

Appendix DD
Public Health and Safety Data

SES Solar Two, LLC Project Health Risk Assessment Calculations

Cancer Risk Calculations		
Total Project PM ₁₀ Annual Emission Rate	2.50E-06	g/s
SCREEN3 Modeled 1-Hour χ /Q Value Using 1 gram/second Emission Rate at Fence Line	815.5	($\mu\text{g}/\text{m}^3$)/(g/s)
SCREEN3 Modeled Annual χ /Q Value Using 1 gram/second Emission Rate at Fence Line	65.24	($\mu\text{g}/\text{m}^3$)/(g/s)
Maximum Annual PM ₁₀ Concentration Using Actual Emission Rate	0.00016	$\mu\text{g}/\text{m}^3$
Inhalation Cancer Potency Factor for Diesel Particulate Matter (From OEHHA)	1.10E+00	(mg/kg-day) ⁻¹
Inhalation Dose (mg/kg-day) = (Annual Concentration) * DBR * A * EF * ED * 1e-6 / AT		
DBR = Daily Breathing Rate (L/kg-day), Used 95 th Percentile	393	L/kg-day
A = Inhalation Absorption Factor (Fraction of Chemical Absorbed), Default	1	
EF = Exposure Frequency (Days/Year)	52	days/year
ED = Exposure Duration (Years), Default	70	years
AT = Averaging Time Period Over Which Exposure is Averaged (Days), Default (e.g., 25,550 Days for 70-Year Cancer Risk)	25,550	days
Inhalation Dose (mg/kg-day)	9.12E-09	mg/kg-day
Inhalation Cancer Risk = (Inhalation Dose) * (Cancer Potency Factor)		
Inhalation Cancer Risk	1.00E-08	
	0.010	in a million
Chronic Non-Cancer Hazard Index Calculations		
Total Project PM ₁₀ Annual Emission Rate	2.50E-06	g/s
SCREEN3 Modeled 1-Hour χ /Q Value Using 1 gram/second Emission Rate at Fence Line	815.5	($\mu\text{g}/\text{m}^3$)/(g/s)
SCREEN3 Modeled Annual χ /Q Value Using 1 gram/second Emission Rate at Fence Line	65.24	($\mu\text{g}/\text{m}^3$)/(g/s)
Maximum Annual PM ₁₀ Concentration Using Actual Emission Rate	0.00016	$\mu\text{g}/\text{m}^3$
Diesel Particulate Matter Chronic Reference Exposure Level (REL) from OEHHA	5	$\mu\text{g}/\text{m}^3$
Chronic Non-Cancer Hazard Index (HI)	0.00003	

