Appendix 5.11A
Soil Loss Calculations

Soil Type	Acreage		Soil Loss Estimates Using RUSLE2 software (tons/ac/year)			
		Slope	Grading	Construction w/o BMPs	Construction with BMPs	No Project
Project Site						
122	0.04	1	4.5	2.1	0.058	0.0097
211	29.29	1	4.5	2.1	0.058	0.0097
		Subtotal (tons)	**131.98**	**15.40**	**0.43**	**0.28**
Off-Site Laydown Area						
UNK	UNK					
		Subtotal	**0.0**	**0.0**	**0.0**	**0.0**
Off-Site Parking Area						
UNK	UNK					
		Subtotal	**0.0**	**0.0**	**0.0**	**0.0**
		TOTAL	**131.98**	**15.40**	**0.43**	**0.28**

Assumptions:
Assumes slope is the mid-point of the slope class
Assumes no grading on the off-site laydown area or off-site parking areas.
Assumes project site will be 25% bare soil during construction.

Project: Huntington Beach Generating Station SPL updated June 8, 2012

Dust from Wind Erosion - With and Without Mitigation

Grading

PM10 Emission Factor (ton/acre/month)[a]	0.11	PM10 emission factor from URBEMIS2007 per email on 5/31/12 from Elyse Engel/SJC. MRI factor of 0.011 tons/acre/month is based on 168 hours per month of construction activity.
Project Site		
Duration (months):	4	Assumes 4 months of active grading.
Site Acreage:	25.63	Assumes 100% of site will need to be graded after demolition
PM10 Emitted (tons):	11.28	
TSP Emitted (tons)[b]:	**22.552**	assume TSP is 50% PM10 as per 5/31/12 email from Elyse Engel/SJC. Source: SCAQMD CEQA Handbook (1993) Table A9-9-E, Factor J
Mitigated TSP Emitted (tons):	**7.893**	Assume 65% reduction in PM10 with watering thrice daily per SCAQMD CEQA Handbook (1993) Table 11-4
Off-site Laydown Area		
Duration (months)	0	Assumes off-site laydown area will not need grading
Acres exposed	0.0	Assumes 0 months of active grading
PM10 Emitted (tons):	0.00	
TSP Emitted for Site (tons):	**0.000**	
Mitigated TSP Emitted (tons):	**0.000**	Assume 65% reduction in TSP with watering thrice daily per SCAQMD CEQA Handbook (1993) Table 11-4
Off-site Parking Area		
Duration (months)	0	Assumes off-site laydown area will not need grading
Acres exposed	0.0	Assumes 0 months of active grading
PM10 Emitted (tons):	0.00	
TSP Emitted for Site (tons):	**0.000**	
Mitigated TSP Emitted (tons):	**0.000**	Assume 65% reduction in TSP with watering thrice daily per SCAQMD CEQA Handbook (1993) Table 11-4
Total Unmitigated TSP Emitted (tons):	**22.552**	
Total Mitigated TSP Emitted (tons):	**7.893**	Assume 65% reduction in PM10 with watering thrice daily per SCAQMD CEQA Handbook (1993) Table 11-4

[a]Emission Factor Source: Jones and Stokes Associates, 2007. URBEMIS2007, available at http://www.urbemis.com/software/download.html.

[b] Conversion Factor Source: Southern California Air Quality Management District (SCAQMD). 1993. CEQA Guidelines, Estimating Emissions from Wind Erosion of Storage Piles (Table A9-9-E)

[c] Mitigation Efficiency Rate Source: SCAQMD. 1993 CEQA Guidelines (Table 11-4)

Wind Blown Dust

TSP Emission Factor (ton/acre/year)	0.38	Emission Factor Source: AP-42, Section 11.9 Western Surface Coal Mining Table 11.9-4, January 1995.
Project Site		
Acres exposed	6.41	Assumes that 25% of the project area is exposed during construction
Duration (months)	38	Assumes 38 months of construction after grading
TSP Emitted for Site (tons):	**7.710**	
Mitigated TSP Emitted (tons):	**2.698**	Assume 65% reduction in TSP with watering thrice daily per SCAQMD CEQA Handbook (1993) Table 11-4
Off-site Laydown Area		
Acres exposed	0.0	Assumes off-site laydown area is completely covered (natural veg, gravelled or paved) during construction
Duration (months)	38	Assumes 38 months of construction traffic
TSP Emitted for Site (tons):	**0.000**	
Mitigated TSP Emitted (tons):	**0.000**	Assume 65% reduction in TSP with watering thrice daily per SCAQMD CEQA Handbook (1993) Table 11-4
Off-site Parking Area		
Acres exposed	0.0	Assumes off-site parking area is completely covered (natural veg, gravelled or paved) during construction
Duration (months)	38	Assumes 38 months of construction traffic
TSP Emitted for Site (tons):	**0.000**	
Mitigated TSP Emitted (tons):	**0.000**	Assume 65% reduction in TSP with watering thrice daily per SCAQMD CEQA Handbook (1993) Table 11-4
Total Wind Blown Dust (tons) without mitig	**7.710**	
Total WBD (tons) with mitigation	**2.698**	Assume 65% reduction in PM10 with watering thrice daily per SCAQMD CEQA Handbook (1993) Table 11-4

Project total without mitigation	**30.262**
Project total with mitigation	**10.592**