



EMCON

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FAX TRANSMITTAL

TO: DALE KLETTKE & MEDULA LOGAN

DATE: 1/29

FROM: JOHN YOUNG

TIME: 11:00

Number of Pages 3 (Including Cover Page)

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COMMENTS:

ASTM WORKSHEET 5.7 FOR

ARCO 2111 1156 DAVIS ST SAN LEANDRO

PLEASE CALL W/ ANY QUESTIONS

ORIGINAL TO FOLLOW: K ORIGINAL WILL NOT FOLLOW: _____ BROADCAST: _____

ANY QUESTIONS REGARDING THIS TRANSMISSION, PLEASE CALL THE NUMBER LISTED ABOVE

RBCA SUMMARY REPORT

Worksheet 5.7

Site Name: ARCO 2111

Date Completed: 9-11-96

Site Location: 1156 Davis Street, San Leandro, CA

Completed By: EMCON

Page 1 of 2

TIER 2 EXPOSURE PATHWAY TRANSPORT PARAMETERS

Instructions: For complete exposure pathways, provide site-specific values for transport parameters. In absence of direct measurements, default values may be selected for some parameters, as shown below. If no default value shown, site-specific value must be provided.

TRANSPORT PARAMETER	SITE-SPECIFIC VALUE (INPUT VALUE BELOW)	DEFAULT VALUE (<input type="checkbox"/> TO SELECT)
AIR PARAMETERS		
δ_{air} Air mixing zone height (cm)		<input checked="" type="checkbox"/> 200
U_{air} Ambient air velocity in mixing zone (cm/sec)		<input checked="" type="checkbox"/> 225
Pe Soil particulate areal emission rate (g/cm ² -sec)		<input type="checkbox"/> 2.17E-10
σ_y Transverse air dispersion coeff. (m)		<input checked="" type="checkbox"/> 100
σ_z Vertical air dispersion coeff. (m)		<input checked="" type="checkbox"/> 10
GROUNDWATER PARAMETERS		
δ_{gw} Groundwater mixing zone depth (cm)		<input type="checkbox"/> 200
I Water infiltration rate (cm/yr)		<input type="checkbox"/> 30
V_{gw} Groundwater Darcy velocity (ft/yr)		
K Saturated hydraulic conductivity (cm/sec)		
i_{grad} Lateral groundwater flow gradient (dim)		
$(BC)_i$ Available biodegradation capacity of electron acceptors for constituent i		
x Distance to POE from point of maximum COC concentration in groundwater (ft)		
α_x Longitudinal groundwater dispersion coeff. (cm)		<input type="checkbox"/> 10% of x
α_y Transverse groundwater dispersion coeff. (cm)		<input type="checkbox"/> 33% of α_x
α_z Vertical groundwater dispersion coeff. (cm)		<input type="checkbox"/> 5% of α_z
SOIL PARAMETERS		
h_{cap} Capillary zone thickness (cm)	30	<input type="checkbox"/> 5
h_v Vadose zone thickness (cm)	340	
ρ_s Soil bulk density (g/cm ³)		<input checked="" type="checkbox"/> 1.7
foc_s Fraction organic carbon in soil leaching zone (dim)		<input checked="" type="checkbox"/> 0.01
foc_{gw} Fraction organic carbon in water-bearing unit (dim)		<input type="checkbox"/> 0.001
L_{gw} Depth to groundwater (cm)		<input type="checkbox"/> 0.38
Θ_T Soil porosity (dim)	0.30	
Soil volumetric water content (dim)		
Θ_{wcap} • Capillary zone	0.25	<input type="checkbox"/> 0.342
Θ_{ws} • Vadose zone	0.09	<input type="checkbox"/> 0.12
Θ_{wcrack} • Foundation crack	0.09	<input type="checkbox"/> 0.12

RBCA SUMMARY REPORT

Worksheet 5.7

Site Name: ARCO 2111

Date Completed: 9-11-98

Site Location: 1158 Davis Street, San Leandro, CA

Completed By: EMCON

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TIER 2 EXPOSURE PATHWAY TRANSPORT PARAMETERS CONTINUED

TRANSPORT PARAMETER		SITE-SPECIFIC VALUE (INPUT VALUE BELOW)	DEFAULT VALUE (■ TO SELECT)	
SOIL PARAMETERS				
Soil volumetric air content (dim)				
θ_{acap}	•Capillary zone		<input type="checkbox"/> 0.038	
θ_{as}	•Vadose zone	0.21	<input type="checkbox"/> 0.26	
θ_{acrack}	•Foundation crack	0.21	<input type="checkbox"/> 0.26	
d	Thickness of surficial soil zone (cm)		<input type="checkbox"/> 100 cm	
BUILDING PARAMETERS				
			<u>Resid.</u>	<u>Comm/</u> <u>Ind.</u>
L_b	Building volume/area ratio (cm)		<input type="checkbox"/> 200	<input checked="" type="checkbox"/> 300
ER	Building air exchange rate (dy-1)		<input type="checkbox"/> 12	<input checked="" type="checkbox"/> 20
L_{crack}	Foundation crack thickness (cm)		<input checked="" type="checkbox"/> 15	
η	Foundation crack fraction	0.005	<input type="checkbox"/> 0.01	

Additional Information: