Inhalation Exposure Concentration (mg/m^3) (3) X (4)		
	On-site (0 m)	Off-site 1 (0 m)	Off-site 2 (0 m)	On-site (0 m)	Off-site 1 (0 m)	Off-site 2 (0 m)
Constituents of Concern	User Defined	None	None	User Defined	None	None
TPH - Aliph >C06-C08 *	6,3E-1			5,9E-4		
TPH - Aliph >C08-C10 *	6,3E-1			5,9E-4		
TPH - Aliph >C10-C12 *	6,3E-1			1,8E-1		
TPH - Aliph >C12-C16 *	6,3E-1			1,8E-1		
TPH - Aliph >C16-C21	6,3E-1			7,5E-2		
TPH - Aliph >C21-C34	6,3E-1			6,2E-1		
TPH - Arom >C07-C08	6,3E-1			5,9E-4		
TPH - Arom >C08-C10	6,3E-1			5,9E-4		
TPH - Arom >C10-C12	6,3E-1			1,8E-1		
TPH - Arom >C12-C16	6,3E-1			9,8E-2		
TPH - Arom >C16-C21	6,3E-1			8,1E-3		
TPH - Arom >C21-C35	6,3E-1			2,8E-4		
Arsenic *	1,7E-2					
Barium	6,3E-1					
Chromium (total)	6,3E-1					
Lead (inorganic) *	1,7E-2					
Mercury *	6,3E-1			2,6E-6		
Cobalt	1,7E-2					
Copper	6,3E-1					
Nickel	1,7E-2					
Vanadium *	6,3E-1					
Zinc	6,3E-1					

NOTE: AT = Averaging time (days) EF = Exposure frequency (days/yr) ED = Exposure duration (yr)

RBCA SITE ASSESSMENT

TIER 2 EXPOSURE CONCENTRATION AND INTAKE CALCULATION

OUTDOOR AIR EXPOSURE PATHWAYS

SUBSURFACE SOILS (1 - 2 m):

VAPOR INHALATION (cont'd)

	4) Exposure Multiplier (EFxED)/(ATx365) (unitless)			5) Average Inhalation Exposure Concentration (mg/m^3) (3) X (4)		
	On-site (0 m)	Off-site 1 (0 m)	Off-site 2 (0 m)	On-site (0 m)	Off-site 1 (0 m)	Off-site 2 (0 m)
Constituents of Concern	User Defined	None	None	User Defined	None	None

Site Name: Recinto Folche_inhalación
Site Location: LOTE X
Completed By: TEMA LITOCLEAN

Date Completed: 1-dic-yy
Job ID: 62288

RBCA SITE ASSESSMENT

TIER 2 EXPOSURE CONCENTRATION AND INTAKE CALCULATION

OUTDOOR AIR EXPOSURE PATHWAYS ☐ **(Checked if Pathway is Complete)**

GROUNDWATER: VAPOR INHALATION

Exposure Concentration

Constituents of Concern	1) Source Medium	2) NAF Value (m^3/L) Receptor			3) Exposure Medium Outdoor Air: POE Conc. (mg/m^3) (1) / (2)		
	Groundwater Conc. (mg/L)	On-site (0 m) None	Off-site 1 (0 m) None	Off-site 2 (0 m) None	On-site (0 m) None	Off-site 1 (0 m) None	Off-site 2 (0 m) None
TPH - Aliph >C06-C08 *							
TPH - Aliph >C08-C10 *							
TPH - Aliph >C10-C12 *							
TPH - Aliph >C12-C16 *							
TPH - Aliph >C16-C21							
TPH - Aliph >C21-C34							
TPH - Arom >C07-C08							
TPH - Arom >C08-C10							
TPH - Arom >C10-C12							
TPH - Arom >C12-C16							
TPH - Arom >C16-C21							
TPH - Arom >C21-C35							
Arsenic *							
Barium							
Chromium (total)							
Lead (inorganic) *							
Mercury *							
Cobalt							
Copper							
Nickel							
Vanadium *							
Zinc							

NOTE: NAF = Natural attenuation factor POE = Point of exposure

RBCA SITE ASSESSMENT

TIER 2 EXPOSURE CONCENTRATION AND INTAKE CALCULATION

OUTDOOR AIR EXPOSURE PATHWAYS ☐ **(Checked if Pathway is Complete)**

GROUNDWATER: VAPOR INHALATION

Exposure Concentration

	1) Source Medium	2) NAF Value (m^3/L) Receptor			3) Exposure Medium Outdoor Air: POE Conc. (mg/m^3) (1) / (2)		
Constituents of Concern	Groundwater Conc. (mg/L)	On-site (0 m)	Off-site 1 (0 m)	Off-site 2 (0 m)	On-site (0 m)	Off-site 1 (0 m)	Off-site 2 (0 m)
		None	None	None	None	None	None

Site Name: Recinto Folche_inhalación
Site Location: LOTE X
Completed By: TEMA LITOCLEAN

Date Completed: 1-dic-yy
Job ID: 62288

RBCA SITE ASSESSMENT

TIER 2 EXPOSURE CONCENTRATION AND INTAKE CALCULATION

OUTDOOR AIR EXPOSURE PATHWAYS

GROUNDWATER: VAPOR

INHALATION (cont'd)

Constituents of Concern	4) Exposure Multiplier (EFxED)/(ATx365) (unitless)			5) Average Inhalation Exposure Concentration (mg/m^3) (3) X (4)		
	On-site (0 m)	Off-site 1 (0 m)	Off-site 2 (0 m)	On-site (0 m)	Off-site 1 (0 m)	Off-site 2 (0 m)
	None	None	None	None	None	None
TPH - Aliph >C06-C08 *						
TPH - Aliph >C08-C10 *						
TPH - Aliph >C10-C12 *						
TPH - Aliph >C12-C16 *						
TPH - Aliph >C16-C21						
TPH - Aliph >C21-C34						
TPH - Arom >C07-C08						
TPH - Arom >C08-C10						
TPH - Arom >C10-C12						
TPH - Arom >C12-C16						
TPH - Arom >C16-C21						
TPH - Arom >C21-C35						
Arsenic *						
Barium						
Chromium (total)						
Lead (inorganic) *						
Mercury *						
Cobalt						
Copper						
Nickel						
Vanadium *						
Zinc						

NOTE: AT = Averaging time (days) EF = Exposure frequency (days/yr) ED = Exposure duration (yr)

RBCA SITE ASSESSMENT

TIER 2 EXPOSURE CONCENTRATION AND INTAKE CALCULATION

OUTDOOR AIR EXPOSURE PATHWAYS

GROUNDWATER: VAPOR

INHALATION (cont'd)

	4) Exposure Multiplier (EFxED)/(ATx365) (unitless)			5) Average Inhalation Exposure Concentration (mg/m^3) (3) X (4)		
	On-site (0 m)	Off-site 1 (0 m)	Off-site 2 (0 m)	On-site (0 m)	Off-site 1 (0 m)	Off-site 2 (0 m)
Constituents of Concern	None	None	None	None	None	None

Site Name: Recinto Folche_inhalación
Site Location: LOTE X
Completed By: TEMA LITOCLEAN

Date Completed: 1-dic-yy
Job ID: 62288

RBCA SITE ASSESSMENT

TIER 2 EXPOSURE CONCENTRATION AND INTAKE CALCULATION

OUTDOOR AIR EXPOSURE PATHWAYS

MAXIMUM PATHWAY EXPOSURE (mg/m^3)

Maximum average expsosure concentration from soil and groundwater routes.)

Constituents of Concern	On-site (0 m) User Defined	On-site (0 m) Construction Worker	Off-site 1 (0 m) None	Off-site 2 (0 m) None
TPH - Aliph >C06-C08 *	5,9E-4			
TPH - Aliph >C08-C10 *	5,9E-4			
TPH - Aliph >C10-C12 *	1,8E-1			
TPH - Aliph >C12-C16 *	1,8E-1			
TPH - Aliph >C16-C21	9,3E-2			
TPH - Aliph >C21-C34	6,3E-1			
TPH - Arom >C07-C08	5,9E-4			
TPH - Arom >C08-C10	5,9E-4			
TPH - Arom >C10-C12	1,8E-1			
TPH - Arom >C12-C16	1,1E-1			
TPH - Arom >C16-C21	3,0E-2			
TPH - Arom >C21-C35	1,3E-2			
Arsenic *	5,8E-12			
Barium	3,4E-8			
Chromium (total)	7,6E-10			
Lead (inorganic) *	2,7E-11			
Mercury *	7,2E-6			
Cobalt	7,7E-12			
Copper	9,5E-10			
Nickel	1,7E-11			
Vanadium *	1,1E-9			
Zinc	2,6E-9			

RBCA SITE ASSESSMENT

TIER 2 EXPOSURE CONCENTRATION AND INTAKE CALCULATION

OUTDOOR AIR EXPOSURE PATHWAYS

MAXIMUM PATHWAY EXPOSURE (mg/m^3)

Maximum average expsosure concentration from soil and groundwater routes.)

Constituents of Concern	On-site (0 m)		Off-site 1 (0 m)	Off-site 2 (0 m)
	User Defined	Construction Worker	None	None

Site Name: Recinto Folche_inhalación
Site Location: LOTE X
Completed By: TEMA LITOCLEAN

Date Completed: 1-dic-yy
Job ID: 62288

RBCA SITE ASSESSMENT

TIER 2 PATHWAY RISK CALCULATION

OUTDOOR AIR EXPOSURE PATHWAYS ■ **(Checked if Pathway is Complete)**

CARCINOGENIC RISK

Constituents of Concern	(1) Is Carcinogenic	(2) Maximum Carcinogenic Exposure (mg/m^3)				(3) Inhalation Unit Risk Factor (µg/m^3)^-1	(4) Individual COC Risk (2) x (3) x 1000			
		On-site (0 m)		Off-site 1 (0 m)	Off-site 2 (0 m)		On-site (0 m)		Off-site 1 (0 m)	Off-site 2 (0 m)
		User Defined	Construction Worker	None	None		User Defined	Construction Worker	None	None
TPH - Aliph >C06-C08 *	FALSO	-	-	-	-	-				
TPH - Aliph >C08-C10 *	FALSO	-	-	-	-	-				
TPH - Aliph >C10-C12 *	FALSO	-	-	-	-	-				
TPH - Aliph >C12-C16 *	FALSO	-	-	-	-	-				
TPH - Aliph >C16-C21	FALSO	-	-	-	-	-				
TPH - Aliph >C21-C34	FALSO	-	-	-	-	-				
TPH - Arom >C07-C08	FALSO	-	-	-	-	-				
TPH - Arom >C08-C10	FALSO	-	-	-	-	-				
TPH - Arom >C10-C12	FALSO	-	-	-	-	-				
TPH - Arom >C12-C16	FALSO	-	-	-	-	-				
TPH - Arom >C16-C21	FALSO	-	-	-	-	-				
TPH - Arom >C21-C35	FALSO	-	-	-	-	-				
Arsenic *	#########	5,8E-12		-	-	4,3E-3	2,5E-11			
Barium	FALSO	-	-	-	-	-				
Chromium (total)	FALSO	-	-	-	-	-				
Lead (inorganic) *	#########	2,7E-11		-	-	1,2E-5	3,3E-13			
Mercury *	FALSO	-	-	-	-	-				
Cobalt	#########	7,7E-12		-	-	9,0E-3	6,9E-11			
Copper	FALSO	-	-	-	-	-				
Nickel	#########	1,7E-11		-	-	4,8E-4	8,4E-12			
Vanadium *	FALSO	-	-	-	-	-				
Zinc	FALSO	-	-	-	-	-				

Total Pathway Carcinogenic Risk = **1,0E-10**

RBCA SITE ASSESSMENT

TIER 2 PATHWAY RISK CALCULATION

OUTDOOR AIR EXPOSURE PATHWAYS ■ **(Checked if Pathway is Complete)**

CARCINOGENIC RISK

Constituents of Concern	(1) Is Carcinogenic	(2) Maximum Carcinogenic Exposure (mg/m^3)				(3) Inhalation Unit Risk Factor (µg/m^3)^-1	(4) Individual COC Risk (2) x (3) x 1000			
		On-site (0 m)		Off-site 1 (0 m)	Off-site 2 (0 m)		On-site (0 m)		Off-site 1 (0 m)	Off-site 2 (0 m)
		User Defined	Construction Worker	None	None		User Defined	Construction Worker	None	None

Site Name: Recinto Folche_inhalación
Site Location: LOTE X

Completed By: TEMA LITOCLEAN
Date Completed: 1-dic-yy

Job ID: 62288

RBCA SITE ASSESSMENT

TIER 2 PATHWAY RISK CALCULATION

OUTDOOR AIR EXPOSURE PATHWAYS ■ **(Checked if Pathway is Complete)**

TOXIC EFFECTS

Constituents of Concern	(5) Maximum Toxicant Exposure (mg/m^3)				(6) Inhalation Reference Conc. (mg/m^3)	(7) Individual COC Hazard Quotient (5) / (6)			
	On-site (0 m)		Off-site 1 (0 m)	Off-site 2 (0 m)		On-site (0 m)		Off-site 1 (0 m)	Off-site 2 (0 m)
	User Defined	Construction Worker	None	None		User Defined	Construction Worker	None	None
TPH - Aliph >C06-C08 *	5,9E-4				1,8E+1	3,3E-5			
TPH - Aliph >C08-C10 *	5,9E-4				1,0E+0	5,9E-4			
TPH - Aliph >C10-C12 *	1,8E-1				1,0E+0	1,8E-1			
TPH - Aliph >C12-C16 *	1,8E-1				1,0E+0	1,8E-1			
TPH - Aliph >C16-C21	9,3E-2				-				
TPH - Aliph >C21-C34	6,3E-1				-				
TPH - Arom >C07-C08	5,9E-4				1,9E+0	3,1E-4			
TPH - Arom >C08-C10	5,9E-4				2,0E-1	2,9E-3			
TPH - Arom >C10-C12	1,8E-1				2,0E-1	9,0E-1			
TPH - Arom >C12-C16	1,1E-1				2,0E-1	5,3E-1			
TPH - Arom >C16-C21	3,0E-2				-				
TPH - Arom >C21-C35	1,3E-2				-				
Arsenic *	2,1E-10				-				
Barium	3,4E-8				-				
Chromium (total)	7,6E-10				1,4E-4	5,4E-6			
Lead (inorganic) *	1,0E-9				-				
Mercury *	7,2E-6				3,0E-4	2,4E-2			
Cobalt	2,9E-10				6,0E-6	4,8E-5			
Copper	9,5E-10				-				
Nickel	6,5E-10				9,0E-5	7,2E-6			
Vanadium *	1,1E-9				-				
Zinc	2,6E-9				-				
Total Pathway Hazard Index =						**1,8E+0**			

RBCA SITE ASSESSMENT

TIER 2 PATHWAY RISK CALCULATION

OUTDOOR AIR EXPOSURE PATHWAYS ■ **(Checked if Pathway is Complete)**

	TOXIC EFFECTS								
	(5) Maximum Toxicant Exposure (mg/m^3)				(6) Inhalation Reference	(7) Individual COC Hazard Quotient (5) / (6)			
	On-site (0 m)		Off-site 1 (0 m)	Off-site 2 (0 m)	Conc. (mg/m^3)	On-site (0 m)		Off-site 1 (0 m)	Off-site 2 (0 m)
Constituents of Concern	User Defined	Construction Worker	None	None		User Defined	Construction Worker	None	None

Site Name: Recinto Folche_inhalación
Site Location: LOTE X

Completed By: TEMA LITOCLEAN
Date Completed: 1-dic-yy

Job ID: 62288

Estudio adicional. Máxima exposición

Escenario *ON SITE* - Instalaciones Lote X

Inhalación de vapores y partículas en espacios abiertos

RBCA SITE ASSESSMENT

Input Parameter Summary

Site Name: Recinto Folche_inhalación_adicional max
Site Location: LOTE X

Completed By: TEMA LITOCLEAN
Date Completed: 1-dic-yy

Exposure Parameters		Residential				Commercial/Industrial		User Defined
		Child*	Adolescent	Adult	Age Adjusted**	Adult	Construct.	
ATc	Averaging time for carcinogens (yr)	74,5	74,5	74,5	NA	74,5	74,5	74,5
ATn	Averaging time for non-carcinogens (yr)	6	12	30	NA	24	1	24
BW	Body weight (kg)	15	35	70	NA	65	70	65
ED	Exposure duration (yr)	6	12	30	NA	24	1	24
τ	Averaging time for vapor flux (yr)	30	30	30	NA	30	30	30
EF	Exposure frequency (days/yr)	350	350	350	NA	230	180	230
EFD	Exposure frequency for dermal exposure	350	350	350	NA	230	180	230
IRw	Ingestion rate of water (L/day)	1	1	2	2,5	1	NA	1
IRs	Ingestion rate of soil (mg/day)	200	200	100	387	50	100	50
SA	Skin surface area (dermal) (cm^2)	2023	2023	3160	4771	3160	3160	3160
M	Soil to skin adherence factor	0,5	0,5	0,5	NA	0,5	0,5	0,5
ETswim	Swimming exposure time (hr/event)	1	3	3	NA	NA	NA	NA
EVswim	Swimming event frequency (events/yr)	12	12	12	NA	NA	NA	NA
IRswim	Water ingestion while swimming (L/hr)	0,5	0,5	0,05	0,3	NA	NA	NA
SAswim	Skin surface area for swimming (cm^2)	3500	8100	23000	15680	NA	NA	NA
IRfish	Ingestion rate of fish (kg/yr)	0,025	0,025	0,025	0,053	NA	NA	NA
FIfish	Contaminated fish fraction (unitless)	1	1	1	NA	NA	NA	NA
IRbg	Below-ground vegetable ingestion	0,002	0,002	0,006	2,053	NA	NA	NA
IRabg	Above-ground vegetable ingestion	0,001	0,001	0,002	0,887	NA	NA	NA
VGbg	Above-ground Veg. Ingest. Correction Factor	0,01	0,01	0,01	NA	NA	NA	NA
VGabg	Below-ground Veg. Ingest. Correction Factor	0,01	0,01	0,01	NA	NA	NA	NA

* = Child Receptor used for Non-Carcinogens
** = Age-adjusted rate is effective value corresponding to adult exposure factors.

Complete Exposure Pathways and Receptors	On-site	Off-site 1	Off-site 2
Groundwater:			
Groundwater Ingestion	None	None	None
Soil Leaching to Groundwater Ingestion	None	None	None
Apply MCL Values	No	No	No
Applicable Surface Water Exposure Routes:			
Swimming	NA	NA	None
Fish Consumption	NA	NA	None
Aquatic Life Protection	NA	NA	None
Soil:			
Direct Contact: direct combined pathways	None	NA	NA
Apply CLEA- UK SGV levels		No	
Outdoor Air:			
Particulates from Surface Soils	User Defined	None	None
Volatilization from Soils	User Defined	None	None
Volatilization from Groundwater	None	None	None
Indoor Air:			
Volatilization from Soils	None	NA	NA
Volatilization from Groundwater	None	None	None
Soil Leaching to Groundwater Volatilization	None	None	None

Receptor Distance from Source Media	On-site	Off-site 1	Off-site 2	(Units)
Groundwater receptor	NA	NA	NA	(m)
Outdoor air inhalation receptor	0	NA	NA	(m)
Indoor air inhalation receptor	NA	NA	NA	(m)

Target Health Risk Values		Individual	Cumulative
TR	Target Risk (carcinogens)	1,0E-5	1,0E-5
THQ	Target Hazard Quotient (non-carcinogenic risk)	1,0E+0	1,0E+0

Modeling Options	
RBCA tier	Tier 2
Outdoor air volatilization model	Surface & Subsurface Models: ASTM Model
Indoor air volatilization model	NA
Soil leaching model	NA
Use soil attenuation model (SAM) for leachate?	NA
Use dual equilibrium desorption model?	No
Apply Mass Balance Limit for Soil Volatilization?	No
Apply UK (CLEA) SGV as soil concentration limit	No
Vegetable calculation options	NA
Air dilution factor	NA
Groundwater dilution-attenuation factor	NA

NOTE: NA = Not applicable
Orange = Site-specific value (different from current default value)

RBCA SITE ASSESSMENT

Input Parameter Summary

Site Name: Recinto Folche_inhalación_adicional max
Site Location: LOTE X

Completed By: TEMA LITOCLEAN
Date Completed: 1-dic-yy

Surface Soil Column Parameters		Value			(Units)
h_{cap}	Capillary zone thickness	NA			(m)
h_v	Vadose zone thickness	NA			(m)
ρ_s	Soil bulk density	1,7			(g/cm^3)
f_{oc}	Fraction organic carbon	***0,005***			(-)
θ_T	Soil total porosity	***0,41***			(-)
		capillary	**vadose**	**foundation**	
θ_w	Volumetric water content	***0,369***	0,12	0,12	(-)
θ_a	Volumetric air content	***0,041***	***0,29***	0,26	(-)
K_{vs}	Vertical hydraulic conductivity	***86,4***			(cm/d)
k_v	Vapor permeability	***1E-13***			(m^2)
L_{gw}	Depth to groundwater	NA			(m)
pH	Soil/groundwater pH	***8,06***			(-)
W	Length of source-zone area parallel to wind	***300***			(m)
W_{gw}	Length of source-zone area parallel to GW flow	NA			(m)
L_{ss}	Thickness of affected surface soils	1			(m)
A	Source zone area	2025			(m^2)
L_s	Depth to top of affected soils	0			(m)
L_{base}	Depth to base of affected soils	***2***			(m)
L_{subs}	Thickness of affected soils	***2***			(m)

Outdoor Air Parameters		Value	(Units)
U_{air}	Ambient air velocity in mixing zone	***3,4***	(m/s)
δ_{air}	Air mixing zone height	2	(m)
Q/C	Inverse mean concentration at the center of source	NA	
P_a	Areal particulate emission rate	6,9E-14	(g/cm^2/s)
V	Fraction of vegetative cover	NA	
U_m	Mean annual airvelocity at 7m	NA	
U_t	Equivalent 7m air velocity threshold value	NA	
F(x)	Windspeed function dependant on Um/Ut	NA	
PEF	Partculate Emission Factor	3,04412E-11	

Building Parameters		Residential	Commercial	(Units)
L_b	Building volume/area ratio	NA	NA	(m)
A_b	Foundation area	NA	NA	(m^2)
X_{crk}	Foundation perimeter	NA	NA	(m)
ER	Building air exchange rate	NA	NA	(1/s)
L_{crk}	Foundation thickness	NA	NA	(m)
Z_{crk}	Depth to bottom of foundation slab	NA	NA	(m)
η	Foundation crack fraction	NA	NA	(-)
dP	Indoor/outdoor differential pressure	NA	NA	(g/cm/s^2)
Q_s	Convective air flow through slab	NA	NA	(m^3/s)
θ_{wcrack}	Volumetric water content of cracks	NA	NA	(-)
θ_{acrack}	Volumetric air content of cracks	NA	NA	(-)
BV	Building Volume	NA	NA	(m^3)
w	Building Width Perpendicular to GW flow	NA	NA	(m)
L	Building Length Parallel to GW flow	NA	NA	(m)
ν	Saturated Soil Zone Porosity	NA	NA	(-)

Groundwater Parameters		Value	(Units)
δ_{gw}	Groundwater mixing zone depth	NA	(m)
I_f	Net groundwater infiltration rate	NA	(cm/yr)
U_{gw}	Groundwater Darcy velocity	NA	(cm/d)
V_{gw}	Groundwater seepage velocity	NA	(cm/d)
K_s	Saturated hydraulic conductivity	NA	(cm/d)
i	Groundwater gradient	NA	(-)
S_w	Width of groundwater source zone	NA	(m)
S_d	Depth of groundwater source zone	NA	(m)
θ_{eff}	Effective porosity in water-bearing unit	NA	(-)
$f_{oc\text{-}sat}$	Fraction organic carbon in water-bearing unit	NA	(-)
pH_{sat}	Groundwater pH	NA	(-)
	Biodegradation considered?	NA	

Transport Parameters		Off-site 1	Off-site 2	Off-site 1	Off-site 2	(Units)
Lateral Groundwater Transport		**Groundwater Ingestion**		**Groundwater to Indoor Air**		
α_x	Longitudinal dispersivity	NA	NA	NA	NA	(m)
α_y	Transverse dispersivity	NA	NA	NA	NA	(m)
α_z	Vertical dispersivity	NA	NA	NA	NA	(m)
Lateral Outdoor Air Transport		**Soil to Outdoor Air Inhal.**		**GW to Outdoor Air Inhal.**		
σ_y	Transverse dispersion coefficient	NA	NA	NA	NA	(m)
σ_z	Vertical dispersion coefficient	NA	NA	NA	NA	(m)
ADF	Air dispersion factor	NA	NA	NA	NA	(-)

Surface Water Parameters		Off-site 2	(Units)
Q_{sw}	Surface water flowrate	NA	(m^3/s)
W_{pi}	Width of GW plume at SW discharge	NA	(m)
δ_{pi}	Thickness of GW plume at SW discharge	NA	(m)
DF_{sw}	Groundwater-to-surface water dilution factor	NA	(-)

NOTE: NA = Not applicable

Orange = Site-specific value (different from current default value)

RBCA SITE ASSESSMENT

TIER 2 EXPOSURE CONCENTRATION AND INTAKE CALCULATION

OUTDOOR AIR EXPOSURE PATHWAYS ■ **(Checked if Pathway is Complete)**

SURFACE SOILS (0 - 1 m):
VAPOR AND DUST INHALATION

Constituents of Concern	1) Source Medium	2) NAF Value (m^3/kg) Receptor				3) Exposure Medium Outdoor Air: POE Conc. (mg/m^3) (1) / (2)			
	Soil Conc. (mg/kg)	On-site (0 m)		Off-site 1 (0 m)	Off-site 2 (0 m)	On-site (0 m)		Off-site 1 (0 m)	Off-site 2 (0 m)
		User Defined	Construction Worker	None	None	User Defined	Construction Worker	None	None
TPH - Aliph >C06-C08 *	5,9E+0	6,3E+3				9,3E-4			
TPH - Aliph >C08-C10 *	5,9E+0	6,3E+3				9,3E-4			
TPH - Aliph >C10-C12 *	1,8E+3	6,3E+3				2,9E-1			
TPH - Aliph >C12-C16 *	1,8E+3	6,3E+3				2,9E-1			
TPH - Aliph >C16-C21	1,8E+3	1,2E+4				1,5E-1			
TPH - Aliph >C21-C34	1,0E+4	1,0E+4				1,0E+0			
TPH - Arom >C07-C08	5,9E+0	6,3E+3				9,3E-4			
TPH - Arom >C08-C10	5,9E+0	6,3E+3				9,3E-4			
TPH - Arom >C10-C12	1,8E+3	6,3E+3				2,9E-1			
TPH - Arom >C12-C16	1,8E+3	1,1E+4				1,7E-1			
TPH - Arom >C16-C21	1,8E+3	3,7E+4				4,8E-2			
TPH - Arom >C21-C35	1,0E+4	4,7E+5				2,1E-2			
Arsenic *	1,1E+1	3,3E+10				3,4E-10			
Barium	1,8E+3	3,3E+10				5,4E-8			
Chromium (total)	4,0E+1	3,3E+10				1,2E-9			
Lead (inorganic) *	5,3E+1	3,3E+10				1,6E-9			
Mercury *	3,2E-1	2,8E+4				1,1E-5			
Cobalt	1,5E+1	3,3E+10				4,5E-10			
Copper	5,0E+1	3,3E+10				1,5E-9			
Nickel	3,4E+1	3,3E+10				1,0E-9			
Vanadium *	6,0E+1	3,3E+10				1,8E-9			
Zinc	1,3E+2	3,3E+10				4,1E-9			

NOTE: NAF = Natural attenuation factor POE = Point of exposure

RBCA SITE ASSESSMENT

TIER 2 EXPOSURE CONCENTRATION AND INTAKE CALCULATION

OUTDOOR AIR EXPOSURE PATHWAYS ■ **(Checked if Pathway is Complete)**

SURFACE SOILS (0 - 1 m):

VAPOR AND DUST INHALATION

	1) Source Medium	2) NAF Value (m^3/kg) Receptor				3) Exposure Medium Outdoor Air: POE Conc. (mg/m^3) (1) / (2)			
	Soil Conc. (mg/kg)	On-site (0 m)		Off-site 1 (0 m)	Off-site 2 (0 m)	On-site (0 m)		Off-site 1 (0 m)	Off-site 2 (0 m)
Constituents of Concern		User Defined	Construction Worker	None	None	User Defined	Construction Worker	None	None

Site Name: Recinto Folche_inhalación_adicional max
Site Location: LOTE X
Completed By: TEMA LITOCLEAN

Date Completed: 1-dic-yy
Job ID: 62288

RBCA SITE ASSESSMENT

TIER 2 EXPOSURE CONCENTRATION AND INTAKE CALCULATION

OUTDOOR AIR EXPOSURE PATHWAYS

SURFACE SOILS (0 - 1 m):

VAPOR AND DUST INHALATION (cont'd)

	4) Exposure Multiplier (EFxED)/(ATx365) (unitless)				5) Average Inhalation Exposure Concentration (mg/m^3) (3) X (4)			
	On-site (0 m)		Off-site 1 (0 m)	Off-site 2 (0 m)	On-site (0 m)		Off-site 1 (0 m)	Off-site 2 (0 m)
Constituents of Concern	User Defined	Construction Worker	None	None	User Defined	Construction Worker	None	None
TPH - Aliph >C06-C08 *	6,3E-1				5,9E-4			
TPH - Aliph >C08-C10 *	6,3E-1				5,9E-4			
TPH - Aliph >C10-C12 *	6,3E-1				1,8E-1			
TPH - Aliph >C12-C16 *	6,3E-1				1,8E-1			
TPH - Aliph >C16-C21	6,3E-1				9,3E-2			
TPH - Aliph >C21-C34	6,3E-1				6,3E-1			
TPH - Arom >C07-C08	6,3E-1				5,9E-4			
TPH - Arom >C08-C10	6,3E-1				5,9E-4			
TPH - Arom >C10-C12	6,3E-1				1,8E-1			
TPH - Arom >C12-C16	6,3E-1				1,1E-1			
TPH - Arom >C16-C21	6,3E-1				3,0E-2			
TPH - Arom >C21-C35	6,3E-1				1,3E-2			
Arsenic *	2,0E-1				6,9E-11			
Barium	6,3E-1				3,4E-8			
Chromium (total)	6,3E-1				7,6E-10			
Lead (inorganic) *	2,0E-1				3,3E-10			
Mercury *	6,3E-1				7,2E-6			
Cobalt	2,0E-1				9,2E-11			
Copper	6,3E-1				9,5E-10			
Nickel	2,0E-1				2,1E-10			
Vanadium *	6,3E-1				1,1E-9			
Zinc	6,3E-1				2,6E-9			

* = Chemical with user-specified data

NOTE: AT = Averaging time (days) EF = Exposure frequency (days/yr) ED = Exposure duration (yr)

RBCA SITE ASSESSMENT

TIER 2 EXPOSURE CONCENTRATION AND INTAKE CALCULATION

OUTDOOR AIR EXPOSURE PATHWAYS

SURFACE SOILS (0 - 1 m):

VAPOR AND DUST INHALATION (cont'd)

	4) Exposure Multiplier (EFxED)/(ATx365) (unitless)				5) Average Inhalation Exposure Concentration (mg/m^3) (3) X (4)			
	On-site (0 m)		Off-site 1 (0 m)	Off-site 2 (0 m)	On-site (0 m)		Off-site 1 (0 m)	Off-site 2 (0 m)
Constituents of Concern	User Defined	Construction Worker	None	None	User Defined	Construction Worker	None	None

Site Name: Recinto Folche_inhalación_adicional max
Site Location: LOTE X
Completed By: TEMA LITOCLEAN

Date Completed: 1-dic-yy
Job ID: 62288

RBCA SITE ASSESSMENT

TIER 2 EXPOSURE CONCENTRATION AND INTAKE CALCULATION

OUTDOOR AIR EXPOSURE PATHWAYS ■ **(Checked if Pathway is Complete)**

SUBSURFACE SOILS (1 - 2 m):

VAPOR INHALATION

Constituents of Concern	1) Source Medium	2) NAF Value (m^3/kg) Receptor			3) Exposure Medium Outdoor Air: POE Conc. (mg/m^3) (1) / (2)		
	Soil Conc. (mg/kg)	On-site (0 m) User Defined	Off-site 1 (0 m) None	Off-site 2 (0 m) None	On-site (0 m) User Defined	Off-site 1 (0 m) None	Off-site 2 (0 m) None
TPH - Aliph >C06-C08 *	5,9E+0	6,3E+3			9,3E-4		
TPH - Aliph >C08-C10 *	5,9E+0	6,3E+3			9,3E-4		
TPH - Aliph >C10-C12 *	1,8E+3	6,3E+3			2,9E-1		
TPH - Aliph >C12-C16 *	1,8E+3	6,3E+3			2,9E-1		
TPH - Aliph >C16-C21	1,8E+3	1,5E+4			1,2E-1		
TPH - Aliph >C21-C34	1,0E+4	1,0E+4			9,8E-1		
TPH - Arom >C07-C08	5,9E+0	6,3E+3			9,3E-4		
TPH - Arom >C08-C10	5,9E+0	6,3E+3			9,3E-4		
TPH - Arom >C10-C12	1,8E+3	6,3E+3			2,9E-1		
TPH - Arom >C12-C16	1,8E+3	1,2E+4			1,6E-1		
TPH - Arom >C16-C21	1,8E+3	1,4E+5			1,3E-2		
TPH - Arom >C21-C35	1,0E+4	2,2E+7			4,5E-4		
Arsenic *	1,1E+1	VFsamb					
Barium	1,8E+3	VFsamb					
Chromium (total)	4,0E+1	VFsamb					
Lead (inorganic) *	5,3E+1	VFsamb					
Mercury *	3,2E-1	7,8E+4			4,1E-6		
Cobalt	1,5E+1	VFsamb					
Copper	5,0E+1	VFsamb					
Nickel	3,4E+1	VFsamb					
Vanadium *	6,0E+1	VFsamb					
Zinc	1,3E+2	VFsamb					

NOTE: NAF = Natural attenuation factor POE = Point of exposure

RBCA SITE ASSESSMENT

TIER 2 EXPOSURE CONCENTRATION AND INTAKE CALCULATION

OUTDOOR AIR EXPOSURE PATHWAYS ■ **(Checked if Pathway is Complete)**

SUBSURFACE SOILS (1 - 2 m):

VAPOR INHALATION

	1) Source Medium	2) NAF Value (m^3/kg) Receptor			3) Exposure Medium Outdoor Air: POE Conc. (mg/m^3) (1) / (2)		
Constituents of Concern	Soil Conc. (mg/kg)	On-site (0 m) User Defined	Off-site 1 (0 m) None	Off-site 2 (0 m) None	On-site (0 m) User Defined	Off-site 1 (0 m) None	Off-site 2 (0 m) None

Site Name: Recinto Folche_inhalación_adicional max
Site Location: LOTE X
Completed By: TEMA LITOCLEAN

Date Completed: 1-dic-yy
Job ID: 62288

RBCA SITE ASSESSMENT

TIER 2 EXPOSURE CONCENTRATION AND INTAKE CALCULATION

OUTDOOR AIR EXPOSURE PATHWAYS

SUBSURFACE SOILS (1 - 2 m):

VAPOR INHALATION (cont'd)

	4) Exposure Multiplier (EFxED)/(ATx365) (unitless)			5) Average Inhalation Exposure Concentration (mg/m^3) (3) X (4)		
	On-site (0 m)	Off-site 1 (0 m)	Off-site 2 (0 m)	On-site (0 m)	Off-site 1 (0 m)	Off-site 2 (0 m)
Constituents of Concern	User Defined	None	None	User Defined	None	None
TPH - Aliph >C06-C08 *	6,3E-1			5,9E-4		
TPH - Aliph >C08-C10 *	6,3E-1			5,9E-4		
TPH - Aliph >C10-C12 *	6,3E-1			1,8E-1		
TPH - Aliph >C12-C16 *	6,3E-1			1,8E-1		
TPH - Aliph >C16-C21	6,3E-1			7,5E-2		
TPH - Aliph >C21-C34	6,3E-1			6,2E-1		
TPH - Arom >C07-C08	6,3E-1			5,9E-4		
TPH - Arom >C08-C10	6,3E-1			5,9E-4		
TPH - Arom >C10-C12	6,3E-1			1,8E-1		
TPH - Arom >C12-C16	6,3E-1			9,8E-2		
TPH - Arom >C16-C21	6,3E-1			8,1E-3		
TPH - Arom >C21-C35	6,3E-1			2,8E-4		
Arsenic *	2,0E-1					
Barium	6,3E-1					
Chromium (total)	6,3E-1					
Lead (inorganic) *	2,0E-1					
Mercury *	6,3E-1			2,6E-6		
Cobalt	2,0E-1					
Copper	6,3E-1					
Nickel	2,0E-1					
Vanadium *	6,3E-1					
Zinc	6,3E-1					

NOTE: AT = Averaging time (days) EF = Exposure frequency (days/yr) ED = Exposure duration (yr)

RBCA SITE ASSESSMENT

TIER 2 EXPOSURE CONCENTRATION AND INTAKE CALCULATION

OUTDOOR AIR EXPOSURE PATHWAYS

SUBSURFACE SOILS (1 - 2 m):

VAPOR INHALATION (cont'd)

	4) Exposure Multiplier (EFxED)/(ATx365) (unitless)			5) Average Inhalation Exposure Concentration (mg/m^3) (3) X (4)		
	On-site (0 m)	Off-site 1 (0 m)	Off-site 2 (0 m)	On-site (0 m)	Off-site 1 (0 m)	Off-site 2 (0 m)
Constituents of Concern	User Defined	None	None	User Defined	None	None

Site Name: Recinto Folche_inhalación_adicional max
Site Location: LOTE X
Completed By: TEMA LITOCLEAN

Date Completed: 1-dic-yy
Job ID: 62288

RBCA SITE ASSESSMENT

TIER 2 EXPOSURE CONCENTRATION AND INTAKE CALCULATION

OUTDOOR AIR EXPOSURE PATHWAYS ☐ **(Checked if Pathway is Complete)**

GROUNDWATER: VAPOR INHALATION

Exposure Concentration

Constituents of Concern	1) Source Medium	2) NAF Value (m^3/L) Receptor			3) Exposure Medium Outdoor Air: POE Conc. (mg/m^3) (1) / (2)		
	Groundwater Conc. (mg/L)	On-site (0 m) None	Off-site 1 (0 m) None	Off-site 2 (0 m) None	On-site (0 m) None	Off-site 1 (0 m) None	Off-site 2 (0 m) None
TPH - Aliph >C06-C08 *							
TPH - Aliph >C08-C10 *							
TPH - Aliph >C10-C12 *							
TPH - Aliph >C12-C16 *							
TPH - Aliph >C16-C21							
TPH - Aliph >C21-C34							
TPH - Arom >C07-C08							
TPH - Arom >C08-C10							
TPH - Arom >C10-C12							
TPH - Arom >C12-C16							
TPH - Arom >C16-C21							
TPH - Arom >C21-C35							
Arsenic *							
Barium							
Chromium (total)							
Lead (inorganic) *							
Mercury *							
Cobalt							
Copper							
Nickel							
Vanadium *							
Zinc							

NOTE: NAF = Natural attenuation factor POE = Point of exposure

RBCA SITE ASSESSMENT

TIER 2 EXPOSURE CONCENTRATION AND INTAKE CALCULATION

OUTDOOR AIR EXPOSURE PATHWAYS ☐ **(Checked if Pathway is Complete)**

GROUNDWATER: VAPOR INHALATION

Exposure Concentration

	1) Source Medium	2) NAF Value (m^3/L) Receptor			3) Exposure Medium Outdoor Air: POE Conc. (mg/m^3) (1) / (2)		
Constituents of Concern	Groundwater Conc. (mg/L)	On-site (0 m)	Off-site 1 (0 m)	Off-site 2 (0 m)	On-site (0 m)	Off-site 1 (0 m)	Off-site 2 (0 m)
		None	None	None	None	None	None

Site Name: Recinto Folche_inhalación_adicional max
Site Location: LOTE X
Completed By: TEMA LITOCLEAN

Date Completed: 1-dic-yy
Job ID: 62288

RBCA SITE ASSESSMENT

TIER 2 EXPOSURE CONCENTRATION AND INTAKE CALCULATION

OUTDOOR AIR EXPOSURE PATHWAYS

GROUNDWATER: VAPOR

INHALATION (cont'd)

Constituents of Concern	4) Exposure Multiplier (EFxED)/(ATx365) (unitless)			5) Average Inhalation Exposure Concentration (mg/m^3) (3) X (4)		
	On-site (0 m)	Off-site 1 (0 m)	Off-site 2 (0 m)	On-site (0 m)	Off-site 1 (0 m)	Off-site 2 (0 m)
	None	None	None	None	None	None
TPH - Aliph >C06-C08 *						
TPH - Aliph >C08-C10 *						
TPH - Aliph >C10-C12 *						
TPH - Aliph >C12-C16 *						
TPH - Aliph >C16-C21						
TPH - Aliph >C21-C34						
TPH - Arom >C07-C08						
TPH - Arom >C08-C10						
TPH - Arom >C10-C12						
TPH - Arom >C12-C16						
TPH - Arom >C16-C21						
TPH - Arom >C21-C35						
Arsenic *						
Barium						
Chromium (total)						
Lead (inorganic) *						
Mercury *						
Cobalt						
Copper						
Nickel						
Vanadium *						
Zinc						

NOTE: AT = Averaging time (days) EF = Exposure frequency (days/yr) ED = Exposure duration (yr)

RBCA SITE ASSESSMENT

TIER 2 EXPOSURE CONCENTRATION AND INTAKE CALCULATION

OUTDOOR AIR EXPOSURE PATHWAYS

GROUNDWATER: VAPOR INHALATION (cont'd)

	4) Exposure Multiplier (EFxED)/(ATx365) (unitless)			5) Average Inhalation Exposure Concentration (mg/m^3) (3) X (4)		
	On-site (0 m)	Off-site 1 (0 m)	Off-site 2 (0 m)	On-site (0 m)	Off-site 1 (0 m)	Off-site 2 (0 m)
Constituents of Concern	None	None	None	None	None	None

Site Name: Recinto Folche_inhalación_adicional max
Site Location: LOTE X
Completed By: TEMA LITOCLEAN

Date Completed: 1-dic-yy
Job ID: 62288

RBCA SITE ASSESSMENT

TIER 2 EXPOSURE CONCENTRATION AND INTAKE CALCULATION

OUTDOOR AIR EXPOSURE PATHWAYS

MAXIMUM PATHWAY EXPOSURE (mg/m^3)

Maximum average expsosure concentration from soil and groundwater routes.)

Constituents of Concern	On-site (0 m) User Defined	On-site (0 m) Construction Worker	Off-site 1 (0 m) None	Off-site 2 (0 m) None
TPH - Aliph >C06-C08 *	5,9E-4			
TPH - Aliph >C08-C10 *	5,9E-4			
TPH - Aliph >C10-C12 *	1,8E-1			
TPH - Aliph >C12-C16 *	1,8E-1			
TPH - Aliph >C16-C21	9,3E-2			
TPH - Aliph >C21-C34	6,3E-1			
TPH - Arom >C07-C08	5,9E-4			
TPH - Arom >C08-C10	5,9E-4			
TPH - Arom >C10-C12	1,8E-1			
TPH - Arom >C12-C16	1,1E-1			
TPH - Arom >C16-C21	3,0E-2			
TPH - Arom >C21-C35	1,3E-2			
Arsenic *	6,9E-11			
Barium	3,4E-8			
Chromium (total)	7,6E-10			
Lead (inorganic) *	3,3E-10			
Mercury *	7,2E-6			
Cobalt	9,2E-11			
Copper	9,5E-10			
Nickel	2,1E-10			
Vanadium *	1,1E-9			
Zinc	2,6E-9			

RBCA SITE ASSESSMENT

TIER 2 EXPOSURE CONCENTRATION AND INTAKE CALCULATION

OUTDOOR AIR EXPOSURE PATHWAYS

MAXIMUM PATHWAY EXPOSURE (mg/m^3)

Maximum average expsosure concentration from soil and groundwater routes.)

Constituents of Concern	On-site (0 m)		Off-site 1 (0 m)	Off-site 2 (0 m)
	User Defined	Construction Worker	None	None

Site Name: Recinto Folche_inhalación_adicional max
Site Location: LOTE X
Completed By: TEMA LITOCLEAN

Date Completed: 1-dic-yy
Job ID: 62288

RBCA SITE ASSESSMENT

TIER 2 PATHWAY RISK CALCULATION

OUTDOOR AIR EXPOSURE PATHWAYS ■ **(Checked if Pathway is Complete)**

CARCINOGENIC RISK

Constituents of Concern	(1) Is Carcinogenic	(2) Maximum Carcinogenic Exposure (mg/m^3) On-site (0 m) User Defined	On-site (0 m) Construction Worker	Off-site 1 (0 m) None	Off-site 2 (0 m) None	(3) Inhalation Unit Risk Factor (µg/m^3)^-1	(4) Individual COC Risk (2) x (3) x 1000 On-site (0 m) User Defined	On-site (0 m) Construction Worker	Off-site 1 (0 m) None	Off-site 2 (0 m) None
TPH - Aliph >C06-C08 *	FALSO	-	-	-	-	-				
TPH - Aliph >C08-C10 *	FALSO	-	-	-	-	-				
TPH - Aliph >C10-C12 *	FALSO	-	-	-	-	-				
TPH - Aliph >C12-C16 *	FALSO	-	-	-	-	-				
TPH - Aliph >C16-C21	FALSO	-	-	-	-	-				
TPH - Aliph >C21-C34	FALSO	-	-	-	-	-				
TPH - Arom >C07-C08	FALSO	-	-	-	-	-				
TPH - Arom >C08-C10	FALSO	-	-	-	-	-				
TPH - Arom >C10-C12	FALSO	-	-	-	-	-				
TPH - Arom >C12-C16	FALSO	-	-	-	-	-				
TPH - Arom >C16-C21	FALSO	-	-	-	-	-				
TPH - Arom >C21-C35	FALSO	-	-	-	-	-				
Arsenic *	#########	6,9E-11		-	-	4,3E-3	3,0E-10			
Barium	FALSO	-	-	-	-	-				
Chromium (total)	FALSO	-	-	-	-	-				
Lead (inorganic) *	#########	3,3E-10		-	-	1,2E-5	3,9E-12			
Mercury *	FALSO	-	-	-	-	-				
Cobalt	#########	9,2E-11		-	-	9,0E-3	8,3E-10			
Copper	FALSO	-	-	-	-	-				
Nickel	#########	2,1E-10		-	-	4,8E-4	1,0E-10			
Vanadium *	FALSO	-	-	-	-	-				
Zinc	FALSO	-	-	-	-	-				

Total Pathway Carcinogenic Risk = **1,2E-9**

RBCA SITE ASSESSMENT

TIER 2 PATHWAY RISK CALCULATION

OUTDOOR AIR EXPOSURE PATHWAYS ■ **(Checked if Pathway is Complete)**

CARCINOGENIC RISK

Constituents of Concern	(1) Is Carcinogenic	(2) Maximum Carcinogenic Exposure (mg/m^3)				(3) Inhalation Unit Risk Factor (µg/m^3)^-1	(4) Individual COC Risk (2) x (3) x 1000			
		On-site (0 m)		Off-site 1 (0 m)	Off-site 2 (0 m)		On-site (0 m)		Off-site 1 (0 m)	Off-site 2 (0 m)
		User Defined	Construction Worker	None	None		User Defined	Construction Worker	None	None

Site Name: Recinto Folche_inhalación_adicional max
Site Location: LOTE X

Completed By: TEMA LITOCLEAN
Date Completed: 1-dic-yy

Job ID: 62288

RBCA SITE ASSESSMENT

TIER 2 PATHWAY RISK CALCULATION

OUTDOOR AIR EXPOSURE PATHWAYS ■ **(Checked if Pathway is Complete)**

TOXIC EFFECTS

Constituents of Concern	(5) Maximum Toxicant Exposure (mg/m^3)				(6) Inhalation Reference Conc. (mg/m^3)	(7) Individual COC Hazard Quotient (5) / (6)			
	On-site (0 m)		Off-site 1 (0 m)	Off-site 2 (0 m)		On-site (0 m)		Off-site 1 (0 m)	Off-site 2 (0 m)
	User Defined	Construction Worker	None	None		User Defined	Construction Worker	None	None
TPH - Aliph >C06-C08 *	5,9E-4				1,8E+1	3,3E-5			
TPH - Aliph >C08-C10 *	5,9E-4				1,0E+0	5,9E-4			
TPH - Aliph >C10-C12 *	1,8E-1				1,0E+0	1,8E-1			
TPH - Aliph >C12-C16 *	1,8E-1				1,0E+0	1,8E-1			
TPH - Aliph >C16-C21	9,3E-2				-				
TPH - Aliph >C21-C34	6,3E-1				-				
TPH - Arom >C07-C08	5,9E-4				1,9E+0	3,1E-4			
TPH - Arom >C08-C10	5,9E-4				2,0E-1	2,9E-3			
TPH - Arom >C10-C12	1,8E-1				2,0E-1	9,0E-1			
TPH - Arom >C12-C16	1,1E-1				2,0E-1	5,3E-1			
TPH - Arom >C16-C21	3,0E-2				-				
TPH - Arom >C21-C35	1,3E-2				-				
Arsenic *	2,1E-10				-				
Barium	3,4E-8				-				
Chromium (total)	7,6E-10				1,4E-4	5,4E-6			
Lead (inorganic) *	1,0E-9				-				
Mercury *	7,2E-6				3,0E-4	2,4E-2			
Cobalt	2,9E-10				6,0E-6	4,8E-5			
Copper	9,5E-10				-				
Nickel	6,5E-10				9,0E-5	7,2E-6			
Vanadium *	1,1E-9				-				
Zinc	2,6E-9				-				
Total Pathway Hazard Index =						**1,8E+0**			

RBCA SITE ASSESSMENT

TIER 2 PATHWAY RISK CALCULATION

OUTDOOR AIR EXPOSURE PATHWAYS ■ **(Checked if Pathway is Complete)**

	TOXIC EFFECTS								
	(5) Maximum Toxicant Exposure (mg/m^3)				(6) Inhalation Reference	(7) Individual COC Hazard Quotient (5) / (6)			
	On-site (0 m)		Off-site 1 (0 m)	Off-site 2 (0 m)	Conc. (mg/m^3)	On-site (0 m)		Off-site 1 (0 m)	Off-site 2 (0 m)
Constituents of Concern	User Defined	Construction Worker	None	None		User Defined	Construction Worker	None	None

Site Name: Recinto Folche_inhalación_adicional max
Site Location: LOTE X

Completed By: TEMA LITOCLEAN
Date Completed: 1-dic-yy

Job ID: 62288

Estudio adicional. Gestión del riesgo

Escenario *ON SITE* - Obras de reacondicionamiento del terreno o saneamiento

Contacto e ingestión suelo

RBCA SITE ASSESSMENT

Input Parameter Summary

Site Name: Recinto Folche_vías directas
Site Location: LOTE X

Completed By: TEMA LITOCLEAN
Date Completed: 1-dic-yy

Exposure Parameters		Residential				Commercial/Industrial		User Defined
		Child*	Adolescent	Adult	Age Adjusted**	Adult	Construct.	
ATc	Averaging time for carcinogens (yr)	74,5	74,5	74,5	NA	74,5	74,5	74,5
ATn	Averaging time for non-carcinogens (yr)	6	12	30	NA	24	1	2
BW	Body weight (kg)	15	35	70	NA	65	70	65
ED	Exposure duration (yr)	6	12	30	NA	24	1	2
τ	Averaging time for vapor flux (yr)	30	30	30	NA	30	30	30
EF	Exposure frequency (days/yr)	350	350	350	NA	250	180	230
EFD	Exposure frequency for dermal exposure	350	350	350	NA	250	180	230
IRw	Ingestion rate of water (L/day)	1	1	2	2,5	1	NA	1
IRs	Ingestion rate of soil (mg/day)	200	200	100	387	50	100	330
SA	Skin surface area (dermal) (cm^2)	2023	2023	3160	4771	3160	3160	3160
M	Soil to skin adherence factor	0,5	0,5	0,5	NA	0,5	0,5	0,5
ETswim	Swimming exposure time (hr/event)	1	3	3	NA	NA	NA	NA
EVswim	Swimming event frequency (events/yr)	12	12	12	NA	NA	NA	NA
IRswim	Water ingestion while swimming (L/hr)	0,5	0,5	0,05	0,3	NA	NA	NA
SAswim	Skin surface area for swimming (cm^2)	3500	8100	23000	15680	NA	NA	NA
IRfish	Ingestion rate of fish (kg/yr)	0,025	0,025	0,025	0,053	NA	NA	NA
FIfish	Contaminated fish fraction (unitless)	1	1	1	NA	NA	NA	NA
IRbg	Below-ground vegetable ingestion	0,002	0,002	0,006	2,053	NA	NA	NA
IRabg	Above-ground vegetable ingestion	0,001	0,001	0,002	0,887	NA	NA	NA
VGbg	Above-ground Veg. Ingest. Correction Factor	0,01	0,01	0,01	NA	NA	NA	NA
VGabg	Below-ground Veg. Ingest. Correction Factor	0,01	0,01	0,01	NA	NA	NA	NA

* = Child Receptor used for Non-Carcinogens
** = Age-adjusted rate is effective value corresponding to adult exposure factors.

Complete Exposure Pathways and Receptors	On-site	Off-site 1	Off-site 2
Groundwater:			
Groundwater Ingestion	None	None	None
Soil Leaching to Groundwater Ingestion	None	None	None
Apply MCL Values	No	No	No
Applicable Surface Water Exposure Routes:			
Swimming	NA	NA	None
Fish Consumption	NA	NA	None
Aquatic Life Protection	NA	NA	None
Soil:			
Direct Contact: Ingestion, Dermal	User Defined	NA	NA
Apply CLEA- UK SGV levels		No	
Outdoor Air:			
Particulates from Surface Soils	None	None	None
Volatilization from Soils	None	None	None
Volatilization from Groundwater	None	None	None
Indoor Air:			
Volatilization from Soils	None	NA	NA
Volatilization from Groundwater	None	None	None
Soil Leaching to Groundwater Volatilization	None	None	None

Receptor Distance from Source Media	On-site	Off-site 1	Off-site 2	(Units)
Groundwater receptor	NA	NA	NA	(m)
Outdoor air inhalation receptor	NA	NA	NA	(m)
Indoor air inhalation receptor	NA	NA	NA	(m)

Target Health Risk Values		Individual	Cumulative
TR	Target Risk (carcinogens)	1,0E-5	1,0E-5
THQ	Target Hazard Quotient (non-carcinogenic risk)	1,0E+0	1,0E+0

Modeling Options	
RBCA tier	Tier 2
Outdoor air volatilization model	NA
Indoor air volatilization model	NA
Soil leaching model	NA
Use soil attenuation model (SAM) for leachate?	NA
Use dual equilibrium desorption model?	NA
Apply Mass Balance Limit for Soil Volatilization?	NA
Apply UK (CLEA) SGV as soil concentration limit	No
Vegetable calculation options	NA
Air dilution factor	NA
Groundwater dilution-attenuation factor	NA

NOTE: NA = Not applicable
Orange = Site-specific value (different from current default value)

RBCA SITE ASSESSMENT

Input Parameter Summary

Site Name: Recinto Folche_vías directas
Site Location: LOTE X

Completed By: TEMA LITOCLEAN
Date Completed: 1-dic-yy

Surface Soil Column Parameters		Value			(Units)
h_{cap}	Capillary zone thickness	NA			(m)
h_v	Vadose zone thickness	NA			(m)
ρ_s	Soil bulk density	NA			(g/cm^3)
f_{oc}	Fraction organic carbon	NA			(-)
θ_T	Soil total porosity	NA			(-)
		capillary	vadose	foundation	
θ_w	Volumetric water content	NA	NA	NA	(-)
θ_a	Volumetric air content	NA	NA	NA	(-)
K_{vs}	Vertical hydraulic conductivity	NA			(cm/d)
k_v	Vapor permeability	NA			(m^2)
L_{gw}	Depth to groundwater	NA			(m)
pH	Soil/groundwater pH	NA			(-)
W	Length of source-zone area parallel to wind	NA			(m)
W_{gw}	Length of source-zone area parallel to GW flow	NA			(m)
L_{ss}	Thickness of affected surface soils	NA			(m)
A	Source zone area	NA			(m^2)
L_s	Depth to top of affected soils	NA			(m)
L_{base}	Depth to base of affected soils	NA			(m)
L_{subs}	Thickness of affected soils	NA			(m)

Outdoor Air Parameters		Value	(Units)
U_{air}	Ambient air velocity in mixing zone	NA	(m/s)
δ_{air}	Air mixing zone height	NA	(m)
Q/C	Inverse mean concentration at the center of source	NA	
P_a	Areal particulate emission rate	NA	(g/cm^2/s)
V	Fraction of vegetative cover	NA	
U_m	Mean annual airvelocity at 7m	NA	
U_t	Equivalent 7m air velocity threshold value	NA	
F(x)	Windspeed function dependant on Um/Ut	NA	
PEF	Partculate Emission Factor	NA	

Building Parameters		Residential	Commercial	(Units)
L_b	Building volume/area ratio	NA	NA	(m)
A_b	Foundation area	NA	NA	(m^2)
X_{crk}	Foundation perimeter	NA	NA	(m)
ER	Building air exchange rate	NA	NA	(1/s)
L_{crk}	Foundation thickness	NA	NA	(m)
Z_{crk}	Depth to bottom of foundation slab	NA	NA	(m)
η	Foundation crack fraction	NA	NA	(-)
dP	Indoor/outdoor differential pressure	NA	NA	(g/cm/s^2)
Q_s	Convective air flow through slab	NA	NA	(m^3/s)
θ_{wcrack}	Volumetric water content of cracks	NA	NA	(-)
θ_{acrack}	Volumetric air content of cracks	NA	NA	(-)
BV	Building Volume	NA	NA	(m^3)
w	Building Width Perpendicular to GW flow	NA	NA	(m)
L	Building Length Parallel to GW flow	NA	NA	(m)
ν	Saturated Soil Zone Porosity	NA	NA	(-)

Groundwater Parameters		Value	(Units)
δ_{gw}	Groundwater mixing zone depth	NA	(m)
I_f	Net groundwater infiltration rate	NA	(cm/yr)
U_{gw}	Groundwater Darcy velocity	NA	(cm/d)
V_{gw}	Groundwater seepage velocity	NA	(cm/d)
K_s	Saturated hydraulic conductivity	NA	(cm/d)
i	Groundwater gradient	NA	(-)
S_w	Width of groundwater source zone	NA	(m)
S_d	Depth of groundwater source zone	NA	(m)
θ_{eff}	Effective porosity in water-bearing unit	NA	(-)
$f_{oc\text{-}sat}$	Fraction organic carbon in water-bearing unit	NA	(-)
pH_{sat}	Groundwater pH	NA	(-)
	Biodegradation considered?	NA	

Transport Parameters		Off-site 1	Off-site 2	Off-site 1	Off-site 2	(Units)
Lateral Groundwater Transport		Groundwater Ingestion		Groundwater to Indoor Air		
α_x	Longitudinal dispersivity	NA	NA	NA	NA	(m)
α_y	Transverse dispersivity	NA	NA	NA	NA	(m)
α_z	Vertical dispersivity	NA	NA	NA	NA	(m)
Lateral Outdoor Air Transport		Soil to Outdoor Air Inhal.		GW to Outdoor Air Inhal.		
σ_y	Transverse dispersion coefficient	NA	NA	NA	NA	(m)
σ_z	Vertical dispersion coefficient	NA	NA	NA	NA	(m)
ADF	Air dispersion factor	NA	NA	NA	NA	(-)

Surface Water Parameters		Off-site 2	(Units)
Q_{sw}	Surface water flowrate	NA	(m^3/s)
W_{pi}	Width of GW plume at SW discharge	NA	(m)
δ_{pi}	Thickness of GW plume at SW discharge	NA	(m)
DF_{sw}	Groundwater-to-surface water dilution factor	NA	(-)

NOTE: NA = Not applicable

TIER 2 EXPOSURE CONCENTRATION AND INTAKE CALCULATION

SOIL EXPOSURE PATHWAY ■ **(Checked if Pathway is Complete)**

SURFACE SOILS: ON SITE INGESTION, DERMAL EXPOSURE

	1) Source/Exposure Medium	2) Exposure Multiplier		3) Average Daily Intake Rate (mg/kg/day) (1) x (2)	
Constituents of Concern	Surface Soil Conc. (mg/kg)	User Defined	Construction Worker	User Defined	Construction Worker
TPH - Aliph >C06-C08 *	5,9E+0	3,2E-6		1,9E-5	-
TPH - Aliph >C08-C10 *	5,9E+0	3,2E-6		1,9E-5	-
TPH - Aliph >C10-C12 *	1,8E+3	6,3E-6		1,1E-2	-
TPH - Aliph >C12-C16 *	1,8E+3	6,3E-6		1,1E-2	-
TPH - Aliph >C16-C21	1,8E+3	6,3E-6		1,1E-2	-
TPH - Aliph >C21-C34	1,0E+4	6,3E-6		6,3E-2	-
TPH - Arom >C07-C08	5,9E+0	3,2E-6		1,9E-5	-
TPH - Arom >C08-C10	5,9E+0	3,2E-6		1,9E-5	-
TPH - Arom >C10-C12	1,8E+3	6,3E-6		1,1E-2	-
TPH - Arom >C12-C16	1,8E+3	6,3E-6		1,1E-2	-
TPH - Arom >C16-C21	1,8E+3	5,4E-6		9,8E-3	-
TPH - Arom >C21-C35	1,0E+4	5,4E-6		5,4E-2	-
Arsenic *	1,1E+1	6,5E-8		7,2E-7	-
Barium	1,8E+3	5,4E-6		9,6E-3	-
Chromium (total)	4,0E+1	Veg?		-	-
Lead (inorganic) *	5,3E+1	7,9E-8		4,2E-6	-
Mercury *	3,2E-1	5,4E-6		1,7E-6	-
Cobalt	1,5E+1	3,4E-6		5,1E-5	-
Copper	5,0E+1	3,5E-6		1,7E-4	-
Nickel	3,4E+1	7,0E-6		2,4E-4	-
Vanadium *	6,0E+1	9,1E-6		5,4E-4	-
Zinc	1,3E+2	4,0E-6		5,3E-4	-

NOTE: RAF = Relative absorption factor (-)	AT = Averaging time (days)	ED = Exposure duration (yrs)	IR = Soil ingestion rate (mg/day)
M = Adherence factor (mg/cm^2)	BW = Body weight (kg)	EF = Exposure frequencey (days/yr)	SA = Skin exposure area (cm^2/day)

Site Name: Recinto Folche_vías directas
Site Location: LOTE X
Completed By: TEMA LITOCLEAN

Date Completed: 1-dic-yy
Job ID: 62288

TIER 2 PATHWAY RISK CALCULATION

SOIL EXPOSURE PATHWAY ■ **(Checked if Pathway is Complete)**

CARCINOGENIC RISK

Constituents of Concern	(1) Is Carcinogenic	(2) Total Carcinogenic Intake Rate (mg/kg/day)				(3) Slope Factor (mg/kg/day)^-1		(4) Individual COC Risk	
		(a) via Ingestion	(b) via Dermal Contact	(c) via Ingestion	(d) via Dermal Contact	(a) Oral	(b) Dermal	(2a)x(3a) + (2b)x(3b)	(2c)x(3a) + (2d)x(3b)
		User Defined		Construction Worker				User Defined	Construction Worker
TPH - Aliph >C06-C08 *	FALSO					-	-		-
TPH - Aliph >C08-C10 *	FALSO					-	-		-
TPH - Aliph >C10-C12 *	FALSO					-	-		-
TPH - Aliph >C12-C16 *	FALSO					-	-		-
TPH - Aliph >C16-C21	FALSO					-	-		-
TPH - Aliph >C21-C34	FALSO					-	-		-
TPH - Arom >C07-C08	FALSO					-	-		-
TPH - Arom >C08-C10	FALSO					-	-		-
TPH - Arom >C10-C12	FALSO					-	-		-
TPH - Arom >C12-C16	FALSO					-	-		-
TPH - Arom >C16-C21	FALSO					-	-		-
TPH - Arom >C21-C35	FALSO					-	-		-
Arsenic *	VERDADERO	5,8E-7	1,5E-7			1,5E+0	1,5E+0	1,1E-6	-
Barium	FALSO					-	-		-
Chromium (total)	FALSO					-	-		-
Lead (inorganic) *	VERDADERO	2,7E-6	1,4E-6			8,5E-3	8,5E-3	3,5E-8	-
Mercury *	FALSO					-	-		-
Cobalt	FALSO					-	-		-
Copper	FALSO					-	-		-
Nickel	FALSO					-	-		-
Vanadium *	FALSO					-	-		-
Zinc	FALSO					-	-		-

* No dermal slope factor available--oral slope factor used.

Total Pathway Carcinogenic Risk = **1,1E-6**

Site Name: Recinto Folche_vías directas
Site Location: LOTE X
Completed By: TEMA LITOCLEAN

Date Completed: 1-dic-yy
Job ID: 62288

TIER 2 PATHWAY RISK CALCULATION

SOIL EXPOSURE PATHWAY ■ **(Checked if Pathway is Complete)**

TOXIC EFFECTS

Constituents of Concern	(5) Total Toxicant Intake Rate (mg/kg/day) (a) via Ingestion	(b) via Dermal Contact	(c) via Ingestion	(d) via Dermal Contact	(6) Reference Dose (mg/kg-day) (a) Oral	(b) Dermal	(7) Individual COC Hazard Quotient (5a)/(6a) + (5b)/(6b)	(5c)/(6a) + (5d)/(6b)
	User Defined		Construction Worker				User Defined	Construction Worker
TPH - Aliph >C06-C08 *	1,9E-5	0,0E+0			6,0E-2	6,0E-2	3,1E-4	
TPH - Aliph >C08-C10 *	1,9E-5	0,0E+0			1,0E-1	1,0E-1	1,9E-4	
TPH - Aliph >C10-C12 *	5,8E-3	5,5E-3			1,0E-1	1,0E-1	1,1E-1	
TPH - Aliph >C12-C16 *	5,8E-3	5,5E-3			1,0E-1	1,0E-1	1,1E-1	
TPH - Aliph >C16-C21	5,8E-3	5,5E-3			2,0E+0	2,0E+0	5,6E-3	
TPH - Aliph >C21-C34	3,2E-2	3,1E-2			1,6E+0	1,6E+0	3,9E-2	
TPH - Arom >C07-C08	1,9E-5	0,0E+0			1,0E-1	1,0E-1	1,9E-4	
TPH - Arom >C08-C10	1,9E-5	0,0E+0			4,0E-2	4,0E-2	4,7E-4	
TPH - Arom >C10-C12	5,8E-3	5,5E-3			4,0E-2	4,0E-2	2,8E-1	
TPH - Arom >C12-C16	5,8E-3	5,5E-3			4,0E-2	4,0E-2	2,8E-1	
TPH - Arom >C16-C21	5,8E-3	4,0E-3			3,0E-2	3,0E-2	3,3E-1	
TPH - Arom >C21-C35	3,2E-2	2,2E-2			3,0E-2	3,0E-2	1,8E+0	
Arsenic *	2,1E-5	5,4E-6			3,0E-4	1,5E-5	4,3E-1	
Barium	5,7E-3	3,9E-3			2,0E-1	2,0E-1	4,8E-2	
Chromium (total)	1,3E-4	No abs.d/URC.s			1,5E+0	1,5E+0	8,5E-5	
Lead (inorganic) *	Tox?	Tox?			-	-		
Mercury *	1,0E-6	7,0E-7			1,6E-4	1,6E-4	1,1E-2	
Cobalt	4,8E-5	2,9E-6			3,0E-4	3,0E-4	1,7E-1	
Copper	1,6E-4	1,3E-5			4,0E-2	4,0E-2	4,3E-3	
Nickel	1,1E-4	1,3E-4			2,0E-2	2,0E-2	1,2E-2	
Vanadium *	1,9E-4	3,5E-4			5,0E-3	5,0E-3	1,1E-1	
Zinc	4,3E-4	1,0E-4			3,0E-1	3,0E-1	1,8E-3	

* No dermal reference dose available--oral reference dose used.

Total Pathway Hazard Index = **3,8E+0**

Site Name: Recinto Folche_vías directas
Site Location: LOTE X
Completed By: TEMA LITOCLEAN

Date Completed: 1-dic-yy
Job ID: 62288

ESTUDIO DE SENSIBILIDAD

Caso: Escenario *ON SITE* - Etapa de mejora ambiental

Inhalación de vapores y partículas en espacios abiertos.

Índice de riesgo toxicológico.

Parámetro: longitud suelo afectado

RBCA SITE ASSESSMENT

Input Parameter Summary

Site Name: Recinto Folche_inhalación_sens largo
Site Location: LOTE X

Completed By: TEMA LITOCLEAN
Date Completed: 1-dic-yy

Exposure Parameters		Residential				Commercial/Industrial		User Defined
		Child*	Adolescent	Adult	Age Adjusted**	Adult	Construct.	
ATc	Averaging time for carcinogens (yr)	74,5	74,5	74,5	NA	74,5	74,5	74,5
ATn	Averaging time for non-carcinogens (yr)	6	12	30	NA	24	1	2
BW	Body weight (kg)	15	35	70	NA	65	70	65
ED	Exposure duration (yr)	6	12	30	NA	24	1	2
τ	Averaging time for vapor flux (yr)	30	30	30	NA	30	30	30
EF	Exposure frequency (days/yr)	350	350	350	NA	230	180	230
EFD	Exposure frequency for dermal exposure	350	350	350	NA	230	180	230
IRw	Ingestion rate of water (L/day)	1	1	2	2,5	1	NA	1
IRs	Ingestion rate of soil (mg/day)	200	200	100	387	50	100	50
SA	Skin surface area (dermal) (cm^2)	2023	2023	3160	4771	3160	3160	3160
M	Soil to skin adherence factor	0,5	0,5	0,5	NA	0,5	0,5	0,5
ETswim	Swimming exposure time (hr/event)	1	3	3	NA	NA	NA	NA
EVswim	Swimming event frequency (events/yr)	12	12	12	NA	NA	NA	NA
IRswim	Water ingestion while swimming (L/hr)	0,5	0,5	0,05	0,3	NA	NA	NA
SAswim	Skin surface area for swimming (cm^2)	3500	8100	23000	15680	NA	NA	NA
IRfish	Ingestion rate of fish (kg/yr)	0,025	0,025	0,025	0,053	NA	NA	NA
FIfish	Contaminated fish fraction (unitless)	1	1	1	NA	NA	NA	NA
IRbg	Below-ground vegetable ingestion	0,002	0,002	0,006	2,053	NA	NA	NA
IRabg	Above-ground vegetable ingestion	0,001	0,001	0,002	0,887	NA	NA	NA
VGbg	Above-ground Veg. Ingest. Correction Factor	0,01	0,01	0,01	NA	NA	NA	NA
VGabg	Below-ground Veg. Ingest. Correction Factor	0,01	0,01	0,01	NA	NA	NA	NA

* = Child Receptor used for Non-Carcinogens
** = Age-adjusted rate is effective value corresponding to adult exposure factors.

Complete Exposure Pathways and Receptors	On-site	Off-site 1	Off-site 2
Groundwater:			
Groundwater Ingestion	None	None	None
Soil Leaching to Groundwater Ingestion	None	None	None
Apply MCL Values	No	No	No
Applicable Surface Water Exposure Routes:			
Swimming	NA	NA	None
Fish Consumption	NA	NA	None
Aquatic Life Protection	NA	NA	None
Soil:			
Direct Contact: direct combined pathways	None	NA	NA
Apply CLEA- UK SGV levels		No	
Outdoor Air:			
Particulates from Surface Soils	User Defined	None	None
Volatilization from Soils	User Defined	None	None
Volatilization from Groundwater	None	None	None
Indoor Air:			
Volatilization from Soils	None	NA	NA
Volatilization from Groundwater	None	None	None
Soil Leaching to Groundwater Volatilization	None	None	None

Receptor Distance from Source Media	On-site	Off-site 1	Off-site 2	(Units)
Groundwater receptor	NA	NA	NA	(m)
Outdoor air inhalation receptor	0	NA	NA	(m)
Indoor air inhalation receptor	NA	NA	NA	(m)

Target Health Risk Values		Individual	Cumulative
TR	Target Risk (carcinogens)	1,0E-5	1,0E-5
THQ	Target Hazard Quotient (non-carcinogenic risk)	1,0E+0	1,0E+0

Modeling Options	
RBCA tier	Tier 2
Outdoor air volatilization model	Surface & Subsurface Models: ASTM Model
Indoor air volatilization model	NA
Soil leaching model	NA
Use soil attenuation model (SAM) for leachate?	NA
Use dual equilibrium desorption model?	No
Apply Mass Balance Limit for Soil Volatilization?	No
Apply UK (CLEA) SGV as soil concentration limit	No
Vegetable calculation options	NA
Air dilution factor	NA
Groundwater dilution-attenuation factor	NA

NOTE: NA = Not applicable
Orange = Site-specific value (different from current default value)

RBCA SITE ASSESSMENT

Input Parameter Summary

Site Name: Recinto Folche_inhalación_sens largo
Site Location: LOTE X

Completed By: TEMA LITOCLEAN
Date Completed: 1-dic-yy

Surface Soil Column Parameters		Value			(Units)
h_{cap}	Capillary zone thickness	NA			(m)
h_v	Vadose zone thickness	NA			(m)
ρ_s	Soil bulk density	1,7			(g/cm^3)
f_{oc}	Fraction organic carbon	***0,005***			(-)
θ_T	Soil total porosity	***0,41***			(-)
		capillary	**vadose**	**foundation**	
θ_w	Volumetric water content	***0,369***	0,12	0,12	(-)
θ_a	Volumetric air content	***0,041***	***0,29***	0,26	(-)
K_{vs}	Vertical hydraulic conductivity	***86,4***			(cm/d)
k_v	Vapor permeability	***1E-13***			(m^2)
L_{gw}	Depth to groundwater	NA			(m)
pH	Soil/groundwater pH	***8,06***			(-)
W	Length of source-zone area parallel to wind	***185***			(m)
W_{gw}	Length of source-zone area parallel to GW flow	NA			(m)
L_{ss}	Thickness of affected surface soils	1			(m)
A	Source zone area	2025			(m^2)
L_s	Depth to top of affected soils	0			(m)
L_{base}	Depth to base of affected soils	***2***			(m)
L_{subs}	Thickness of affected soils	***2***			(m)

Outdoor Air Parameters		Value	(Units)
U_{air}	Ambient air velocity in mixing zone	***3,4***	(m/s)
δ_{air}	Air mixing zone height	2	(m)
Q/C	Inverse mean concentration at the center of source	NA	
P_a	Areal particulate emission rate	6,9E-14	(g/cm^2/s)
V	Fraction of vegetative cover	NA	
U_m	Mean annual airvelocity at 7m	NA	
U_t	Equivalent 7m air velocity threshold value	NA	
F(x)	Windspeed function dependant on Um/Ut	NA	
PEF	Partculate Emission Factor	1,87721E-11	

Building Parameters		Residential	Commercial	(Units)
L_b	Building volume/area ratio	NA	NA	(m)
A_b	Foundation area	NA	NA	(m^2)
X_{crk}	Foundation perimeter	NA	NA	(m)
ER	Building air exchange rate	NA	NA	(1/s)
L_{crk}	Foundation thickness	NA	NA	(m)
Z_{crk}	Depth to bottom of foundation slab	NA	NA	(m)
η	Foundation crack fraction	NA	NA	(-)
dP	Indoor/outdoor differential pressure	NA	NA	(g/cm/s^2)
Q_s	Convective air flow through slab	NA	NA	(m^3/s)
θ_{wcrack}	Volumetric water content of cracks	NA	NA	(-)
θ_{acrack}	Volumetric air content of cracks	NA	NA	(-)
BV	Building Volume	NA	NA	(m^3)
w	Building Width Perpendicular to GW flow	NA	NA	(m)
L	Building Length Parallel to GW flow	NA	NA	(m)
ν	Saturated Soil Zone Porosity	NA	NA	(-)

Groundwater Parameters		Value	(Units)
δ_{gw}	Groundwater mixing zone depth	NA	(m)
I_f	Net groundwater infiltration rate	NA	(cm/yr)
U_{gw}	Groundwater Darcy velocity	NA	(cm/d)
V_{gw}	Groundwater seepage velocity	NA	(cm/d)
K_s	Saturated hydraulic conductivity	NA	(cm/d)
i	Groundwater gradient	NA	(-)
S_w	Width of groundwater source zone	NA	(m)
S_d	Depth of groundwater source zone	NA	(m)
θ_{eff}	Effective porosity in water-bearing unit	NA	(-)
$f_{oc\text{-}sat}$	Fraction organic carbon in water-bearing unit	NA	(-)
pH_{sat}	Groundwater pH	NA	(-)
	Biodegradation considered?	NA	

Transport Parameters		Off-site 1	Off-site 2	Off-site 1	Off-site 2	(Units)
Lateral Groundwater Transport		**Groundwater Ingestion**		**Groundwater to Indoor Air**		
α_x	Longitudinal dispersivity	NA	NA	NA	NA	(m)
α_y	Transverse dispersivity	NA	NA	NA	NA	(m)
α_z	Vertical dispersivity	NA	NA	NA	NA	(m)
Lateral Outdoor Air Transport		**Soil to Outdoor Air Inhal.**		**GW to Outdoor Air Inhal.**		
σ_y	Transverse dispersion coefficient	NA	NA	NA	NA	(m)
σ_z	Vertical dispersion coefficient	NA	NA	NA	NA	(m)
ADF	Air dispersion factor	NA	NA	NA	NA	(-)

Surface Water Parameters		Off-site 2	(Units)
Q_{sw}	Surface water flowrate	NA	(m^3/s)
W_{pi}	Width of GW plume at SW discharge	NA	(m)
δ_{pi}	Thickness of GW plume at SW discharge	NA	(m)
DF_{sw}	Groundwater-to-surface water dilution factor	NA	(-)

NOTE: NA = Not applicable

Orange = Site-specific value (different from current default value)

RBCA SITE ASSESSMENT

TIER 2 EXPOSURE CONCENTRATION AND INTAKE CALCULATION

OUTDOOR AIR EXPOSURE PATHWAYS ■ **(Checked if Pathway is Complete)**

SURFACE SOILS (0 - 1 m):

VAPOR AND DUST INHALATION

Constituents of Concern	1) Source Medium	2) NAF Value (m^3/kg) Receptor				3) Exposure Medium Outdoor Air: POE Conc. (mg/m^3) (1) / (2)			
	Soil Conc. (mg/kg)	On-site (0 m)		Off-site 1 (0 m)	Off-site 2 (0 m)	On-site (0 m)		Off-site 1 (0 m)	Off-site 2 (0 m)
		User Defined	Construction Worker	None	None	User Defined	Construction Worker	None	None
TPH - Aliph >C06-C08 *	5,9E+0	1,0E+4				5,7E-4			
TPH - Aliph >C08-C10 *	5,9E+0	1,0E+4				5,7E-4			
TPH - Aliph >C10-C12 *	1,8E+3	1,0E+4				1,8E-1			
TPH - Aliph >C12-C16 *	1,8E+3	1,0E+4				1,8E-1			
TPH - Aliph >C16-C21	1,8E+3	2,0E+4				9,1E-2			
TPH - Aliph >C21-C34	1,0E+4	1,6E+4				6,1E-1			
TPH - Arom >C07-C08	5,9E+0	1,0E+4				5,7E-4			
TPH - Arom >C08-C10	5,9E+0	1,0E+4				5,7E-4			
TPH - Arom >C10-C12	1,8E+3	1,0E+4				1,8E-1			
TPH - Arom >C12-C16	1,8E+3	1,7E+4				1,0E-1			
TPH - Arom >C16-C21	1,8E+3	6,1E+4				3,0E-2			
TPH - Arom >C21-C35	1,0E+4	7,6E+5				1,3E-2			
Arsenic *	1,1E+1	5,3E+10				2,1E-10			
Barium	1,8E+3	5,3E+10				3,3E-8			
Chromium (total)	4,0E+1	5,3E+10				7,5E-10			
Lead (inorganic) *	5,3E+1	5,3E+10				9,9E-10			
Mercury *	3,2E-1	4,5E+4				7,1E-6			
Cobalt	1,5E+1	5,3E+10				2,8E-10			
Copper	5,0E+1	5,3E+10				9,3E-10			
Nickel	3,4E+1	5,3E+10				6,4E-10			
Vanadium *	6,0E+1	5,3E+10				1,1E-9			
Zinc	1,3E+2	5,3E+10				2,5E-9			

NOTE: NAF = Natural attenuation factor POE = Point of exposure

RBCA SITE ASSESSMENT

TIER 2 EXPOSURE CONCENTRATION AND INTAKE CALCULATION

OUTDOOR AIR EXPOSURE PATHWAYS ■ **(Checked if Pathway is Complete)**

SURFACE SOILS (0 - 1 m):

VAPOR AND DUST INHALATION

	1) Source Medium	2) NAF Value (m^3/kg) Receptor				3) Exposure Medium Outdoor Air: POE Conc. (mg/m^3) (1) / (2)			
	Soil Conc. (mg/kg)	On-site (0 m)		Off-site 1 (0 m)	Off-site 2 (0 m)	On-site (0 m)		Off-site 1 (0 m)	Off-site 2 (0 m)
Constituents of Concern		User Defined	Construction Worker	None	None	User Defined	Construction Worker	None	None

Site Name: Recinto Folche_inhalación_sens largo
Site Location: LOTE X
Completed By: TEMA LITOCLEAN

Date Completed: 1-dic-yy
Job ID: 62288

RBCA SITE ASSESSMENT

TIER 2 EXPOSURE CONCENTRATION AND INTAKE CALCULATION

OUTDOOR AIR EXPOSURE PATHWAYS

SURFACE SOILS (0 - 1 m):

VAPOR AND DUST INHALATION (cont'd)

	4) Exposure Multiplier (EFxED)/(ATx365) (unitless)				5) Average Inhalation Exposure Concentration (mg/m^3) (3) X (4)			
	On-site (0 m)		Off-site 1 (0 m)	Off-site 2 (0 m)	On-site (0 m)		Off-site 1 (0 m)	Off-site 2 (0 m)
Constituents of Concern	User Defined	Construction Worker	None	None	User Defined	Construction Worker	None	None
TPH - Aliph >C06-C08 *	6,3E-1				3,6E-4			
TPH - Aliph >C08-C10 *	6,3E-1				3,6E-4			
TPH - Aliph >C10-C12 *	6,3E-1				1,1E-1			
TPH - Aliph >C12-C16 *	6,3E-1				1,1E-1			
TPH - Aliph >C16-C21	6,3E-1				5,7E-2			
TPH - Aliph >C21-C34	6,3E-1				3,9E-1			
TPH - Arom >C07-C08	6,3E-1				3,6E-4			
TPH - Arom >C08-C10	6,3E-1				3,6E-4			
TPH - Arom >C10-C12	6,3E-1				1,1E-1			
TPH - Arom >C12-C16	6,3E-1				6,5E-2			
TPH - Arom >C16-C21	6,3E-1				1,9E-2			
TPH - Arom >C21-C35	6,3E-1				8,3E-3			
Arsenic *	1,7E-2				3,6E-12			
Barium	6,3E-1				2,1E-8			
Chromium (total)	6,3E-1				4,7E-10			
Lead (inorganic) *	1,7E-2				1,7E-11			
Mercury *	6,3E-1				4,5E-6			
Cobalt	1,7E-2				4,7E-12			
Copper	6,3E-1				5,9E-10			
Nickel	1,7E-2				1,1E-11			
Vanadium *	6,3E-1				7,1E-10			
Zinc	6,3E-1				1,6E-9			

* = Chemical with user-specified data

NOTE: AT = Averaging time (days) EF = Exposure frequency (days/yr) ED = Exposure duration (yr)

RBCA SITE ASSESSMENT

TIER 2 EXPOSURE CONCENTRATION AND INTAKE CALCULATION

OUTDOOR AIR EXPOSURE PATHWAYS

SURFACE SOILS (0 - 1 m):

VAPOR AND DUST INHALATION (cont'd)

	4) Exposure Multiplier (EFxED)/(ATx365) (unitless)				5) Average Inhalation Exposure Concentration (mg/m^3) (3) X (4)			
	On-site (0 m)		Off-site 1 (0 m)	Off-site 2 (0 m)	On-site (0 m)		Off-site 1 (0 m)	Off-site 2 (0 m)
Constituents of Concern	User Defined	Construction Worker	None	None	User Defined	Construction Worker	None	None

Site Name: Recinto Folche_inhalación_sens largo
Site Location: LOTE X
Completed By: TEMA LITOCLEAN

Date Completed: 1-dic-yy
Job ID: 62288

RBCA SITE ASSESSMENT

TIER 2 EXPOSURE CONCENTRATION AND INTAKE CALCULATION

OUTDOOR AIR EXPOSURE PATHWAYS ■ **(Checked if Pathway is Complete)**

SUBSURFACE SOILS (1 - 2 m):

VAPOR INHALATION

	1) Source Medium	2) NAF Value (m^3/kg) Receptor			3) Exposure Medium Outdoor Air: POE Conc. (mg/m^3) (1) / (2)		
Constituents of Concern	Soil Conc. (mg/kg)	On-site (0 m) User Defined	Off-site 1 (0 m) None	Off-site 2 (0 m) None	On-site (0 m) User Defined	Off-site 1 (0 m) None	Off-site 2 (0 m) None
TPH - Aliph >C06-C08 *	5,9E+0	1,0E+4			5,7E-4		
TPH - Aliph >C08-C10 *	5,9E+0	1,0E+4			5,7E-4		
TPH - Aliph >C10-C12 *	1,8E+3	1,0E+4			1,8E-1		
TPH - Aliph >C12-C16 *	1,8E+3	1,0E+4			1,8E-1		
TPH - Aliph >C16-C21	1,8E+3	2,5E+4			7,3E-2		
TPH - Aliph >C21-C34	1,0E+4	1,7E+4			6,0E-1		
TPH - Arom >C07-C08	5,9E+0	1,0E+4			5,7E-4		
TPH - Arom >C08-C10	5,9E+0	1,0E+4			5,7E-4		
TPH - Arom >C10-C12	1,8E+3	1,0E+4			1,8E-1		
TPH - Arom >C12-C16	1,8E+3	1,9E+4			9,6E-2		
TPH - Arom >C16-C21	1,8E+3	2,3E+5			7,9E-3		
TPH - Arom >C21-C35	1,0E+4	3,6E+7			2,8E-4		
Arsenic *	1,1E+1	VFsamb					
Barium	1,8E+3	VFsamb					
Chromium (total)	4,0E+1	VFsamb					
Lead (inorganic) *	5,3E+1	VFsamb					
Mercury *	3,2E-1	1,3E+5			2,5E-6		
Cobalt	1,5E+1	VFsamb					
Copper	5,0E+1	VFsamb					
Nickel	3,4E+1	VFsamb					
Vanadium *	6,0E+1	VFsamb					
Zinc	1,3E+2	VFsamb					

NOTE: NAF = Natural attenuation factor POE = Point of exposure

RBCA SITE ASSESSMENT

TIER 2 EXPOSURE CONCENTRATION AND INTAKE CALCULATION

OUTDOOR AIR EXPOSURE PATHWAYS ■ **(Checked if Pathway is Complete)**

SUBSURFACE SOILS (1 - 2 m):

VAPOR INHALATION

	1) Source Medium	2) NAF Value (m^3/kg) Receptor			3) Exposure Medium Outdoor Air: POE Conc. (mg/m^3) (1) / (2)		
Constituents of Concern	Soil Conc. (mg/kg)	On-site (0 m)	Off-site 1 (0 m)	Off-site 2 (0 m)	On-site (0 m)	Off-site 1 (0 m)	Off-site 2 (0 m)
		User Defined	None	None	User Defined	None	None

Site Name: Recinto Folche_inhalación_sens largo
Site Location: LOTE X
Completed By: TEMA LITOCLEAN

Date Completed: 1-dic-yy
Job ID: 62288

RBCA SITE ASSESSMENT

TIER 2 EXPOSURE CONCENTRATION AND INTAKE CALCULATION

OUTDOOR AIR EXPOSURE PATHWAYS

SUBSURFACE SOILS (1 - 2 m):

VAPOR INHALATION (cont'd)

Constituents of Concern	4) Exposure Multiplier (EFxED)/(ATx365) (unitless)			5) Average Inhalation Exposure Concentration (mg/m^3) (3) X (4)		
	On-site (0 m) User Defined	Off-site 1 (0 m) None	Off-site 2 (0 m) None	On-site (0 m) User Defined	Off-site 1 (0 m) None	Off-site 2 (0 m) None
TPH - Aliph >C06-C08 *	6,3E-1			3,6E-4		
TPH - Aliph >C08-C10 *	6,3E-1			3,6E-4		
TPH - Aliph >C10-C12 *	6,3E-1			1,1E-1		
TPH - Aliph >C12-C16 *	6,3E-1			1,1E-1		
TPH - Aliph >C16-C21	6,3E-1			4,6E-2		
TPH - Aliph >C21-C34	6,3E-1			3,8E-1		
TPH - Arom >C07-C08	6,3E-1			3,6E-4		
TPH - Arom >C08-C10	6,3E-1			3,6E-4		
TPH - Arom >C10-C12	6,3E-1			1,1E-1		
TPH - Arom >C12-C16	6,3E-1			6,1E-2		
TPH - Arom >C16-C21	6,3E-1			5,0E-3		
TPH - Arom >C21-C35	6,3E-1			1,8E-4		
Arsenic *	1,7E-2					
Barium	6,3E-1					
Chromium (total)	6,3E-1					
Lead (inorganic) *	1,7E-2					
Mercury *	6,3E-1			1,6E-6		
Cobalt	1,7E-2					
Copper	6,3E-1					
Nickel	1,7E-2					
Vanadium *	6,3E-1					
Zinc	6,3E-1					

NOTE: AT = Averaging time (days) EF = Exposure frequency (days/yr) ED = Exposure duration (yr)

RBCA SITE ASSESSMENT

TIER 2 EXPOSURE CONCENTRATION AND INTAKE CALCULATION

OUTDOOR AIR EXPOSURE PATHWAYS

SUBSURFACE SOILS (1 - 2 m):

VAPOR INHALATION (cont'd)

	4) Exposure Multiplier (EFxED)/(ATx365) (unitless)			5) Average Inhalation Exposure Concentration (mg/m^3) (3) X (4)		
	On-site (0 m)	Off-site 1 (0 m)	Off-site 2 (0 m)	On-site (0 m)	Off-site 1 (0 m)	Off-site 2 (0 m)
Constituents of Concern	User Defined	None	None	User Defined	None	None

Site Name: Recinto Folche_inhalación_sens largo
Site Location: LOTE X
Completed By: TEMA LITOCLEAN

Date Completed: 1-dic-yy
Job ID: 62288

RBCA SITE ASSESSMENT

TIER 2 EXPOSURE CONCENTRATION AND INTAKE CALCULATION

OUTDOOR AIR EXPOSURE PATHWAYS ☐ **(Checked if Pathway is Complete)**

GROUNDWATER: VAPOR INHALATION

Exposure Concentration

Constituents of Concern	1) Source Medium	2) NAF Value (m^3/L) Receptor			3) Exposure Medium Outdoor Air: POE Conc. (mg/m^3) (1) / (2)		
	Groundwater Conc. (mg/L)	On-site (0 m) None	Off-site 1 (0 m) None	Off-site 2 (0 m) None	On-site (0 m) None	Off-site 1 (0 m) None	Off-site 2 (0 m) None
TPH - Aliph >C06-C08 *							
TPH - Aliph >C08-C10 *							
TPH - Aliph >C10-C12 *							
TPH - Aliph >C12-C16 *							
TPH - Aliph >C16-C21							
TPH - Aliph >C21-C34							
TPH - Arom >C07-C08							
TPH - Arom >C08-C10							
TPH - Arom >C10-C12							
TPH - Arom >C12-C16							
TPH - Arom >C16-C21							
TPH - Arom >C21-C35							
Arsenic *							
Barium							
Chromium (total)							
Lead (inorganic) *							
Mercury *							
Cobalt							
Copper							
Nickel							
Vanadium *							
Zinc							

NOTE: NAF = Natural attenuation factor POE = Point of exposure

RBCA SITE ASSESSMENT

TIER 2 EXPOSURE CONCENTRATION AND INTAKE CALCULATION

OUTDOOR AIR EXPOSURE PATHWAYS ☐ **(Checked if Pathway is Complete)**

GROUNDWATER: VAPOR INHALATION

Exposure Concentration

	1) Source Medium	2) NAF Value (m^3/L) Receptor			3) Exposure Medium Outdoor Air: POE Conc. (mg/m^3) (1) / (2)		
Constituents of Concern	Groundwater Conc. (mg/L)	On-site (0 m)	Off-site 1 (0 m)	Off-site 2 (0 m)	On-site (0 m)	Off-site 1 (0 m)	Off-site 2 (0 m)
		None	None	None	None	None	None

Site Name: Recinto Folche_inhalación_sens largo
Site Location: LOTE X
Completed By: TEMA LITOCLEAN

Date Completed: 1-dic-yy
Job ID: 62288

RBCA SITE ASSESSMENT

TIER 2 EXPOSURE CONCENTRATION AND INTAKE CALCULATION

OUTDOOR AIR EXPOSURE PATHWAYS

GROUNDWATER: VAPOR

INHALATION (cont'd)

Constituents of Concern	4) Exposure Multiplier (EFxED)/(ATx365) (unitless)			5) Average Inhalation Exposure Concentration (mg/m^3) (3) X (4)		
	On-site (0 m)	Off-site 1 (0 m)	Off-site 2 (0 m)	On-site (0 m)	Off-site 1 (0 m)	Off-site 2 (0 m)
	None	None	None	None	None	None
TPH - Aliph >C06-C08 *						
TPH - Aliph >C08-C10 *						
TPH - Aliph >C10-C12 *						
TPH - Aliph >C12-C16 *						
TPH - Aliph >C16-C21						
TPH - Aliph >C21-C34						
TPH - Arom >C07-C08						
TPH - Arom >C08-C10						
TPH - Arom >C10-C12						
TPH - Arom >C12-C16						
TPH - Arom >C16-C21						
TPH - Arom >C21-C35						
Arsenic *						
Barium						
Chromium (total)						
Lead (inorganic) *						
Mercury *						
Cobalt						
Copper						
Nickel						
Vanadium *						
Zinc						

NOTE: AT = Averaging time (days) EF = Exposure frequency (days/yr) ED = Exposure duration (yr)

RBCA SITE ASSESSMENT

TIER 2 EXPOSURE CONCENTRATION AND INTAKE CALCULATION

OUTDOOR AIR EXPOSURE PATHWAYS

GROUNDWATER: VAPOR INHALATION (cont'd)

	4) Exposure Multiplier (EFxED)/(ATx365) (unitless)			5) Average Inhalation Exposure Concentration (mg/m^3) (3) X (4)		
	On-site (0 m)	Off-site 1 (0 m)	Off-site 2 (0 m)	On-site (0 m)	Off-site 1 (0 m)	Off-site 2 (0 m)
Constituents of Concern	None	None	None	None	None	None

Site Name: Recinto Folche_inhalación_sens largo
Site Location: LOTE X
Completed By: TEMA LITOCLEAN

Date Completed: 1-dic-yy
Job ID: 62288

RBCA SITE ASSESSMENT

TIER 2 EXPOSURE CONCENTRATION AND INTAKE CALCULATION

OUTDOOR AIR EXPOSURE PATHWAYS

MAXIMUM PATHWAY EXPOSURE (mg/m^3)

Maximum average expsosure concentration from soil and groundwater routes.)

Constituents of Concern	On-site (0 m) User Defined	On-site (0 m) Construction Worker	Off-site 1 (0 m) None	Off-site 2 (0 m) None
TPH - Aliph >C06-C08 *	3,6E-4			
TPH - Aliph >C08-C10 *	3,6E-4			
TPH - Aliph >C10-C12 *	1,1E-1			
TPH - Aliph >C12-C16 *	1,1E-1			
TPH - Aliph >C16-C21	5,7E-2			
TPH - Aliph >C21-C34	3,9E-1			
TPH - Arom >C07-C08	3,6E-4			
TPH - Arom >C08-C10	3,6E-4			
TPH - Arom >C10-C12	1,1E-1			
TPH - Arom >C12-C16	6,5E-2			
TPH - Arom >C16-C21	1,9E-2			
TPH - Arom >C21-C35	8,3E-3			
Arsenic *	3,6E-12			
Barium	2,1E-8			
Chromium (total)	4,7E-10			
Lead (inorganic) *	1,7E-11			
Mercury *	4,5E-6			
Cobalt	4,7E-12			
Copper	5,9E-10			
Nickel	1,1E-11			
Vanadium *	7,1E-10			
Zinc	1,6E-9			

RBCA SITE ASSESSMENT

TIER 2 EXPOSURE CONCENTRATION AND INTAKE CALCULATION

OUTDOOR AIR EXPOSURE PATHWAYS

MAXIMUM PATHWAY EXPOSURE (mg/m^3)

Maximum average expsosure concentration from soil and groundwater routes.)

Constituents of Concern	On-site (0 m)		Off-site 1 (0 m)	Off-site 2 (0 m)
	User Defined	Construction Worker	None	None

Site Name: Recinto Folche_inhalación_sens largo
Site Location: LOTE X
Completed By: TEMA LITOCLEAN

Date Completed: 1-dic-yy
Job ID: 62288

RBCA SITE ASSESSMENT

TIER 2 PATHWAY RISK CALCULATION

OUTDOOR AIR EXPOSURE PATHWAYS ■ **(Checked if Pathway is Complete)**

CARCINOGENIC RISK

Constituents of Concern	(1) Is Carcinogenic	(2) Maximum Carcinogenic Exposure (mg/m^3)				(3) Inhalation Unit Risk Factor (µg/m^3)^-1	(4) Individual COC Risk (2) x (3) x 1000			
		On-site (0 m)		Off-site 1 (0 m)	Off-site 2 (0 m)		On-site (0 m)		Off-site 1 (0 m)	Off-site 2 (0 m)
		User Defined	Construction Worker	None	None		User Defined	Construction Worker	None	None
TPH - Aliph >C06-C08 *	FALSO	-	-	-	-	-				
TPH - Aliph >C08-C10 *	FALSO	-	-	-	-	-				
TPH - Aliph >C10-C12 *	FALSO	-	-	-	-	-				
TPH - Aliph >C12-C16 *	FALSO	-	-	-	-	-				
TPH - Aliph >C16-C21	FALSO	-	-	-	-	-				
TPH - Aliph >C21-C34	FALSO	-	-	-	-	-				
TPH - Arom >C07-C08	FALSO	-	-	-	-	-				
TPH - Arom >C08-C10	FALSO	-	-	-	-	-				
TPH - Arom >C10-C12	FALSO	-	-	-	-	-				
TPH - Arom >C12-C16	FALSO	-	-	-	-	-				
TPH - Arom >C16-C21	FALSO	-	-	-	-	-				
TPH - Arom >C21-C35	FALSO	-	-	-	-	-				
Arsenic *	#########	3,6E-12		-	-	4,3E-3	1,5E-11			
Barium	FALSO	-	-	-	-	-				
Chromium (total)	FALSO	-	-	-	-	-				
Lead (inorganic) *	#########	1,7E-11		-	-	1,2E-5	2,0E-13			
Mercury *	FALSO	-	-	-	-	-				
Cobalt	#########	4,7E-12		-	-	9,0E-3	4,3E-11			
Copper	FALSO	-	-	-	-	-				
Nickel	#########	1,1E-11		-	-	4,8E-4	5,2E-12			
Vanadium *	FALSO	-	-	-	-	-				
Zinc	FALSO	-	-	-	-	-				

Total Pathway Carcinogenic Risk = **6,3E-11**

RBCA SITE ASSESSMENT

TIER 2 PATHWAY RISK CALCULATION

OUTDOOR AIR EXPOSURE PATHWAYS ■ **(Checked if Pathway is Complete)**

CARCINOGENIC RISK

Constituents of Concern	(1) Is Carcinogenic	(2) Maximum Carcinogenic Exposure (mg/m^3)				(3) Inhalation Unit Risk Factor (µg/m^3)^-1	(4) Individual COC Risk (2) x (3) x 1000			
		On-site (0 m)		Off-site 1 (0 m)	Off-site 2 (0 m)		On-site (0 m)		Off-site 1 (0 m)	Off-site 2 (0 m)
		User Defined	Construction Worker	None	None		User Defined	Construction Worker	None	None

Site Name: Recinto Folche_inhalación_sens largo
Site Location: LOTE X

Completed By: TEMA LITOCLEAN
Date Completed: 1-dic-yy

Job ID: 62288

RBCA SITE ASSESSMENT

TIER 2 PATHWAY RISK CALCULATION

OUTDOOR AIR EXPOSURE PATHWAYS ■ **(Checked if Pathway is Complete)**

TOXIC EFFECTS

Constituents of Concern	(5) Maximum Toxicant Exposure (mg/m^3)				(6) Inhalation Reference Conc. (mg/m^3)	(7) Individual COC Hazard Quotient (5) / (6)			
	On-site (0 m)		Off-site 1 (0 m)	Off-site 2 (0 m)		On-site (0 m)		Off-site 1 (0 m)	Off-site 2 (0 m)
	User Defined	Construction Worker	None	None		User Defined	Construction Worker	None	None
TPH - Aliph >C06-C08 *	3,6E-4				1,8E+1	2,0E-5			
TPH - Aliph >C08-C10 *	3,6E-4				1,0E+0	3,6E-4			
TPH - Aliph >C10-C12 *	1,1E-1				1,0E+0	1,1E-1			
TPH - Aliph >C12-C16 *	1,1E-1				1,0E+0	1,1E-1			
TPH - Aliph >C16-C21	5,7E-2				-				
TPH - Aliph >C21-C34	3,9E-1				-				
TPH - Arom >C07-C08	3,6E-4				1,9E+0	1,9E-4			
TPH - Arom >C08-C10	3,6E-4				2,0E-1	1,8E-3			
TPH - Arom >C10-C12	1,1E-1				2,0E-1	5,6E-1			
TPH - Arom >C12-C16	6,5E-2				2,0E-1	3,3E-1			
TPH - Arom >C16-C21	1,9E-2				-				
TPH - Arom >C21-C35	8,3E-3				-				
Arsenic *	1,3E-10				-				
Barium	2,1E-8				-				
Chromium (total)	4,7E-10				1,4E-4	3,4E-6			
Lead (inorganic) *	6,2E-10				-				
Mercury *	4,5E-6				3,0E-4	1,5E-2			
Cobalt	1,8E-10				6,0E-6	2,9E-5			
Copper	5,9E-10				-				
Nickel	4,0E-10				9,0E-5	4,5E-6			
Vanadium *	7,1E-10				-				
Zinc	1,6E-9				-				
Total Pathway Hazard Index =						**1,1E+0**			

RBCA SITE ASSESSMENT

TIER 2 PATHWAY RISK CALCULATION

OUTDOOR AIR EXPOSURE PATHWAYS ■ **(Checked if Pathway is Complete)**

	TOXIC EFFECTS								
	(5) Maximum Toxicant Exposure (mg/m^3)				(6) Inhalation Reference	(7) Individual COC Hazard Quotient (5) / (6)			
	On-site (0 m)		Off-site 1 (0 m)	Off-site 2 (0 m)	Conc. (mg/m^3)	On-site (0 m)		Off-site 1 (0 m)	Off-site 2 (0 m)
Constituents of Concern	User Defined	Construction Worker	None	None		User Defined	Construction Worker	None	None

Site Name: Recinto Folche_inhalación_sens largo
Site Location: LOTE X

Completed By: TEMA LITOCLEAN
Date Completed: 1-dic-yy

Job ID: 62288

Caso: Escenario *ON SITE* - Etapa de mejora ambiental

Inhalación de vapores y partículas en espacios abiertos.

Índice de riesgo toxicológico.

Parámetro: distribución de las fracciones de TPH en cadenas

RBCA SITE ASSESSMENT	User-Specified COC Data

REPRESENTATIVE COC CONCENTRATIONS IN SOURCE MEDIA

CONSTITUENT	Representative COC Concentration			
	Groundwater		Soils (0 - 2 m)	
	value (mg/L)	note	value (mg/kg)	note
TPH - Aliph >C06-C08 *			1,2E+1	Distri. 100% alif./arom.
TPH - Aliph >C08-C10 *			1,2E+1	Distri. 100% alif./arom.
TPH - Aliph >C10-C12 *			3,6E+3	Distri. 100% alif./arom.
TPH - Aliph >C12-C16 *			3,6E+3	Distri. 100% alif./arom.
TPH - Aliph >C16-C21			3,6E+3	Distri. 100% alif./arom.
TPH - Aliph >C21-C34			2,0E+4	Distri. 100% alif./arom.
TPH - Arom >C07-C08			1,2E+1	Distri. 100% alif./arom.
TPH - Arom >C08-C10			1,2E+1	Distri. 100% alif./arom.
TPH - Arom >C10-C12			3,6E+3	Distri. 100% alif./arom.
TPH - Arom >C12-C16			3,6E+3	Distri. 100% alif./arom.
TPH - Arom >C16-C21			3,6E+3	Distri. 100% alif./arom.
TPH - Arom >C21-C35			2,0E+4	Distri. 100% alif./arom.
Arsenic *			1,1E+1	61586-FO-CS45-2,00
Barium			1,8E+3	61586-FO-CS42-2,00
Chromium (total)			4,0E+1	61586-FO-CS22-2,00
Lead (inorganic) *			5,3E+1	61586-FO-CS67-2,00
Mercury *			3,2E-1	61586-FO-CS15-2,00
Cobalt			1,5E+1	61586-FO-CS74-0,50
Copper			5,0E+1	61586-FO-CS13-0,0
Nickel			3,4E+1	61586-FO-CS74-0,50
Vanadium *			6,0E+1	61586-FO-CS74-0,50
Zinc			1,3E+2	61586-FO-CS74-0,50

RBCA SITE ASSESSMENT

Input Parameter Summary

Site Name: Recinto Folche_inhalación Rev2_sens distribución+NRE
Site Location: LOTE X

Completed By: TEMA LITOCLEAN
Date Completed: 1-dic-yy

Exposure Parameters		Residential				Commercial/Industrial		User Defined
		Child*	Adolescent	Adult	Age Adjusted**	Adult	Construct.	
ATc	Averaging time for carcinogens (yr)	74,5	74,5	74,5	NA	74,5	74,5	74,5
ATn	Averaging time for non-carcinogens (yr)	6	12	30	NA	24	1	2
BW	Body weight (kg)	15	35	70	NA	65	70	65
ED	Exposure duration (yr)	6	12	30	NA	24	1	2
τ	Averaging time for vapor flux (yr)	30	30	30	NA	30	30	30
EF	Exposure frequency (days/yr)	350	350	350	NA	230	180	230
EFD	Exposure frequency for dermal exposure	350	350	350	NA	230	180	230
IRw	Ingestion rate of water (L/day)	1	1	2	2,5	1	NA	1
IRs	Ingestion rate of soil (mg/day)	200	200	100	387	50	100	50
SA	Skin surface area (dermal) (cm^2)	2023	2023	3160	4771	3160	3160	3160
M	Soil to skin adherence factor	0,5	0,5	0,5	NA	0,5	0,5	0,5
ETswim	Swimming exposure time (hr/event)	1	3	3	NA	NA	NA	NA
EVswim	Swimming event frequency (events/yr)	12	12	12	NA	NA	NA	NA
IRswim	Water ingestion while swimming (L/hr)	0,5	0,5	0,05	0,3	NA	NA	NA
SAswim	Skin surface area for swimming (cm^2)	3500	8100	23000	15680	NA	NA	NA
IRfish	Ingestion rate of fish (kg/yr)	0,025	0,025	0,025	0,053	NA	NA	NA
FIfish	Contaminated fish fraction (unitless)	1	1	1	NA	NA	NA	NA
IRbg	Below-ground vegetable ingestion	0,002	0,002	0,006	2,053	NA	NA	NA
IRabg	Above-ground vegetable ingestion	0,001	0,001	0,002	0,887	NA	NA	NA
VGbg	Above-ground Veg. Ingest. Correction Factor	0,01	0,01	0,01	NA	NA	NA	NA
VGabg	Below-ground Veg. Ingest. Correction Factor	0,01	0,01	0,01	NA	NA	NA	NA

* = Child Receptor used for Non-Carcinogens
** = Age-adjusted rate is effective value corresponding to adult exposure factors.

Complete Exposure Pathways and Receptors	On-site	Off-site 1	Off-site 2
Groundwater:			
Groundwater Ingestion	None	None	None
Soil Leaching to Groundwater Ingestion	None	None	None
Apply MCL Values	No	No	No
Applicable Surface Water Exposure Routes:			
Swimming	NA	NA	None
Fish Consumption	NA	NA	None
Aquatic Life Protection	NA	NA	None
Soil:			
Direct Contact: direct combined pathways	None	NA	NA
Apply CLEA- UK SGV levels		No	
Outdoor Air:			
Particulates from Surface Soils	User Defined	None	None
Volatilization from Soils	User Defined	None	None
Volatilization from Groundwater	None	None	None
Indoor Air:			
Volatilization from Soils	None	NA	NA
Volatilization from Groundwater	None	None	None
Soil Leaching to Groundwater Volatilization	None	None	None

Receptor Distance from Source Media	On-site	Off-site 1	Off-site 2	(Units)
Groundwater receptor	NA	NA	NA	(m)
Outdoor air inhalation receptor	0	NA	NA	(m)
Indoor air inhalation receptor	NA	NA	NA	(m)

Target Health Risk Values		Individual	Cumulative
TR	Target Risk (carcinogens)	1,0E-5	1,0E-5
THQ	Target Hazard Quotient (non-carcinogenic risk)	1,0E+0	1,0E+0

Modeling Options	
RBCA tier	Tier 2
Outdoor air volatilization model	Surface & Subsurface Models: ASTM Model
Indoor air volatilization model	NA
Soil leaching model	NA
Use soil attenuation model (SAM) for leachate?	NA
Use dual equilibrium desorption model?	No
Apply Mass Balance Limit for Soil Volatilization?	No
Apply UK (CLEA) SGV as soil concentration limit	No
Vegetable calculation options	NA
Air dilution factor	NA
Groundwater dilution-attenuation factor	NA

NOTE: NA = Not applicable
Orange = Site-specific value (different from current default value)

RBCA SITE ASSESSMENT — Input Parameter Summary

Site Name: Recinto Folche_inhalación Rev2_sens distribución+NRE
Site Location: LOTE X

Completed By: TEMA LITOCLEAN
Date Completed: 1-dic-yy

Surface Soil Column Parameters		Value			(Units)
h_{cap}	Capillary zone thickness	NA			(m)
h_v	Vadose zone thickness	NA			(m)
ρ_s	Soil bulk density	1,7			(g/cm^3)
f_{oc}	Fraction organic carbon	***0,005***			(-)
θ_T	Soil total porosity	***0,41***			(-)
		capillary	**vadose**	**foundation**	
θ_w	Volumetric water content	***0,369***	0,12	0,12	(-)
θ_a	Volumetric air content	***0,041***	***0,29***	0,26	(-)
K_{vs}	Vertical hydraulic conductivity	***86,4***			(cm/d)
k_v	Vapor permeability	***1E-13***			(m^2)
L_{gw}	Depth to groundwater	NA			(m)
pH	Soil/groundwater pH	***8,06***			(-)
W	Length of source-zone area parallel to wind	***300***			(m)
W_{gw}	Length of source-zone area parallel to GW flow	NA			(m)
L_{ss}	Thickness of affected surface soils	1			(m)
A	Source zone area	2025			(m^2)
L_s	Depth to top of affected soils	0			(m)
L_{base}	Depth to base of affected soils	***2***			(m)
L_{subs}	Thickness of affected soils	***2***			(m)

Outdoor Air Parameters		Value	(Units)
U_{air}	Ambient air velocity in mixing zone	***3,4***	(m/s)
δ_{air}	Air mixing zone height	2	(m)
Q/C	Inverse mean concentration at the center of source	NA	
P_a	Areal particulate emission rate	6,9E-14	(g/cm^2/s)
V	Fraction of vegetative cover	NA	
U_m	Mean annual airvelocity at 7m	NA	
U_t	Equivalent 7m air velocity threshold value	NA	
F(x)	Windspeed function dependant on Um/Ut	NA	
PEF	Partculate Emission Factor	3,04412E-11	

Building Parameters		Residential	Commercial	(Units)
L_b	Building volume/area ratio	NA	NA	(m)
A_b	Foundation area	NA	NA	(m^2)
X_{crk}	Foundation perimeter	NA	NA	(m)
ER	Building air exchange rate	NA	NA	(1/s)
L_{crk}	Foundation thickness	NA	NA	(m)
Z_{crk}	Depth to bottom of foundation slab	NA	NA	(m)
η	Foundation crack fraction	NA	NA	(-)
dP	Indoor/outdoor differential pressure	NA	NA	(g/cm/s^2)
Q_s	Convective air flow through slab	NA	NA	(m^3/s)
θ_{wcrack}	Volumetric water content of cracks	NA	NA	(-)
θ_{acrack}	Volumetric air content of cracks	NA	NA	(-)
BV	Building Volume	NA	NA	(m^3)
w	Building Width Perpendicular to GW flow	NA	NA	(m)
L	Building Length Parallel to GW flow	NA	NA	(m)
v	Saturated Soil Zone Porosity	NA	NA	(-)

Groundwater Parameters		Value	(Units)
δ_{gw}	Groundwater mixing zone depth	NA	(m)
I_f	Net groundwater infiltration rate	NA	(cm/yr)
U_{gw}	Groundwater Darcy velocity	NA	(cm/d)
V_{gw}	Groundwater seepage velocity	NA	(cm/d)
K_s	Saturated hydraulic conductivity	NA	(cm/d)
i	Groundwater gradient	NA	(-)
S_w	Width of groundwater source zone	NA	(m)
S_d	Depth of groundwater source zone	NA	(m)
θ_{eff}	Effective porosity in water-bearing unit	NA	(-)
$f_{oc\text{-}sat}$	Fraction organic carbon in water-bearing unit	NA	(-)
pH_{sat}	Groundwater pH	NA	(-)
	Biodegradation considered?	NA	

Transport Parameters		Off-site 1	Off-site 2	Off-site 1	Off-site 2	(Units)
Lateral Groundwater Transport		**Groundwater Ingestion**		**Groundwater to Indoor Air**		
α_x	Longitudinal dispersivity	NA	NA	NA	NA	(m)
α_y	Transverse dispersivity	NA	NA	NA	NA	(m)
α_z	Vertical dispersivity	NA	NA	NA	NA	(m)
Lateral Outdoor Air Transport		**Soil to Outdoor Air Inhal.**		**GW to Outdoor Air Inhal.**		
σ_y	Transverse dispersion coefficient	NA	NA	NA	NA	(m)
σ_z	Vertical dispersion coefficient	NA	NA	NA	NA	(m)
ADF	Air dispersion factor	NA	NA	NA	NA	(-)

Surface Water Parameters		Off-site 2	(Units)
Q_{sw}	Surface water flowrate	NA	(m^3/s)
W_{pi}	Width of GW plume at SW discharge	NA	(m)
δ_{pi}	Thickness of GW plume at SW discharge	NA	(m)
DF_{sw}	Groundwater-to-surface water dilution factor	NA	(-)

NOTE: NA = Not applicable

Orange = Site-specific value (different from current default value)

RBCA SITE ASSESSMENT

TIER 2 EXPOSURE CONCENTRATION AND INTAKE CALCULATION

OUTDOOR AIR EXPOSURE PATHWAYS ■ **(Checked if Pathway is Complete)**

SURFACE SOILS (0 - 1 m):

VAPOR AND DUST INHALATION

Constituents of Concern	1) Source Medium	2) NAF Value (m^3/kg) Receptor				3) Exposure Medium Outdoor Air: POE Conc. (mg/m^3) (1) / (2)			
	Soil Conc. (mg/kg)	On-site (0 m)		Off-site 1 (0 m)	Off-site 2 (0 m)	On-site (0 m)		Off-site 1 (0 m)	Off-site 2 (0 m)
		User Defined	Construction Worker	None	None	User Defined	Construction Worker	None	None
TPH - Aliph >C06-C08 *	1,2E+1	6,3E+3				1,9E-3			
TPH - Aliph >C08-C10 *	1,2E+1	6,3E+3				1,9E-3			
TPH - Aliph >C10-C12 *	3,6E+3	6,3E+3				5,7E-1			
TPH - Aliph >C12-C16 *	3,6E+3	6,3E+3				5,7E-1			
TPH - Aliph >C16-C21	3,6E+3	1,2E+4				2,9E-1			
TPH - Aliph >C21-C34	2,0E+4	1,0E+4				2,0E+0			
TPH - Arom >C07-C08	1,2E+1	6,3E+3				1,9E-3			
TPH - Arom >C08-C10	1,2E+1	6,3E+3				1,9E-3			
TPH - Arom >C10-C12	3,6E+3	6,3E+3				5,7E-1			
TPH - Arom >C12-C16	3,6E+3	1,1E+4				3,4E-1			
TPH - Arom >C16-C21	3,6E+3	3,7E+4				9,7E-2			
TPH - Arom >C21-C35	2,0E+4	4,7E+5				4,3E-2			
Arsenic *	1,1E+1	3,3E+10				3,4E-10			
Barium	1,8E+3	3,3E+10				5,4E-8			
Chromium (total)	4,0E+1	3,3E+10				1,2E-9			
Lead (inorganic) *	5,3E+1	3,3E+10				1,6E-9			
Mercury *	3,2E-1	2,8E+4				1,1E-5			
Cobalt	1,5E+1	3,3E+10				4,5E-10			
Copper	5,0E+1	3,3E+10				1,5E-9			
Nickel	3,4E+1	3,3E+10				1,0E-9			
Vanadium *	6,0E+1	3,3E+10				1,8E-9			
Zinc	1,3E+2	3,3E+10				4,1E-9			

NOTE: NAF = Natural attenuation factor POE = Point of exposure

RBCA SITE ASSESSMENT

TIER 2 EXPOSURE CONCENTRATION AND INTAKE CALCULATION

OUTDOOR AIR EXPOSURE PATHWAYS ■ **(Checked if Pathway is Complete)**

SURFACE SOILS (0 - 1 m):

VAPOR AND DUST INHALATION

	1) Source Medium	2) NAF Value (m^3/kg) Receptor				3) Exposure Medium Outdoor Air: POE Conc. (mg/m^3) (1) / (2)			
	Soil Conc. (mg/kg)	On-site (0 m)		Off-site 1 (0 m)	Off-site 2 (0 m)	On-site (0 m)		Off-site 1 (0 m)	Off-site 2 (0 m)
Constituents of Concern		User Defined	Construction Worker	None	None	User Defined	Construction Worker	None	None

Site Name: Recinto Folche_inhalación Rev2_sens distribución+NRE
Site Location: LOTE X
Completed By: TEMA LITOCLEAN

Date Completed: 1-dic-yy
Job ID: 62288

RBCA SITE ASSESSMENT

TIER 2 EXPOSURE CONCENTRATION AND INTAKE CALCULATION

OUTDOOR AIR EXPOSURE PATHWAYS

SURFACE SOILS (0 - 1 m):

VAPOR AND DUST INHALATION (cont'd)

	4) Exposure Multiplier (EFxED)/(ATx365) (unitless)				5) Average Inhalation Exposure Concentration (mg/m^3) (3) X (4)			
	On-site (0 m)		Off-site 1 (0 m)	Off-site 2 (0 m)	On-site (0 m)		Off-site 1 (0 m)	Off-site 2 (0 m)
Constituents of Concern	User Defined	Construction Worker	None	None	User Defined	Construction Worker	None	None
TPH - Aliph >C06-C08 *	6,3E-1				1,2E-3			
TPH - Aliph >C08-C10 *	6,3E-1				1,2E-3			
TPH - Aliph >C10-C12 *	6,3E-1				3,6E-1			
TPH - Aliph >C12-C16 *	6,3E-1				3,6E-1			
TPH - Aliph >C16-C21	6,3E-1				1,9E-1			
TPH - Aliph >C21-C34	6,3E-1				1,3E+0			
TPH - Arom >C07-C08	6,3E-1				1,2E-3			
TPH - Arom >C08-C10	6,3E-1				1,2E-3			
TPH - Arom >C10-C12	6,3E-1				3,6E-1			
TPH - Arom >C12-C16	6,3E-1				2,1E-1			
TPH - Arom >C16-C21	6,3E-1				6,1E-2			
TPH - Arom >C21-C35	6,3E-1				2,7E-2			
Arsenic *	1,7E-2				5,8E-12			
Barium	6,3E-1				3,4E-8			
Chromium (total)	6,3E-1				7,6E-10			
Lead (inorganic) *	1,7E-2				2,7E-11			
Mercury *	6,3E-1				7,2E-6			
Cobalt	1,7E-2				7,7E-12			
Copper	6,3E-1				9,5E-10			
Nickel	1,7E-2				1,7E-11			
Vanadium *	6,3E-1				1,1E-9			
Zinc	6,3E-1				2,6E-9			

* = Chemical with user-specified data

NOTE: AT = Averaging time (days) EF = Exposure frequency (days/yr) ED = Exposure duration (yr)

RBCA SITE ASSESSMENT

TIER 2 EXPOSURE CONCENTRATION AND INTAKE CALCULATION

OUTDOOR AIR EXPOSURE PATHWAYS

SURFACE SOILS (0 - 1 m):

VAPOR AND DUST INHALATION (cont'd)

	4) Exposure Multiplier (EFxED)/(ATx365) (unitless)				5) Average Inhalation Exposure Concentration (mg/m^3) (3) X (4)			
	On-site (0 m)		Off-site 1 (0 m)	Off-site 2 (0 m)	On-site (0 m)		Off-site 1 (0 m)	Off-site 2 (0 m)
Constituents of Concern	User Defined	Construction Worker	None	None	User Defined	Construction Worker	None	None

Site Name: Recinto Folche_inhalación Rev2_sens distribución+NRE
Site Location: LOTE X
Completed By: TEMA LITOCLEAN

Date Completed: 1-dic-yy
Job ID: 62288

RBCA SITE ASSESSMENT

TIER 2 EXPOSURE CONCENTRATION AND INTAKE CALCULATION

OUTDOOR AIR EXPOSURE PATHWAYS ■ **(Checked if Pathway is Complete)**

SUBSURFACE SOILS (1 - 2 m):

VAPOR INHALATION

Constituents of Concern	1) Source Medium	2) NAF Value (m^3/kg) Receptor			3) Exposure Medium Outdoor Air: POE Conc. (mg/m^3) (1) / (2)		
	Soil Conc. (mg/kg)	On-site (0 m) User Defined	Off-site 1 (0 m) None	Off-site 2 (0 m) None	On-site (0 m) User Defined	Off-site 1 (0 m) None	Off-site 2 (0 m) None
TPH - Aliph >C06-C08 *	1,2E+1	6,3E+3			1,9E-3		
TPH - Aliph >C08-C10 *	1,2E+1	6,3E+3			1,9E-3		
TPH - Aliph >C10-C12 *	3,6E+3	6,3E+3			5,7E-1		
TPH - Aliph >C12-C16 *	3,6E+3	6,3E+3			5,7E-1		
TPH - Aliph >C16-C21	3,6E+3	1,5E+4			2,4E-1		
TPH - Aliph >C21-C34	2,0E+4	1,0E+4			2,0E+0		
TPH - Arom >C07-C08	1,2E+1	6,3E+3			1,9E-3		
TPH - Arom >C08-C10	1,2E+1	6,3E+3			1,9E-3		
TPH - Arom >C10-C12	3,6E+3	6,3E+3			5,7E-1		
TPH - Arom >C12-C16	3,6E+3	1,2E+4			3,1E-1		
TPH - Arom >C16-C21	3,6E+3	1,4E+5			2,6E-2		
TPH - Arom >C21-C35	2,0E+4	2,2E+7			9,0E-4		
Arsenic *	1,1E+1	VFsamb					
Barium	1,8E+3	VFsamb					
Chromium (total)	4,0E+1	VFsamb					
Lead (inorganic) *	5,3E+1	VFsamb					
Mercury *	3,2E-1	7,8E+4			4,1E-6		
Cobalt	1,5E+1	VFsamb					
Copper	5,0E+1	VFsamb					
Nickel	3,4E+1	VFsamb					
Vanadium *	6,0E+1	VFsamb					
Zinc	1,3E+2	VFsamb					

NOTE: NAF = Natural attenuation factor POE = Point of exposure

RBCA SITE ASSESSMENT

TIER 2 EXPOSURE CONCENTRATION AND INTAKE CALCULATION

OUTDOOR AIR EXPOSURE PATHWAYS ■ **(Checked if Pathway is Complete)**

SUBSURFACE SOILS (1 - 2 m):

VAPOR INHALATION

	1) Source Medium	2) NAF Value (m^3/kg) Receptor			3) Exposure Medium Outdoor Air: POE Conc. (mg/m^3) (1) / (2)		
Constituents of Concern	Soil Conc. (mg/kg)	On-site (0 m) User Defined	Off-site 1 (0 m) None	Off-site 2 (0 m) None	On-site (0 m) User Defined	Off-site 1 (0 m) None	Off-site 2 (0 m) None

Site Name: Recinto Folche_inhalación Rev2_sens distribución+NRE
Site Location: LOTE X
Completed By: TEMA LITOCLEAN

Date Completed: 1-dic-yy
Job ID: 62288

RBCA SITE ASSESSMENT

TIER 2 EXPOSURE CONCENTRATION AND INTAKE CALCULATION

OUTDOOR AIR EXPOSURE PATHWAYS

SUBSURFACE SOILS (1 - 2 m):

VAPOR INHALATION (cont'd)

Constituents of Concern	4) Exposure Multiplier (EFxED)/(ATx365) (unitless)			5) Average Inhalation Exposure Concentration (mg/m^3) (3) X (4)		
	On-site (0 m) User Defined	Off-site 1 (0 m) None	Off-site 2 (0 m) None	On-site (0 m) User Defined	Off-site 1 (0 m) None	Off-site 2 (0 m) None
TPH - Aliph >C06-C08 *	6,3E-1			1,2E-3		
TPH - Aliph >C08-C10 *	6,3E-1			1,2E-3		
TPH - Aliph >C10-C12 *	6,3E-1			3,6E-1		
TPH - Aliph >C12-C16 *	6,3E-1			3,6E-1		
TPH - Aliph >C16-C21	6,3E-1			1,5E-1		
TPH - Aliph >C21-C34	6,3E-1			1,2E+0		
TPH - Arom >C07-C08	6,3E-1			1,2E-3		
TPH - Arom >C08-C10	6,3E-1			1,2E-3		
TPH - Arom >C10-C12	6,3E-1			3,6E-1		
TPH - Arom >C12-C16	6,3E-1			2,0E-1		
TPH - Arom >C16-C21	6,3E-1			1,6E-2		
TPH - Arom >C21-C35	6,3E-1			5,7E-4		
Arsenic *	1,7E-2					
Barium	6,3E-1					
Chromium (total)	6,3E-1					
Lead (inorganic) *	1,7E-2					
Mercury *	6,3E-1			2,6E-6		
Cobalt	1,7E-2					
Copper	6,3E-1					
Nickel	1,7E-2					
Vanadium *	6,3E-1					
Zinc	6,3E-1					

NOTE: AT = Averaging time (days) EF = Exposure frequency (days/yr) ED = Exposure duration (yr)

RBCA SITE ASSESSMENT

TIER 2 EXPOSURE CONCENTRATION AND INTAKE CALCULATION

OUTDOOR AIR EXPOSURE PATHWAYS

SUBSURFACE SOILS (1 - 2 m):

VAPOR INHALATION (cont'd)

	4) Exposure Multiplier (EFxED)/(ATx365) (unitless)			5) Average Inhalation Exposure Concentration (mg/m^3) (3) X (4)		
	On-site (0 m)	Off-site 1 (0 m)	Off-site 2 (0 m)	On-site (0 m)	Off-site 1 (0 m)	Off-site 2 (0 m)
Constituents of Concern	User Defined	None	None	User Defined	None	None

Site Name: Recinto Folche_inhalación Rev2_sens distribución+NRE
Site Location: LOTE X
Completed By: TEMA LITOCLEAN

Date Completed: 1-dic-yy
Job ID: 62288

RBCA SITE ASSESSMENT

TIER 2 EXPOSURE CONCENTRATION AND INTAKE CALCULATION

OUTDOOR AIR EXPOSURE PATHWAYS ☐ **(Checked if Pathway is Complete)**

GROUNDWATER: VAPOR INHALATION

Exposure Concentration

Constituents of Concern	1) Source Medium	2) NAF Value (m^3/L) Receptor			3) Exposure Medium Outdoor Air: POE Conc. (mg/m^3) (1) / (2)		
	Groundwater Conc. (mg/L)	On-site (0 m) None	Off-site 1 (0 m) None	Off-site 2 (0 m) None	On-site (0 m) None	Off-site 1 (0 m) None	Off-site 2 (0 m) None
TPH - Aliph >C06-C08 *							
TPH - Aliph >C08-C10 *							
TPH - Aliph >C10-C12 *							
TPH - Aliph >C12-C16 *							
TPH - Aliph >C16-C21							
TPH - Aliph >C21-C34							
TPH - Arom >C07-C08							
TPH - Arom >C08-C10							
TPH - Arom >C10-C12							
TPH - Arom >C12-C16							
TPH - Arom >C16-C21							
TPH - Arom >C21-C35							
Arsenic *							
Barium							
Chromium (total)							
Lead (inorganic) *							
Mercury *							
Cobalt							
Copper							
Nickel							
Vanadium *							
Zinc							

NOTE: NAF = Natural attenuation factor POE = Point of exposure

RBCA SITE ASSESSMENT

TIER 2 EXPOSURE CONCENTRATION AND INTAKE CALCULATION

OUTDOOR AIR EXPOSURE PATHWAYS ☐ **(Checked if Pathway is Complete)**

GROUNDWATER: VAPOR INHALATION

Exposure Concentration

	1) Source Medium	2) NAF Value (m^3/L) Receptor			3) Exposure Medium Outdoor Air: POE Conc. (mg/m^3) (1) / (2)		
Constituents of Concern	Groundwater Conc. (mg/L)	On-site (0 m)	Off-site 1 (0 m)	Off-site 2 (0 m)	On-site (0 m)	Off-site 1 (0 m)	Off-site 2 (0 m)
		None	None	None	None	None	None

Site Name: Recinto Folche_inhalación Rev2_sens distribución+NRE
Site Location: LOTE X
Completed By: TEMA LITOCLEAN

Date Completed: 1-dic-yy
Job ID: 62288

RBCA SITE ASSESSMENT

TIER 2 EXPOSURE CONCENTRATION AND INTAKE CALCULATION

OUTDOOR AIR EXPOSURE PATHWAYS

GROUNDWATER: VAPOR

INHALATION (cont'd)

Constituents of Concern	4) Exposure Multiplier (EFxED)/(ATx365) (unitless)			5) Average Inhalation Exposure Concentration (mg/m^3) (3) X (4)		
	On-site (0 m)	Off-site 1 (0 m)	Off-site 2 (0 m)	On-site (0 m)	Off-site 1 (0 m)	Off-site 2 (0 m)
	None	None	None	None	None	None
TPH - Aliph >C06-C08 *						
TPH - Aliph >C08-C10 *						
TPH - Aliph >C10-C12 *						
TPH - Aliph >C12-C16 *						
TPH - Aliph >C16-C21						
TPH - Aliph >C21-C34						
TPH - Arom >C07-C08						
TPH - Arom >C08-C10						
TPH - Arom >C10-C12						
TPH - Arom >C12-C16						
TPH - Arom >C16-C21						
TPH - Arom >C21-C35						
Arsenic *						
Barium						
Chromium (total)						
Lead (inorganic) *						
Mercury *						
Cobalt						
Copper						
Nickel						
Vanadium *						
Zinc						

NOTE: AT = Averaging time (days) EF = Exposure frequency (days/yr) ED = Exposure duration (yr)

RBCA SITE ASSESSMENT

TIER 2 EXPOSURE CONCENTRATION AND INTAKE CALCULATION

OUTDOOR AIR EXPOSURE PATHWAYS

GROUNDWATER: VAPOR INHALATION (cont'd)

Constituents of Concern	4) Exposure Multiplier (EFxED)/(ATx365) (unitless)			5) Average Inhalation Exposure Concentration (mg/m^3) (3) X (4)		
	On-site (0 m)	Off-site 1 (0 m)	Off-site 2 (0 m)	On-site (0 m)	Off-site 1 (0 m)	Off-site 2 (0 m)
	None	None	None	None	None	None

Site Name: Recinto Folche_inhalación Rev2_sens distribución+NRE
Site Location: LOTE X
Completed By: TEMA LITOCLEAN

Date Completed: 1-dic-yy
Job ID: 62288

RBCA SITE ASSESSMENT

TIER 2 EXPOSURE CONCENTRATION AND INTAKE CALCULATION

OUTDOOR AIR EXPOSURE PATHWAYS

MAXIMUM PATHWAY EXPOSURE (mg/m^3)

Maximum average expsosure concentration from soil and groundwater routes.)

Constituents of Concern	On-site (0 m) User Defined	On-site (0 m) Construction Worker	Off-site 1 (0 m) None	Off-site 2 (0 m) None
TPH - Aliph >C06-C08 *	1,2E-3			
TPH - Aliph >C08-C10 *	1,2E-3			
TPH - Aliph >C10-C12 *	3,6E-1			
TPH - Aliph >C12-C16 *	3,6E-1			
TPH - Aliph >C16-C21	1,9E-1			
TPH - Aliph >C21-C34	1,3E+0			
TPH - Arom >C07-C08	1,2E-3			
TPH - Arom >C08-C10	1,2E-3			
TPH - Arom >C10-C12	3,6E-1			
TPH - Arom >C12-C16	2,1E-1			
TPH - Arom >C16-C21	6,1E-2			
TPH - Arom >C21-C35	2,7E-2			
Arsenic *	5,8E-12			
Barium	3,4E-8			
Chromium (total)	7,6E-10			
Lead (inorganic) *	2,7E-11			
Mercury *	7,2E-6			
Cobalt	7,7E-12			
Copper	9,5E-10			
Nickel	1,7E-11			
Vanadium *	1,1E-9			
Zinc	2,6E-9			

RBCA SITE ASSESSMENT

TIER 2 EXPOSURE CONCENTRATION AND INTAKE CALCULATION

OUTDOOR AIR EXPOSURE PATHWAYS

MAXIMUM PATHWAY EXPOSURE (mg/m^3)

Maximum average expsosure concentration from soil and groundwater routes.)

Constituents of Concern	On-site (0 m) User Defined	On-site (0 m) Construction Worker	Off-site 1 (0 m) None	Off-site 2 (0 m) None

Site Name: Recinto Folche_inhalación Rev2_sens distribución+NRE
Site Location: LOTE X
Completed By: TEMA LITOCLEAN

Date Completed: 1-dic-yy
Job ID: 62288

RBCA SITE ASSESSMENT

TIER 2 PATHWAY RISK CALCULATION

OUTDOOR AIR EXPOSURE PATHWAYS ■ **(Checked if Pathway is Complete)**

CARCINOGENIC RISK

Constituents of Concern	(1) Is Carcinogenic	(2) Maximum Carcinogenic Exposure (mg/m^3)				(3) Inhalation Unit Risk Factor (µg/m^3)^-1	(4) Individual COC Risk (2) x (3) x 1000			
		On-site (0 m)		Off-site 1 (0 m)	Off-site 2 (0 m)		On-site (0 m)		Off-site 1 (0 m)	Off-site 2 (0 m)
		User Defined	Construction Worker	None	None		User Defined	Construction Worker	None	None
TPH - Aliph >C06-C08 *	FALSO	-	-	-	-	-				
TPH - Aliph >C08-C10 *	FALSO	-	-	-	-	-				
TPH - Aliph >C10-C12 *	FALSO	-	-	-	-	-				
TPH - Aliph >C12-C16 *	FALSO	-	-	-	-	-				
TPH - Aliph >C16-C21	FALSO	-	-	-	-	-				
TPH - Aliph >C21-C34	FALSO	-	-	-	-	-				
TPH - Arom >C07-C08	FALSO	-	-	-	-	-				
TPH - Arom >C08-C10	FALSO	-	-	-	-	-				
TPH - Arom >C10-C12	FALSO	-	-	-	-	-				
TPH - Arom >C12-C16	FALSO	-	-	-	-	-				
TPH - Arom >C16-C21	FALSO	-	-	-	-	-				
TPH - Arom >C21-C35	FALSO	-	-	-	-	-				
Arsenic *	#########	5,8E-12		-	-	4,3E-3	2,5E-11			
Barium	FALSO	-	-	-	-	-				
Chromium (total)	FALSO	-	-	-	-	-				
Lead (inorganic) *	#########	2,7E-11		-	-	1,2E-5	3,3E-13			
Mercury *	FALSO	-	-	-	-	-				
Cobalt	#########	7,7E-12		-	-	9,0E-3	6,9E-11			
Copper	FALSO	-	-	-	-	-				
Nickel	#########	1,7E-11		-	-	4,8E-4	8,4E-12			
Vanadium *	FALSO	-	-	-	-	-				
Zinc	FALSO	-	-	-	-	-				

Total Pathway Carcinogenic Risk = **1,0E-10**

RBCA SITE ASSESSMENT

TIER 2 PATHWAY RISK CALCULATION

OUTDOOR AIR EXPOSURE PATHWAYS ■ **(Checked if Pathway is Complete)**

CARCINOGENIC RISK

Constituents of Concern	(1) Is Carcinogenic	(2) Maximum Carcinogenic Exposure (mg/m^3)				(3) Inhalation Unit Risk Factor (µg/m^3)^-1	(4) Individual COC Risk (2) x (3) x 1000			
		On-site (0 m)		Off-site 1 (0 m)	Off-site 2 (0 m)		On-site (0 m)		Off-site 1 (0 m)	Off-site 2 (0 m)
		User Defined	Construction Worker	None	None		User Defined	Construction Worker	None	None

Site Name: Recinto Folche_inhalación Rev2_sens distribución+NRE
Site Location: LOTE X

Completed By: TEMA LITOCLEAN
Date Completed: 1-dic-yy

Job ID: 62288

RBCA SITE ASSESSMENT

TIER 2 PATHWAY RISK CALCULATION

OUTDOOR AIR EXPOSURE PATHWAYS ■ **(Checked if Pathway is Complete)**

TOXIC EFFECTS

Constituents of Concern	(5) Maximum Toxicant Exposure (mg/m^3)				(6) Inhalation Reference Conc. (mg/m^3)	(7) Individual COC Hazard Quotient (5) / (6)			
	On-site (0 m)		Off-site 1 (0 m)	Off-site 2 (0 m)		On-site (0 m)		Off-site 1 (0 m)	Off-site 2 (0 m)
	User Defined	Construction Worker	None	None		User Defined	Construction Worker	None	None
TPH - Aliph >C06-C08 *	1,2E-3				1,8E+1	6,5E-5			
TPH - Aliph >C08-C10 *	1,2E-3				1,0E+0	1,2E-3			
TPH - Aliph >C10-C12 *	3,6E-1				1,0E+0	3,6E-1			
TPH - Aliph >C12-C16 *	3,6E-1				1,0E+0	3,6E-1			
TPH - Aliph >C16-C21	1,9E-1				-				
TPH - Aliph >C21-C34	1,3E+0				-				
TPH - Arom >C07-C08	1,2E-3				1,9E+0	6,2E-4			
TPH - Arom >C08-C10	1,2E-3				2,0E-1	5,9E-3			
TPH - Arom >C10-C12	3,6E-1				2,0E-1	1,8E+0			
TPH - Arom >C12-C16	2,1E-1				2,0E-1	1,1E+0			
TPH - Arom >C16-C21	6,1E-2				-				
TPH - Arom >C21-C35	2,7E-2				-				
Arsenic *	2,1E-10				-				
Barium	3,4E-8				-				
Chromium (total)	7,6E-10				1,4E-4	5,4E-6			
Lead (inorganic) *	1,0E-9				-				
Mercury *	7,2E-6				3,0E-4	2,4E-2			
Cobalt	2,9E-10				6,0E-6	4,8E-5			
Copper	9,5E-10				-				
Nickel	6,5E-10				9,0E-5	7,2E-6			
Vanadium *	1,1E-9				-				
Zinc	2,6E-9				-				
Total Pathway Hazard Index =						**3,6E+0**			

RBCA SITE ASSESSMENT

TIER 2 PATHWAY RISK CALCULATION

OUTDOOR AIR EXPOSURE PATHWAYS ■ **(Checked if Pathway is Complete)**

TOXIC EFFECTS

Constituents of Concern	(5) Maximum Toxicant Exposure (mg/m^3)				(6) Inhalation Reference Conc. (mg/m^3)	(7) Individual COC Hazard Quotient (5) / (6)			
	On-site (0 m)		Off-site 1 (0 m)	Off-site 2 (0 m)		On-site (0 m)		Off-site 1 (0 m)	Off-site 2 (0 m)
	User Defined	Construction Worker	None	None		User Defined	Construction Worker	None	None

Site Name: Recinto Folche_inhalación Rev2_sens distribución+NRE
Site Location: LOTE X

Completed By: TEMA LITOCLEAN
Date Completed: 1-dic-yy

Job ID: 62288

Caso: Escenario *ON SITE* - Etapa de mejora ambiental

Inhalación de vapores y partículas en espacios abiertos.

Índice de riesgo toxicológico.

Parámetro: valor de COT

RBCA SITE ASSESSMENT

Input Parameter Summary

Site Name: Recinto Folche_inhalación Rev2_sens COT+NRE
Site Location: LOTE X

Completed By: TEMA LITOCLEAN
Date Completed: 1-dic-yy

Exposure Parameters		Residential				Commercial/Industrial		User Defined
		Child*	Adolescent	Adult	Age Adjusted**	Adult	Construct.	
ATc	Averaging time for carcinogens (yr)	74,5	74,5	74,5	NA	74,5	74,5	74,5
ATn	Averaging time for non-carcinogens (yr)	6	12	30	NA	24	1	2
BW	Body weight (kg)	15	35	70	NA	65	70	65
ED	Exposure duration (yr)	6	12	30	NA	24	1	2
τ	Averaging time for vapor flux (yr)	30	30	30	NA	30	30	30
EF	Exposure frequency (days/yr)	350	350	350	NA	230	180	230
EFD	Exposure frequency for dermal exposure	350	350	350	NA	230	180	230
IRw	Ingestion rate of water (L/day)	1	1	2	2,5	1	NA	1
IRs	Ingestion rate of soil (mg/day)	200	200	100	387	50	100	50
SA	Skin surface area (dermal) (cm^2)	2023	2023	3160	4771	3160	3160	3160
M	Soil to skin adherence factor	0,5	0,5	0,5	NA	0,5	0,5	0,5
ETswim	Swimming exposure time (hr/event)	1	3	3	NA	NA	NA	NA
EVswim	Swimming event frequency (events/yr)	12	12	12	NA	NA	NA	NA
IRswim	Water ingestion while swimming (L/hr)	0,5	0,5	0,05	0,3	NA	NA	NA
SAswim	Skin surface area for swimming (cm^2)	3500	8100	23000	15680	NA	NA	NA
IRfish	Ingestion rate of fish (kg/yr)	0,025	0,025	0,025	0,053	NA	NA	NA
FIfish	Contaminated fish fraction (unitless)	1	1	1	NA	NA	NA	NA
IRbg	Below-ground vegetable ingestion	0,002	0,002	0,006	2,053	NA	NA	NA
IRabg	Above-ground vegetable ingestion	0,001	0,001	0,002	0,887	NA	NA	NA
VGbg	Above-ground Veg. Ingest. Correction Factor	0,01	0,01	0,01	NA	NA	NA	NA
VGabg	Below-ground Veg. Ingest. Correction Factor	0,01	0,01	0,01	NA	NA	NA	NA

* = Child Receptor used for Non-Carcinogens
** = Age-adjusted rate is effective value corresponding to adult exposure factors.

Complete Exposure Pathways and Receptors	On-site	Off-site 1	Off-site 2
Groundwater:			
Groundwater Ingestion	None	None	None
Soil Leaching to Groundwater Ingestion	None	None	None
Apply MCL Values	No	No	No
Applicable Surface Water Exposure Routes:			
Swimming	NA	NA	None
Fish Consumption	NA	NA	None
Aquatic Life Protection	NA	NA	None
Soil:			
Direct Contact: direct combined pathways	None	NA	NA
Apply CLEA- UK SGV levels		No	
Outdoor Air:			
Particulates from Surface Soils	User Defined	None	None
Volatilization from Soils	User Defined	None	None
Volatilization from Groundwater	None	None	None
Indoor Air:			
Volatilization from Soils	None	NA	NA
Volatilization from Groundwater	None	None	None
Soil Leaching to Groundwater Volatilization	None	None	None

Receptor Distance from Source Media	On-site	Off-site 1	Off-site 2	(Units)
Groundwater receptor	NA	NA	NA	(m)
Outdoor air inhalation receptor	0	NA	NA	(m)
Indoor air inhalation receptor	NA	NA	NA	(m)

Target Health Risk Values		Individual	Cumulative
TR	Target Risk (carcinogens)	1,0E-5	1,0E-5
THQ	Target Hazard Quotient (non-carcinogenic risk)	1,0E+0	1,0E+0

Modeling Options	
RBCA tier	Tier 2
Outdoor air volatilization model	Surface & Subsurface Models: ASTM Model
Indoor air volatilization model	NA
Soil leaching model	NA
Use soil attenuation model (SAM) for leachate?	NA
Use dual equilibrium desorption model?	No
Apply Mass Balance Limit for Soil Volatilization?	No
Apply UK (CLEA) SGV as soil concentration limit	No
Vegetable calculation options	NA
Air dilution factor	NA
Groundwater dilution-attenuation factor	NA

NOTE: NA = Not applicable
Orange = Site-specific value (different from current default value)

RBCA SITE ASSESSMENT

Input Parameter Summary

Site Name: Recinto Folche_inhalación Rev2_sens COT+NRE
Site Location: LOTE X

Completed By: TEMA LITOCLEAN
Date Completed: 1-dic-yy

Surface Soil Column Parameters		Value			(Units)
h_{cap}	Capillary zone thickness	NA			(m)
h_v	Vadose zone thickness	NA			(m)
ρ_s	Soil bulk density	1,7			(g/cm^3)
f_{oc}	Fraction organic carbon	***0,0005***			(-)
θ_T	Soil total porosity	***0,41***			(-)
		capillary	**vadose**	**foundation**	
θ_w	Volumetric water content	***0,369***	0,12	0,12	(-)
θ_a	Volumetric air content	***0,041***	***0,29***	0,26	(-)
K_{vs}	Vertical hydraulic conductivity	***86,4***			(cm/d)
k_v	Vapor permeability	***1E-13***			(m^2)
L_{gw}	Depth to groundwater	NA			(m)
pH	Soil/groundwater pH	***8,06***			(-)
W	Length of source-zone area parallel to wind	***300***			(m)
W_{gw}	Length of source-zone area parallel to GW flow	NA			(m)
L_{ss}	Thickness of affected surface soils	1			(m)
A	Source zone area	2025			(m^2)
L_s	Depth to top of affected soils	0			(m)
L_{base}	Depth to base of affected soils	***2***			(m)
L_{subs}	Thickness of affected soils	***2***			(m)

Outdoor Air Parameters		Value	(Units)
U_{air}	Ambient air velocity in mixing zone	***3,4***	(m/s)
δ_{air}	Air mixing zone height	2	(m)
Q/C	Inverse mean concentration at the center of source	NA	
P_a	Areal particulate emission rate	6,9E-14	(g/cm^2/s)
V	Fraction of vegetative cover	NA	
U_m	Mean annual airvelocity at 7m	NA	
U_t	Equivalent 7m air velocity threshold value	NA	
F(x)	Windspeed function dependant on Um/Ut	NA	
PEF	Partculate Emission Factor	3,04412E-11	

Building Parameters		Residential	Commercial	(Units)
L_b	Building volume/area ratio	NA	NA	(m)
A_b	Foundation area	NA	NA	(m^2)
X_{crk}	Foundation perimeter	NA	NA	(m)
ER	Building air exchange rate	NA	NA	(1/s)
L_{crk}	Foundation thickness	NA	NA	(m)
Z_{crk}	Depth to bottom of foundation slab	NA	NA	(m)
η	Foundation crack fraction	NA	NA	(-)
dP	Indoor/outdoor differential pressure	NA	NA	(g/cm/s^2)
Q_s	Convective air flow through slab	NA	NA	(m^3/s)
θ_{wcrack}	Volumetric water content of cracks	NA	NA	(-)
θ_{acrack}	Volumetric air content of cracks	NA	NA	(-)
BV	Building Volume	NA	NA	(m^3)
w	Building Width Perpendicular to GW flow	NA	NA	(m)
L	Building Length Parallel to GW flow	NA	NA	(m)
ν	Saturated Soil Zone Porosity	NA	NA	(-)

Groundwater Parameters		Value	(Units)
δ_{gw}	Groundwater mixing zone depth	NA	(m)
I_f	Net groundwater infiltration rate	NA	(cm/yr)
U_{gw}	Groundwater Darcy velocity	NA	(cm/d)
V_{gw}	Groundwater seepage velocity	NA	(cm/d)
K_s	Saturated hydraulic conductivity	NA	(cm/d)
i	Groundwater gradient	NA	(-)
S_w	Width of groundwater source zone	NA	(m)
S_d	Depth of groundwater source zone	NA	(m)
θ_{eff}	Effective porosity in water-bearing unit	NA	(-)
$f_{oc\text{-}sat}$	Fraction organic carbon in water-bearing unit	NA	(-)
pH_{sat}	Groundwater pH	NA	(-)
	Biodegradation considered?	NA	

Transport Parameters		Off-site 1	Off-site 2	Off-site 1	Off-site 2	(Units)
Lateral Groundwater Transport		**Groundwater Ingestion**		**Groundwater to Indoor Air**		
α_x	Longitudinal dispersivity	NA	NA	NA	NA	(m)
α_y	Transverse dispersivity	NA	NA	NA	NA	(m)
α_z	Vertical dispersivity	NA	NA	NA	NA	(m)
Lateral Outdoor Air Transport		**Soil to Outdoor Air Inhal.**		**GW to Outdoor Air Inhal.**		
σ_y	Transverse dispersion coefficient	NA	NA	NA	NA	(m)
σ_z	Vertical dispersion coefficient	NA	NA	NA	NA	(m)
ADF	Air dispersion factor	NA	NA	NA	NA	(-)

Surface Water Parameters		Off-site 2	(Units)
Q_{sw}	Surface water flowrate	NA	(m^3/s)
W_{pi}	Width of GW plume at SW discharge	NA	(m)
δ_{pi}	Thickness of GW plume at SW discharge	NA	(m)
DF_{sw}	Groundwater-to-surface water dilution factor	NA	(-)

NOTE: NA = Not applicable

Orange = Site-specific value (different from current default value)

RBCA SITE ASSESSMENT

TIER 2 EXPOSURE CONCENTRATION AND INTAKE CALCULATION

OUTDOOR AIR EXPOSURE PATHWAYS ■ **(Checked if Pathway is Complete)**

SURFACE SOILS (0 - 1 m):

VAPOR AND DUST INHALATION

	1) Source Medium	2) NAF Value (m^3/kg) Receptor				3) Exposure Medium Outdoor Air: POE Conc. (mg/m^3) (1) / (2)			
	Soil Conc. (mg/kg)	On-site (0 m)		Off-site 1 (0 m)	Off-site 2 (0 m)	On-site (0 m)		Off-site 1 (0 m)	Off-site 2 (0 m)
Constituents of Concern		User Defined	Construction Worker	None	None	User Defined	Construction Worker	None	None
TPH - Aliph >C06-C08 *	5,9E+0	6,3E+3				9,3E-4			
TPH - Aliph >C08-C10 *	5,9E+0	6,3E+3				9,3E-4			
TPH - Aliph >C10-C12 *	1,8E+3	6,3E+3				2,9E-1			
TPH - Aliph >C12-C16 *	1,8E+3	6,3E+3				2,9E-1			
TPH - Aliph >C16-C21	1,8E+3	6,3E+3				2,9E-1			
TPH - Aliph >C21-C34	1,0E+4	6,3E+3				1,6E+0			
TPH - Arom >C07-C08	5,9E+0	6,3E+3				9,3E-4			
TPH - Arom >C08-C10	5,9E+0	6,3E+3				9,3E-4			
TPH - Arom >C10-C12	1,8E+3	6,3E+3				2,9E-1			
TPH - Arom >C12-C16	1,8E+3	6,3E+3				2,9E-1			
TPH - Arom >C16-C21	1,8E+3	1,2E+4				1,5E-1			
TPH - Arom >C21-C35	1,0E+4	1,5E+5				6,7E-2			
Arsenic *	1,1E+1	3,3E+10				3,4E-10			
Barium	1,8E+3	3,3E+10				5,4E-8			
Chromium (total)	4,0E+1	3,3E+10				1,2E-9			
Lead (inorganic) *	5,3E+1	3,3E+10				1,6E-9			
Mercury *	3,2E-1	2,8E+4				1,1E-5			
Cobalt	1,5E+1	3,3E+10				4,5E-10			
Copper	5,0E+1	3,3E+10				1,5E-9			
Nickel	3,4E+1	3,3E+10				1,0E-9			
Vanadium *	6,0E+1	3,3E+10				1,8E-9			
Zinc	1,3E+2	3,3E+10				4,1E-9			

NOTE: NAF = Natural attenuation factor POE = Point of exposure

RBCA SITE ASSESSMENT

TIER 2 EXPOSURE CONCENTRATION AND INTAKE CALCULATION

OUTDOOR AIR EXPOSURE PATHWAYS ■ **(Checked if Pathway is Complete)**

SURFACE SOILS (0 - 1 m):

VAPOR AND DUST INHALATION

	1) Source Medium	2) NAF Value (m^3/kg) Receptor				3) Exposure Medium Outdoor Air: POE Conc. (mg/m^3) (1) / (2)			
	Soil Conc. (mg/kg)	On-site (0 m)		Off-site 1 (0 m)	Off-site 2 (0 m)	On-site (0 m)		Off-site 1 (0 m)	Off-site 2 (0 m)
Constituents of Concern		User Defined	Construction Worker	None	None	User Defined	Construction Worker	None	None

Site Name: Recinto Folche_inhalación Rev2_sens COT+NRE
Site Location: LOTE X
Completed By: TEMA LITOCLEAN

Date Completed: 1-dic-yy
Job ID: 62288

RBCA SITE ASSESSMENT

TIER 2 EXPOSURE CONCENTRATION AND INTAKE CALCULATION

OUTDOOR AIR EXPOSURE PATHWAYS

SURFACE SOILS (0 - 1 m):

VAPOR AND DUST INHALATION (cont'd)

	4) Exposure Multiplier (EFxED)/(ATx365) (unitless)				5) Average Inhalation Exposure Concentration (mg/m^3) (3) X (4)			
	On-site (0 m)		Off-site 1 (0 m)	Off-site 2 (0 m)	On-site (0 m)		Off-site 1 (0 m)	Off-site 2 (0 m)
Constituents of Concern	User Defined	Construction Worker	None	None	User Defined	Construction Worker	None	None
TPH - Aliph >C06-C08 *	6,3E-1				5,9E-4			
TPH - Aliph >C08-C10 *	6,3E-1				5,9E-4			
TPH - Aliph >C10-C12 *	6,3E-1				1,8E-1			
TPH - Aliph >C12-C16 *	6,3E-1				1,8E-1			
TPH - Aliph >C16-C21	6,3E-1				1,8E-1			
TPH - Aliph >C21-C34	6,3E-1				1,0E+0			
TPH - Arom >C07-C08	6,3E-1				5,9E-4			
TPH - Arom >C08-C10	6,3E-1				5,9E-4			
TPH - Arom >C10-C12	6,3E-1				1,8E-1			
TPH - Arom >C12-C16	6,3E-1				1,8E-1			
TPH - Arom >C16-C21	6,3E-1				9,6E-2			
TPH - Arom >C21-C35	6,3E-1				4,3E-2			
Arsenic *	1,7E-2				5,8E-12			
Barium	6,3E-1				3,4E-8			
Chromium (total)	6,3E-1				7,6E-10			
Lead (inorganic) *	1,7E-2				2,7E-11			
Mercury *	6,3E-1				7,2E-6			
Cobalt	1,7E-2				7,7E-12			
Copper	6,3E-1				9,5E-10			
Nickel	1,7E-2				1,7E-11			
Vanadium *	6,3E-1				1,1E-9			
Zinc	6,3E-1				2,6E-9			

* = Chemical with user-specified data

NOTE: AT = Averaging time (days) EF = Exposure frequency (days/yr) ED = Exposure duration (yr)

RBCA SITE ASSESSMENT

TIER 2 EXPOSURE CONCENTRATION AND INTAKE CALCULATION

OUTDOOR AIR EXPOSURE PATHWAYS

SURFACE SOILS (0 - 1 m):

VAPOR AND DUST INHALATION (cont'd)

	4) Exposure Multiplier (EFxED)/(ATx365) (unitless)				5) Average Inhalation Exposure Concentration (mg/m^3) (3) X (4)			
	On-site (0 m)		Off-site 1 (0 m)	Off-site 2 (0 m)	On-site (0 m)		Off-site 1 (0 m)	Off-site 2 (0 m)
Constituents of Concern	User Defined	Construction Worker	None	None	User Defined	Construction Worker	None	None

Site Name: Recinto Folche_inhalación Rev2_sens COT+NRE
Site Location: LOTE X
Completed By: TEMA LITOCLEAN

Date Completed: 1-dic-yy
Job ID: 62288

RBCA SITE ASSESSMENT

TIER 2 EXPOSURE CONCENTRATION AND INTAKE CALCULATION

OUTDOOR AIR EXPOSURE PATHWAYS ■ **(Checked if Pathway is Complete)**

SUBSURFACE SOILS (1 - 2 m):

VAPOR INHALATION

	1) Source Medium	2) NAF Value (m^3/kg) Receptor			3) Exposure Medium Outdoor Air: POE Conc. (mg/m^3) (1) / (2)		
Constituents of Concern	Soil Conc. (mg/kg)	On-site (0 m) User Defined	Off-site 1 (0 m) None	Off-site 2 (0 m) None	On-site (0 m) User Defined	Off-site 1 (0 m) None	Off-site 2 (0 m) None
TPH - Aliph >C06-C08 *	5,9E+0	6,3E+3			9,3E-4		
TPH - Aliph >C08-C10 *	5,9E+0	6,3E+3			9,3E-4		
TPH - Aliph >C10-C12 *	1,8E+3	6,3E+3			2,9E-1		
TPH - Aliph >C12-C16 *	1,8E+3	6,3E+3			2,9E-1		
TPH - Aliph >C16-C21	1,8E+3	6,3E+3			2,9E-1		
TPH - Aliph >C21-C34	1,0E+4	6,3E+3			1,6E+0		
TPH - Arom >C07-C08	5,9E+0	6,3E+3			9,3E-4		
TPH - Arom >C08-C10	5,9E+0	6,3E+3			9,3E-4		
TPH - Arom >C10-C12	1,8E+3	6,3E+3			2,9E-1		
TPH - Arom >C12-C16	1,8E+3	6,3E+3			2,9E-1		
TPH - Arom >C16-C21	1,8E+3	1,4E+4			1,3E-1		
TPH - Arom >C21-C35	1,0E+4	2,2E+6			4,5E-3		
Arsenic *	1,1E+1	VFsamb					
Barium	1,8E+3	VFsamb					
Chromium (total)	4,0E+1	VFsamb					
Lead (inorganic) *	5,3E+1	VFsamb					
Mercury *	3,2E-1	7,8E+4			4,1E-6		
Cobalt	1,5E+1	VFsamb					
Copper	5,0E+1	VFsamb					
Nickel	3,4E+1	VFsamb					
Vanadium *	6,0E+1	VFsamb					
Zinc	1,3E+2	VFsamb					

NOTE: NAF = Natural attenuation factor POE = Point of exposure

RBCA SITE ASSESSMENT

TIER 2 EXPOSURE CONCENTRATION AND INTAKE CALCULATION

OUTDOOR AIR EXPOSURE PATHWAYS ■ **(Checked if Pathway is Complete)**

SUBSURFACE SOILS (1 - 2 m):

VAPOR INHALATION

	1) Source Medium	2) NAF Value (m^3/kg) Receptor			3) Exposure Medium Outdoor Air: POE Conc. (mg/m^3) (1) / (2)		
Constituents of Concern	Soil Conc. (mg/kg)	On-site (0 m) User Defined	Off-site 1 (0 m) None	Off-site 2 (0 m) None	On-site (0 m) User Defined	Off-site 1 (0 m) None	Off-site 2 (0 m) None

Site Name: Recinto Folche_inhalación Rev2_sens COT+NRE
Site Location: LOTE X
Completed By: TEMA LITOCLEAN

Date Completed: 1-dic-yy
Job ID: 62288

RBCA SITE ASSESSMENT

TIER 2 EXPOSURE CONCENTRATION AND INTAKE CALCULATION

OUTDOOR AIR EXPOSURE PATHWAYS

SUBSURFACE SOILS (1 - 2 m):

VAPOR INHALATION (cont'd)

	4) Exposure Multiplier (EFxED)/(ATx365) (unitless)			5) Average Inhalation Exposure Concentration (mg/m^3) (3) X (4)		
	On-site (0 m)	Off-site 1 (0 m)	Off-site 2 (0 m)	On-site (0 m)	Off-site 1 (0 m)	Off-site 2 (0 m)
Constituents of Concern	User Defined	None	None	User Defined	None	None
TPH - Aliph >C06-C08 *	6,3E-1			5,9E-4		
TPH - Aliph >C08-C10 *	6,3E-1			5,9E-4		
TPH - Aliph >C10-C12 *	6,3E-1			1,8E-1		
TPH - Aliph >C12-C16 *	6,3E-1			1,8E-1		
TPH - Aliph >C16-C21	6,3E-1			1,8E-1		
TPH - Aliph >C21-C34	6,3E-1			1,0E+0		
TPH - Arom >C07-C08	6,3E-1			5,9E-4		
TPH - Arom >C08-C10	6,3E-1			5,9E-4		
TPH - Arom >C10-C12	6,3E-1			1,8E-1		
TPH - Arom >C12-C16	6,3E-1			1,8E-1		
TPH - Arom >C16-C21	6,3E-1			8,0E-2		
TPH - Arom >C21-C35	6,3E-1			2,8E-3		
Arsenic *	1,7E-2					
Barium	6,3E-1					
Chromium (total)	6,3E-1					
Lead (inorganic) *	1,7E-2					
Mercury *	6,3E-1			2,6E-6		
Cobalt	1,7E-2					
Copper	6,3E-1					
Nickel	1,7E-2					
Vanadium *	6,3E-1					
Zinc	6,3E-1					

NOTE: AT = Averaging time (days) EF = Exposure frequency (days/yr) ED = Exposure duration (yr)

RBCA SITE ASSESSMENT

TIER 2 EXPOSURE CONCENTRATION AND INTAKE CALCULATION

OUTDOOR AIR EXPOSURE PATHWAYS

SUBSURFACE SOILS (1 - 2 m):

VAPOR INHALATION (cont'd)

	4) Exposure Multiplier (EFxED)/(ATx365) (unitless)			5) Average Inhalation Exposure Concentration (mg/m^3) (3) X (4)		
	On-site (0 m)	Off-site 1 (0 m)	Off-site 2 (0 m)	On-site (0 m)	Off-site 1 (0 m)	Off-site 2 (0 m)
Constituents of Concern	User Defined	None	None	User Defined	None	None

Site Name: Recinto Folche_inhalación Rev2_sens COT+NRE
Site Location: LOTE X
Completed By: TEMA LITOCLEAN

Date Completed: 1-dic-yy
Job ID: 62288

RBCA SITE ASSESSMENT

TIER 2 EXPOSURE CONCENTRATION AND INTAKE CALCULATION

OUTDOOR AIR EXPOSURE PATHWAYS ☐ **(Checked if Pathway is Complete)**

GROUNDWATER: VAPOR INHALATION

Exposure Concentration

Constituents of Concern	1) Source Medium	2) NAF Value (m^3/L) Receptor			3) Exposure Medium Outdoor Air: POE Conc. (mg/m^3) (1) / (2)		
	Groundwater Conc. (mg/L)	On-site (0 m) None	Off-site 1 (0 m) None	Off-site 2 (0 m) None	On-site (0 m) None	Off-site 1 (0 m) None	Off-site 2 (0 m) None
TPH - Aliph >C06-C08 *							
TPH - Aliph >C08-C10 *							
TPH - Aliph >C10-C12 *							
TPH - Aliph >C12-C16 *							
TPH - Aliph >C16-C21							
TPH - Aliph >C21-C34							
TPH - Arom >C07-C08							
TPH - Arom >C08-C10							
TPH - Arom >C10-C12							
TPH - Arom >C12-C16							
TPH - Arom >C16-C21							
TPH - Arom >C21-C35							
Arsenic *							
Barium							
Chromium (total)							
Lead (inorganic) *							
Mercury *							
Cobalt							
Copper							
Nickel							
Vanadium *							
Zinc							

NOTE: NAF = Natural attenuation factor POE = Point of exposure

RBCA SITE ASSESSMENT

TIER 2 EXPOSURE CONCENTRATION AND INTAKE CALCULATION

OUTDOOR AIR EXPOSURE PATHWAYS ☐ **(Checked if Pathway is Complete)**

GROUNDWATER: VAPOR INHALATION

Exposure Concentration

	1) Source Medium	2) NAF Value (m^3/L) Receptor			3) Exposure Medium Outdoor Air: POE Conc. (mg/m^3) (1) / (2)		
Constituents of Concern	Groundwater Conc. (mg/L)	On-site (0 m)	Off-site 1 (0 m)	Off-site 2 (0 m)	On-site (0 m)	Off-site 1 (0 m)	Off-site 2 (0 m)
		None	None	None	None	None	None

Site Name: Recinto Folche_inhalación Rev2_sens COT+NRE
Site Location: LOTE X
Completed By: TEMA LITOCLEAN

Date Completed: 1-dic-yy
Job ID: 62288

RBCA SITE ASSESSMENT

TIER 2 EXPOSURE CONCENTRATION AND INTAKE CALCULATION

OUTDOOR AIR EXPOSURE PATHWAYS

GROUNDWATER: VAPOR

INHALATION (cont'd)

Constituents of Concern	4) Exposure Multiplier (EFxED)/(ATx365) (unitless)			5) Average Inhalation Exposure Concentration (mg/m^3) (3) X (4)		
	On-site (0 m)	Off-site 1 (0 m)	Off-site 2 (0 m)	On-site (0 m)	Off-site 1 (0 m)	Off-site 2 (0 m)
	None	None	None	None	None	None
TPH - Aliph >C06-C08 *						
TPH - Aliph >C08-C10 *						
TPH - Aliph >C10-C12 *						
TPH - Aliph >C12-C16 *						
TPH - Aliph >C16-C21						
TPH - Aliph >C21-C34						
TPH - Arom >C07-C08						
TPH - Arom >C08-C10						
TPH - Arom >C10-C12						
TPH - Arom >C12-C16						
TPH - Arom >C16-C21						
TPH - Arom >C21-C35						
Arsenic *						
Barium						
Chromium (total)						
Lead (inorganic) *						
Mercury *						
Cobalt						
Copper						
Nickel						
Vanadium *						
Zinc						

NOTE: AT = Averaging time (days) EF = Exposure frequency (days/yr) ED = Exposure duration (yr)

RBCA SITE ASSESSMENT

TIER 2 EXPOSURE CONCENTRATION AND INTAKE CALCULATION

OUTDOOR AIR EXPOSURE PATHWAYS

GROUNDWATER: VAPOR

INHALATION (cont'd)

	4) Exposure Multiplier (EFxED)/(ATx365) (unitless)			5) Average Inhalation Exposure Concentration (mg/m^3) (3) X (4)		
	On-site (0 m)	Off-site 1 (0 m)	Off-site 2 (0 m)	On-site (0 m)	Off-site 1 (0 m)	Off-site 2 (0 m)
Constituents of Concern	None	None	None	None	None	None

Site Name: Recinto Folche_inhalación Rev2_sens COT+NRE
Site Location: LOTE X
Completed By: TEMA LITOCLEAN

Date Completed: 1-dic-yy
Job ID: 62288

RBCA SITE ASSESSMENT

TIER 2 EXPOSURE CONCENTRATION AND INTAKE CALCULATION

OUTDOOR AIR EXPOSURE PATHWAYS

MAXIMUM PATHWAY EXPOSURE (mg/m^3)

Maximum average expsosure concentration from soil and groundwater routes.)

Constituents of Concern	On-site (0 m) User Defined	On-site (0 m) Construction Worker	Off-site 1 (0 m) None	Off-site 2 (0 m) None
TPH - Aliph >C06-C08 *	5,9E-4			
TPH - Aliph >C08-C10 *	5,9E-4			
TPH - Aliph >C10-C12 *	1,8E-1			
TPH - Aliph >C12-C16 *	1,8E-1			
TPH - Aliph >C16-C21	1,8E-1			
TPH - Aliph >C21-C34	1,0E+0			
TPH - Arom >C07-C08	5,9E-4			
TPH - Arom >C08-C10	5,9E-4			
TPH - Arom >C10-C12	1,8E-1			
TPH - Arom >C12-C16	1,8E-1			
TPH - Arom >C16-C21	9,6E-2			
TPH - Arom >C21-C35	4,3E-2			
Arsenic *	5,8E-12			
Barium	3,4E-8			
Chromium (total)	7,6E-10			
Lead (inorganic) *	2,7E-11			
Mercury *	7,2E-6			
Cobalt	7,7E-12			
Copper	9,5E-10			
Nickel	1,7E-11			
Vanadium *	1,1E-9			
Zinc	2,6E-9			

RBCA SITE ASSESSMENT

TIER 2 EXPOSURE CONCENTRATION AND INTAKE CALCULATION

OUTDOOR AIR EXPOSURE PATHWAYS

MAXIMUM PATHWAY EXPOSURE (mg/m^3)

Maximum average expsosure concentration from soil and groundwater routes.)

Constituents of Concern	On-site (0 m) User Defined	On-site (0 m) Construction Worker	Off-site 1 (0 m) None	Off-site 2 (0 m) None

Site Name: Recinto Folche_inhalación Rev2_sens COT+NRE
Site Location: LOTE X
Completed By: TEMA LITOCLEAN

Date Completed: 1-dic-yy
Job ID: 62288

RBCA SITE ASSESSMENT

TIER 2 PATHWAY RISK CALCULATION

OUTDOOR AIR EXPOSURE PATHWAYS ■ **(Checked if Pathway is Complete)**

CARCINOGENIC RISK

Constituents of Concern	(1) Is Carcinogenic	(2) Maximum Carcinogenic Exposure (mg/m^3)				(3) Inhalation Unit Risk Factor (µg/m^3)^-1	(4) Individual COC Risk (2) x (3) x 1000			
		On-site (0 m)		Off-site 1 (0 m)	Off-site 2 (0 m)		On-site (0 m)		Off-site 1 (0 m)	Off-site 2 (0 m)
		User Defined	Construction Worker	None	None		User Defined	Construction Worker	None	None
TPH - Aliph >C06-C08 *	FALSO	-	-	-	-	-				
TPH - Aliph >C08-C10 *	FALSO	-	-	-	-	-				
TPH - Aliph >C10-C12 *	FALSO	-	-	-	-	-				
TPH - Aliph >C12-C16 *	FALSO	-	-	-	-	-				
TPH - Aliph >C16-C21	FALSO	-	-	-	-	-				
TPH - Aliph >C21-C34	FALSO	-	-	-	-	-				
TPH - Arom >C07-C08	FALSO	-	-	-	-	-				
TPH - Arom >C08-C10	FALSO	-	-	-	-	-				
TPH - Arom >C10-C12	FALSO	-	-	-	-	-				
TPH - Arom >C12-C16	FALSO	-	-	-	-	-				
TPH - Arom >C16-C21	FALSO	-	-	-	-	-				
TPH - Arom >C21-C35	FALSO	-	-	-	-	-				
Arsenic *	#########	5,8E-12		-	-	4,3E-3	2,5E-11			
Barium	FALSO	-	-	-	-	-				
Chromium (total)	FALSO	-	-	-	-	-				
Lead (inorganic) *	#########	2,7E-11		-	-	1,2E-5	3,3E-13			
Mercury *	FALSO	-	-	-	-	-				
Cobalt	#########	7,7E-12		-	-	9,0E-3	6,9E-11			
Copper	FALSO	-	-	-	-	-				
Nickel	#########	1,7E-11		-	-	4,8E-4	8,4E-12			
Vanadium *	FALSO	-	-	-	-	-				
Zinc	FALSO	-	-	-	-	-				

Total Pathway Carcinogenic Risk = **1,0E-10**

RBCA SITE ASSESSMENT

TIER 2 PATHWAY RISK CALCULATION

OUTDOOR AIR EXPOSURE PATHWAYS ■ **(Checked if Pathway is Complete)**

CARCINOGENIC RISK

Constituents of Concern	(1) Is Carcinogenic	(2) Maximum Carcinogenic Exposure (mg/m^3)				(3) Inhalation Unit Risk Factor (µg/m^3)^-1	(4) Individual COC Risk (2) x (3) x 1000			
		On-site (0 m)		Off-site 1 (0 m)	Off-site 2 (0 m)		On-site (0 m)		Off-site 1 (0 m)	Off-site 2 (0 m)
		User Defined	Construction Worker	None	None		User Defined	Construction Worker	None	None

Site Name: Recinto Folche_inhalación Rev2_sens COT+NRE
Site Location: LOTE X

Completed By: TEMA LITOCLEAN
Date Completed: 1-dic-yy

Job ID: 62288

RBCA SITE ASSESSMENT

TIER 2 PATHWAY RISK CALCULATION

OUTDOOR AIR EXPOSURE PATHWAYS ■ **(Checked if Pathway is Complete)**

Constituents of Concern	(5) Maximum Toxicant Exposure (mg/m^3)				TOXIC EFFECTS (6) Inhalation Reference Conc. (mg/m^3)	(7) Individual COC Hazard Quotient (5) / (6)			
	On-site (0 m)		Off-site 1 (0 m)	Off-site 2 (0 m)		On-site (0 m)		Off-site 1 (0 m)	Off-site 2 (0 m)
	User Defined	Construction Worker	None	None		User Defined	Construction Worker	None	None
TPH - Aliph >C06-C08 *	5,9E-4				1,8E+1	3,3E-5			
TPH - Aliph >C08-C10 *	5,9E-4				1,0E+0	5,9E-4			
TPH - Aliph >C10-C12 *	1,8E-1				1,0E+0	1,8E-1			
TPH - Aliph >C12-C16 *	1,8E-1				1,0E+0	1,8E-1			
TPH - Aliph >C16-C21	1,8E-1				-				
TPH - Aliph >C21-C34	1,0E+0				-				
TPH - Arom >C07-C08	5,9E-4				1,9E+0	3,1E-4			
TPH - Arom >C08-C10	5,9E-4				2,0E-1	2,9E-3			
TPH - Arom >C10-C12	1,8E-1				2,0E-1	9,0E-1			
TPH - Arom >C12-C16	1,8E-1				2,0E-1	9,0E-1			
TPH - Arom >C16-C21	9,6E-2				-				
TPH - Arom >C21-C35	4,3E-2				-				
Arsenic *	2,1E-10				-				
Barium	3,4E-8				-				
Chromium (total)	7,6E-10				1,4E-4	5,4E-6			
Lead (inorganic) *	1,0E-9				-				
Mercury *	7,2E-6				3,0E-4	2,4E-2			
Cobalt	2,9E-10				6,0E-6	4,8E-5			
Copper	9,5E-10				-				
Nickel	6,5E-10				9,0E-5	7,2E-6			
Vanadium *	1,1E-9				-				
Zinc	2,6E-9				-				
Total Pathway Hazard Index =						**2,2E+0**			

RBCA SITE ASSESSMENT

TIER 2 PATHWAY RISK CALCULATION

OUTDOOR AIR EXPOSURE PATHWAYS ■ **(Checked if Pathway is Complete)**

	TOXIC EFFECTS								
	(5) Maximum Toxicant Exposure (mg/m^3)				(6) Inhalation Reference	(7) Individual COC Hazard Quotient (5) / (6)			
	On-site (0 m)		Off-site 1 (0 m)	Off-site 2 (0 m)	Conc. (mg/m^3)	On-site (0 m)		Off-site 1 (0 m)	Off-site 2 (0 m)
Constituents of Concern	User Defined	Construction Worker	None	None		User Defined	Construction Worker	None	None

Site Name: Recinto Folche_inhalación Rev2_sens COT+NRE
Site Location: LOTE X

Completed By: TEMA LITOCLEAN
Date Completed: 1-dic-yy

Job ID: 62288

Niveles de remediación específicos (NRE)

RBCA SITE ASSESSMENT | **Cumulative Risk Worksheet**

Site Name: Recinto Folche_inhalación_NRE | Completed By: TEMA LITOCLEAN | Job ID: 62288

Site Location: LOTE X | Date Completed: 1-dic-yy

CUMULATIVE RISK WORKSHEET

CONSTITUENTS OF CONCERN		Representative Concentration		Proposed CRF		Resultant Target Concentration	
CAS No.	**Name**	Soil (mg/kg)	Groundwater (mg/L)	Soil	GW	Soil (mg/kg)	Groundwater (mg/L)
T-al0608	TPH - Aliph >C06-C08 *	5,9E+0		NA	NA	5,9E+0	
T-al0810	TPH - Aliph >C08-C10 *	5,9E+0		NA	NA	5,9E+0	
T-al1012	TPH - Aliph >C10-C12 *	1,8E+3		1,8E+0	NA	1,0E+3	
T-al1216	TPH - Aliph >C12-C16 *	1,8E+3		1,8E+0	NA	1,0E+3	
T-al1621	TPH - Aliph >C16-C21	1,8E+3		1,8E+0	NA	1,0E+3	
T-al2134	TPH - Aliph >C21-C34	1,0E+4		1,3E+0	NA	7,5E+3	
T-ar0708	TPH - Arom >C07-C08	5,9E+0		NA	NA	5,9E+0	
T-ar0810	TPH - Arom >C08-C10	5,9E+0		NA	NA	5,9E+0	
T-ar1012	TPH - Arom >C10-C12	1,8E+3		1,8E+0	NA	1,0E+3	
T-ar1216	TPH - Arom >C12-C16	1,8E+3		1,8E+0	NA	1,0E+3	
T-ar1621	TPH - Arom >C16-C21	1,8E+3		1,8E+0	NA	1,0E+3	
T-ar2134	TPH - Arom >C21-C35	1,0E+4		1,3E+0	NA	7,5E+3	
7440-38-2	Arsenic *	1,1E+1		NA	NA	1,1E+1	
7440-39-3	Barium	1,8E+3		NA	NA	1,8E+3	
7440-47-3	Chromium (total)	4,0E+1		NA	NA	4,0E+1	
7439-92-1	Lead (inorganic) *	5,3E+1		NA	NA	5,3E+1	
7439-97-6	Mercury *	3,2E-1		NA	NA	3,2E-1	
7440-48-4	Cobalt	1,5E+1		NA	NA	1,5E+1	
7440-50-8	Copper	5,0E+1		NA	NA	5,0E+1	
7440-02-0	Nickel	3,4E+1		NA	NA	3,4E+1	
7440-62-2	Vanadium *	6,0E+1		NA	NA	6,0E+1	
7440-66-6	Zinc	1,3E+2		NA	NA	1,3E+2	

Cumulative Values:

RBCA SITE ASSESSMENT | **Cumulative Risk Worksheet**

Site Name: Recinto Folche_inhalación_NRE | Completed By: TEMA LITOCLEAN | Job ID: 62288

Site Location: LOTE X | Date Completed: 1-dic-yy | *2 OF 3*

CUMULATIVE RISK WORKSHEET

Cumulative Target Risk: 1.000E-8 Target Hazard Index: 01E+0

ON-SITE RECEPTORS

CONSTITUENTS OF CONCERN		Outdoor Air Exposure: User Defined Target Risk: 1.000E-8 Target HQ: 01E+0		Indoor Air Exposure: None Target Risk: 1.000E-8 Target HQ: 01E+0		Soil Exposure: None Target Risk: 1.000E-8 Target HQ: 01E+0		Groundwater Exposure: None Target Risk: 1.000E-8 Target HQ: 01E+0	
CAS No.	Name	Carcinogenic Risk	Hazard Quotient	Carcinogenic Risk	Hazard Quotient	Carcinogenic Risk	Hazard Quotient	Carcinogenic Risk	Hazard Quotient
T-al0608	TPH - Aliph >C06-C08 *		3,3E-5						
T-al0810	TPH - Aliph >C08-C10 *		5,9E-4						
T-al1012	TPH - Aliph >C10-C12 *		9,9E-2						
T-al1216	TPH - Aliph >C12-C16 *		9,9E-2						
T-al1621	TPH - Aliph >C16-C21		Tox?						
T-al2134	TPH - Aliph >C21-C34		Tox?						
T-ar0708	TPH - Arom >C07-C08		3,1E-4						
T-ar0810	TPH - Arom >C08-C10		2,9E-3						
T-ar1012	TPH - Arom >C10-C12		5,0E-1						
T-ar1216	TPH - Arom >C12-C16		2,9E-1						
T-ar1621	TPH - Arom >C16-C21		Tox?						
T-ar2134	TPH - Arom >C21-C35		Tox?						
7440-38-2	Arsenic *	2,5E-11	Tox?						
7440-39-3	Barium		Tox?						
7440-47-3	Chromium (total)		5,4E-6						
7439-92-1	Lead (inorganic) *	3,3E-13	Tox?						
7439-97-6	Mercury *		2,4E-2						
7440-48-4	Cobalt	6,9E-11	4,8E-5						
7440-50-8	Copper		Tox?						
7440-02-0	Nickel	8,4E-12	7,2E-6						
7440-62-2	Vanadium *		Tox?						
7440-66-6	Zinc		Tox?						
	Cumulative Values:	**1,0E-10**	**1,0E+0** ■	**0,0E+0**	**0,0E+0**	**0,0E+0**	**0,0E+0**	**0,0E+0**	**0,0E+0**

■ indicates risk level exceeding target risk

RBCA SITE ASSESSMENT | **Cumulative Risk Worksheet**

Site Name: Recinto Folche_inhalación_NRE | Completed By: TEMA LITOCLEAN | Job ID: 62288

Site Location: LOTE X | Date Completed: 1-dic-yy | *3 OF 3*

CUMULATIVE RISK WORKSHEET

Cumulative Target Risk: 1.000E-8 Target Hazard Index: 01E+0

OFF-SITE RECEPTORS

CONSTITUENTS OF CONCERN		Outdoor Air Exposure:				Indoor Air Exposure:				Groundwater Exposure:			
		None		None		None		None		None (0 m)		None (0 m)	
		Target Risk: 1.000E-8	Target HQ: 01E+0	Target Risk: 1.000E-8	Target HQ: 01E+0	Target Risk: 1.000E-8	Target HQ: 01E+0	Target Risk: 1.000E-8	Target HQ: 01E+0	Target Risk: 1.000E-8	Target HQ: 01E+0	Target Risk: 1.000E-8	Target HQ: 01E+0
CAS No.	**Name**	Carcinogenic Risk	Hazard Quotient	Carcinogenic Risk	Hazard Quotient	Carcinogenic Risk	Hazard Quotient	Carcinogenic Risk	Hazard Quotient	Carcinogenic Risk	Hazard Quotient	Carcinogenic Risk	Hazard Quotient
T-al0608	TPH - Aliph >C06-C08 *												
T-al0810	TPH - Aliph >C08-C10 *												
T-al1012	TPH - Aliph >C10-C12 *												
T-al1216	TPH - Aliph >C12-C16 *												
T-al1621	TPH - Aliph >C16-C21												
T-al2134	TPH - Aliph >C21-C34												
T-ar0708	TPH - Arom >C07-C08												
T-ar0810	TPH - Arom >C08-C10												
T-ar1012	TPH - Arom >C10-C12												
T-ar1216	TPH - Arom >C12-C16												
T-ar1621	TPH - Arom >C16-C21												
T-ar2134	TPH - Arom >C21-C35												
7440-38-2	Arsenic *												
7440-39-3	Barium												
7440-47-3	Chromium (total)												
7439-92-1	Lead (inorganic) *												
7439-97-6	Mercury *												
7440-48-4	Cobalt												
7440-50-8	Copper												
7440-02-0	Nickel												
7440-62-2	Vanadium *												
7440-66-6	Zinc												
	Cumulative Values:	**0,0E+0**	**0,0E+0**	**0,0E+0**	**0,0E+0**	**0,0E+0**	**0,0E+0**	**0,0E+0**	**0,0E+0**	**0,0E+0**	**0,0E+0**	**0,0E+0**	**0,0E+0**

■ indicates risk level exceeding target risk

indicates risk level exceeding target risk

Niveles de remediación específicos (NRE)

Comparación

Parámetro: distribución de las fracciones de TPH en cadenas

RBCA SITE ASSESSMENT | **Cumulative Risk Worksheet**

Site Name: Recinto Folche_inhalación Rev2_sens distribución+NRE Completed By: TEMA LITOCLEAN Job ID: 62288

Site Location: LOTE X Date Completed: 1-dic-yy

CUMULATIVE RISK WORKSHEET

CONSTITUENTS OF CONCERN		Representative Concentration		Proposed CRF		Resultant Target Concentration	
CAS No.	Name	Soil (mg/kg)	Groundwater (mg/L)	Soil	GW	Soil (mg/kg)	Groundwater (mg/L)
T-al0608	TPH - Aliph >C06-C08 *	1,2E+1		NA	NA	1,2E+1	
T-al0810	TPH - Aliph >C08-C10 *	1,2E+1		NA	NA	1,2E+1	
T-al1012	TPH - Aliph >C10-C12 *	3,6E+3		3,6E+0	NA	1,0E+3	
T-al1216	TPH - Aliph >C12-C16 *	3,6E+3		3,6E+0	NA	1,0E+3	
T-al1621	TPH - Aliph >C16-C21	3,6E+3		3,6E+0	NA	1,0E+3	
T-al2134	TPH - Aliph >C21-C34	2,0E+4		2,7E+0	NA	7,5E+3	
T-ar0708	TPH - Arom >C07-C08	1,2E+1		NA	NA	1,2E+1	
T-ar0810	TPH - Arom >C08-C10	1,2E+1		NA	NA	1,2E+1	
T-ar1012	TPH - Arom >C10-C12	3,6E+3		3,6E+0	NA	1,0E+3	
T-ar1216	TPH - Arom >C12-C16	3,6E+3		3,6E+0	NA	1,0E+3	
T-ar1621	TPH - Arom >C16-C21	3,6E+3		3,6E+0	NA	1,0E+3	
T-ar2134	TPH - Arom >C21-C35	2,0E+4		2,7E+0	NA	7,5E+3	
7440-38-2	Arsenic *	1,1E+1		NA	NA	1,1E+1	
7440-39-3	Barium	1,8E+3		NA	NA	1,8E+3	
7440-47-3	Chromium (total)	4,0E+1		NA	NA	4,0E+1	
7439-92-1	Lead (inorganic) *	5,3E+1		NA	NA	5,3E+1	
7439-97-6	Mercury *	3,2E-1		NA	NA	3,2E-1	
7440-48-4	Cobalt	1,5E+1		NA	NA	1,5E+1	
7440-50-8	Copper	5,0E+1		NA	NA	5,0E+1	
7440-02-0	Nickel	3,4E+1		NA	NA	3,4E+1	
7440-62-2	Vanadium *	6,0E+1		NA	NA	6,0E+1	
7440-66-6	Zinc	1,3E+2		NA	NA	1,3E+2	

Cumulative Values:

RBCA SITE ASSESSMENT | **Cumulative Risk Worksheet**

Site Name: Recinto Folche_inhalación Rev2_sens distribuc

Completed By: TEMA LITOCLEAN

Job ID: 62288

Site Location: LOTE X

Date Completed: 1-dic-yy

CUMULATIVE RISK WORKSHEET

Cumulative Target Risk: 1.000E-8 Target Hazard Index: 01E+0

ON-SITE RECEPTORS

CONSTITUENTS OF CONCERN		Outdoor Air Exposure: User Defined Target Risk: 1.000E-8	Outdoor Air Exposure: User Defined Target HQ: 01E+0	Indoor Air Exposure: None Target Risk: 1.000E-8	Indoor Air Exposure: None Target HQ: 01E+0	Soil Exposure: None Target Risk: 1.000E-8	Soil Exposure: None Target HQ: 01E+0	Groundwater Exposure: None Target Risk: 1.000E-8	Groundwater Exposure: None Target HQ: 01E+0
CAS No.	**Name**	Carcinogenic Risk	Hazard Quotient	Carcinogenic Risk	Hazard Quotient	Carcinogenic Risk	Hazard Quotient	Carcinogenic Risk	Hazard Quotient
T-al0608	TPH - Aliph >C06-C08 *		6,5E-5						
T-al0810	TPH - Aliph >C08-C10 *		1,2E-3						
T-al1012	TPH - Aliph >C10-C12 *		1,0E-1						
T-al1216	TPH - Aliph >C12-C16 *		1,0E-1						
T-al1621	TPH - Aliph >C16-C21		Tox?						
T-al2134	TPH - Aliph >C21-C34		Tox?						
T-ar0708	TPH - Arom >C07-C08		6,2E-4						
T-ar0810	TPH - Arom >C08-C10		5,9E-3						
T-ar1012	TPH - Arom >C10-C12		5,0E-1						
T-ar1216	TPH - Arom >C12-C16		3,0E-1						
T-ar1621	TPH - Arom >C16-C21		Tox?						
T-ar2134	TPH - Arom >C21-C35		Tox?						
7440-38-2	Arsenic *	2,5E-11	Tox?						
7440-39-3	Barium		Tox?						
7440-47-3	Chromium (total)		5,4E-6						
7439-92-1	Lead (inorganic) *	3,3E-13	Tox?						
7439-97-6	Mercury *		2,4E-2						
7440-48-4	Cobalt	6,9E-11	4,8E-5						
7440-50-8	Copper		Tox?						
7440-02-0	Nickel	8,4E-12	7,2E-6						
7440-62-2	Vanadium *		Tox?						
7440-66-6	Zinc		Tox?						
	Cumulative Values:	**1,0E-10**	**1,0E+0** ■	**0,0E+0**	**0,0E+0**	**0,0E+0**	**0,0E+0**	**0,0E+0**	**0,0E+0**

■ indicates risk level exceeding target risk

RBCA SITE ASSESSMENT | **Cumulative Risk Worksheet**

Site Name: Recinto Folche_inhalación Rev2_sens distribuc | Completed By: TEMA LITOCLEAN | Job ID: 62288

Site Location: LOTE X | Date Completed: 1-dic-yy | *3 OF 3*

CUMULATIVE RISK WORKSHEET

Cumulative Target Risk: 1.000E-8 Target Hazard Index: 01E+0

OFF-SITE RECEPTORS

CONSTITUENTS OF CONCERN		Outdoor Air Exposure:				Indoor Air Exposure:				Groundwater Exposure:			
		None		None		None		None		None (0 m)		None (0 m)	
		Target Risk: 1.000E-8	Target HQ: 01E+0	Target Risk: 1.000E-8	Target HQ: 01E+0	Target Risk: 1.000E-8	Target HQ: 01E+0	Target Risk: 1.000E-8	Target HQ: 01E+0	Target Risk: 1.000E-8	Target HQ: 01E+0	Target Risk: 1.000E-8	Target HQ: 01E+0
CAS No.	**Name**	Carcinogenic Risk	Hazard Quotient	Carcinogenic Risk	Hazard Quotient	Carcinogenic Risk	Hazard Quotient	Carcinogenic Risk	Hazard Quotient	Carcinogenic Risk	Hazard Quotient	Carcinogenic Risk	Hazard Quotient
T-al0608	TPH - Aliph >C06-C08 *												
T-al0810	TPH - Aliph >C08-C10 *												
T-al1012	TPH - Aliph >C10-C12 *												
T-al1216	TPH - Aliph >C12-C16 *												
T-al1621	TPH - Aliph >C16-C21												
T-al2134	TPH - Aliph >C21-C34												
T-ar0708	TPH - Arom >C07-C08												
T-ar0810	TPH - Arom >C08-C10												
T-ar1012	TPH - Arom >C10-C12												
T-ar1216	TPH - Arom >C12-C16												
T-ar1621	TPH - Arom >C16-C21												
T-ar2134	TPH - Arom >C21-C35												
7440-38-2	Arsenic *												
7440-39-3	Barium												
7440-47-3	Chromium (total)												
7439-92-1	Lead (inorganic) *												
7439-97-6	Mercury *												
7440-48-4	Cobalt												
7440-50-8	Copper												
7440-02-0	Nickel												
7440-62-2	Vanadium *												
7440-66-6	Zinc												
	Cumulative Values:	**0,0E+0**	**0,0E+0**	**0,0E+0**	**0,0E+0**	**0,0E+0**	**0,0E+0**	**0,0E+0**	**0,0E+0**	**0,0E+0**	**0,0E+0**	**0,0E+0**	**0,0E+0**

■ indicates risk level exceeding target risk

indicates risk level exceeding target risk

Niveles de remediación específicos (NRE)

Comparación

Parámetro: valor de COT

RBCA SITE ASSESSMENT | **Cumulative Risk Worksheet**

Site Name: Recinto Folche_inhalación Rev2_sens COT+NRE | Completed By: TEMA LITOCLEAN | Job ID: 62288

Site Location: LOTE X | Date Completed: 1-dic-yy

CUMULATIVE RISK WORKSHEET

CONSTITUENTS OF CONCERN		Representative Concentration		Proposed CRF		Resultant Target Concentration	
CAS No.	**Name**	Soil (mg/kg)	Groundwater (mg/L)	Soil	GW	Soil (mg/kg)	Groundwater (mg/L)
T-al0608	TPH - Aliph >C06-C08 *	5,9E+0		NA	NA	5,9E+0	
T-al0810	TPH - Aliph >C08-C10 *	5,9E+0		NA	NA	5,9E+0	
T-al1012	TPH - Aliph >C10-C12 *	1,8E+3		2,3E+0	NA	8,0E+2	
T-al1216	TPH - Aliph >C12-C16 *	1,8E+3		2,3E+0	NA	8,0E+2	
T-al1621	TPH - Aliph >C16-C21	1,8E+3		2,3E+0	NA	8,0E+2	
T-al2134	TPH - Aliph >C21-C34	1,0E+4		1,4E+0	NA	7,3E+3	
T-ar0708	TPH - Arom >C07-C08	5,9E+0		NA	NA	5,9E+0	
T-ar0810	TPH - Arom >C08-C10	5,9E+0		NA	NA	5,9E+0	
T-ar1012	TPH - Arom >C10-C12	1,8E+3		2,3E+0	NA	8,0E+2	
T-ar1216	TPH - Arom >C12-C16	1,8E+3		2,3E+0	NA	8,0E+2	
T-ar1621	TPH - Arom >C16-C21	1,8E+3		2,3E+0	NA	8,0E+2	
T-ar2134	TPH - Arom >C21-C35	1,0E+4		1,4E+0	NA	7,3E+3	
7440-38-2	Arsenic *	1,1E+1		NA	NA	1,1E+1	
7440-39-3	Barium	1,8E+3		NA	NA	1,8E+3	
7440-47-3	Chromium (total)	4,0E+1		NA	NA	4,0E+1	
7439-92-1	Lead (inorganic) *	5,3E+1		NA	NA	5,3E+1	
7439-97-6	Mercury *	3,2E-1		NA	NA	3,2E-1	
7440-48-4	Cobalt	1,5E+1		NA	NA	1,5E+1	
7440-50-8	Copper	5,0E+1		NA	NA	5,0E+1	
7440-02-0	Nickel	3,4E+1		NA	NA	3,4E+1	
7440-62-2	Vanadium *	6,0E+1		NA	NA	6,0E+1	
7440-66-6	Zinc	1,3E+2		NA	NA	1,3E+2	

Cumulative Values:

RBCA SITE ASSESSMENT | **Cumulative Risk Worksheet**

Site Name: Recinto Folche_inhalación Rev2_sens COT+NF | Completed By: TEMA LITOCLEAN | Job ID: 62288

Site Location: LOTE X | Date Completed: 1-dic-yy | *2 OF 3*

CUMULATIVE RISK WORKSHEET

Cumulative Target Risk: 1.000E-8 Target Hazard Index: 01E+0

ON-SITE RECEPTORS

CONSTITUENTS OF CONCERN		Outdoor Air Exposure: User Defined Target Risk: 1.000E-8 Target HQ: 01E+0		Indoor Air Exposure: None Target Risk: 1.000E-8 Target HQ: 01E+0		Soil Exposure: None Target Risk: 1.000E-8 Target HQ: 01E+0		Groundwater Exposure: None Target Risk: 1.000E-8 Target HQ: 01E+0	
CAS No.	**Name**	Carcinogenic Risk	Hazard Quotient	Carcinogenic Risk	Hazard Quotient	Carcinogenic Risk	Hazard Quotient	Carcinogenic Risk	Hazard Quotient
T-al0608	TPH - Aliph >C06-C08 *		3,3E-5						
T-al0810	TPH - Aliph >C08-C10 *		5,9E-4						
T-al1012	TPH - Aliph >C10-C12 *		8,0E-2						
T-al1216	TPH - Aliph >C12-C16 *		8,0E-2						
T-al1621	TPH - Aliph >C16-C21		Tox?						
T-al2134	TPH - Aliph >C21-C34		Tox?						
T-ar0708	TPH - Arom >C07-C08		3,1E-4						
T-ar0810	TPH - Arom >C08-C10		2,9E-3						
T-ar1012	TPH - Arom >C10-C12		4,0E-1						
T-ar1216	TPH - Arom >C12-C16		4,0E-1						
T-ar1621	TPH - Arom >C16-C21		Tox?						
T-ar2134	TPH - Arom >C21-C35		Tox?						
7440-38-2	Arsenic *	2,5E-11	Tox?						
7440-39-3	Barium		Tox?						
7440-47-3	Chromium (total)		5,4E-6						
7439-92-1	Lead (inorganic) *	3,3E-13	Tox?						
7439-97-6	Mercury *		2,4E-2						
7440-48-4	Cobalt	6,9E-11	4,8E-5						
7440-50-8	Copper		Tox?						
7440-02-0	Nickel	8,4E-12	7,2E-6						
7440-62-2	Vanadium *		Tox?						
7440-66-6	Zinc		Tox?						
	Cumulative Values:	**1,0E-10**	**9,9E-1**	**0,0E+0**	**0,0E+0**	**0,0E+0**	**0,0E+0**	**0,0E+0**	**0,0E+0**

■ indicates risk level exceeding target risk

RBCA SITE ASSESSMENT | **Cumulative Risk Worksheet**

Site Name: Recinto Folche_inhalación Rev2_sens COT+NF
Completed By: TEMA LITOCLEAN
Job ID: 62288
Site Location: LOTE X
Date Completed: 1-dic-yy

CUMULATIVE RISK WORKSHEET

Cumulative Target Risk: 1.000E-8 Target Hazard Index: 01E+0

OFF-SITE RECEPTORS

CONSTITUENTS OF CONCERN		Outdoor Air Exposure:				Indoor Air Exposure:				Groundwater Exposure:			
		None		None		None		None		None (0 m)		None (0 m)	
		Target Risk: 1.000E-8	Target HQ: 01E+0	Target Risk: 1.000E-8	Target HQ: 01E+0	Target Risk: 1.000E-8	Target HQ: 01E+0	Target Risk: 1.000E-8	Target HQ: 01E+0	Target Risk: 1.000E-8	Target HQ: 01E+0	Target Risk: 1.000E-8	Target HQ: 01E+0
CAS No.	**Name**	Carcinogenic Risk	Hazard Quotient	Carcinogenic Risk	Hazard Quotient	Carcinogenic Risk	Hazard Quotient	Carcinogenic Risk	Hazard Quotient	Carcinogenic Risk	Hazard Quotient	Carcinogenic Risk	Hazard Quotient
T-al0608	TPH - Aliph >C06-C08 *												
T-al0810	TPH - Aliph >C08-C10 *												
T-al1012	TPH - Aliph >C10-C12 *												
T-al1216	TPH - Aliph >C12-C16 *												
T-al1621	TPH - Aliph >C16-C21												
T-al2134	TPH - Aliph >C21-C34												
T-ar0708	TPH - Arom >C07-C08												
T-ar0810	TPH - Arom >C08-C10												
T-ar1012	TPH - Arom >C10-C12												
T-ar1216	TPH - Arom >C12-C16												
T-ar1621	TPH - Arom >C16-C21												
T-ar2134	TPH - Arom >C21-C35												
7440-38-2	Arsenic *												
7440-39-3	Barium												
7440-47-3	Chromium (total)												
7439-92-1	Lead (inorganic) *												
7439-97-6	Mercury *												
7440-48-4	Cobalt												
7440-50-8	Copper												
7440-02-0	Nickel												
7440-62-2	Vanadium *												
7440-66-6	Zinc												
	Cumulative Values:	**0,0E+0**	**0,0E+0**	**0,0E+0**	**0,0E+0**	**0,0E+0**	**0,0E+0**	**0,0E+0**	**0,0E+0**	**0,0E+0**	**0,0E+0**	**0,0E+0**	**0,0E+0**

■ indicates risk level exceeding target risk

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