Impact Sciences, Inc., "Construction Emissions: Grading and Improvements Emissions, Direct Emissions" (2008)

GRADING PHASE EMISSIONS BASED ON URBEMIS2007

Project Name	**Adobe Canyon**
Subphase	**Grading - Direct**
Quarter	**1(2,3)**

Length of Subphase Grading (Work Days):	40
Months of Grading Activity:	2.0
Number of Days/Month	20
Grading Year:	2011
Maximum Daily Acreage Graded in Subphase (ac):	0.00
Amount of On-Site Cut and Fill Per Day (cy)	2,488.20
Amount of Off-Site Cut and Fill Per Day (cy)	0.00

	Input Required
	Constant Factor
	Mitigation
	Applied Emission Factor from Appropriate Year
	Intermediate Calculated Values
	Calculated/Totaled Emissions

FUGITIVE DUST EMISSIONS

Fugitive Dust Emissions (lbs/day): 293.61

FUGITIVE DUST MITIGATION

Apply Soil Stabilizers to Inactive Areas	88.08	30% reduction
Replace Ground Cover in Disturbed Areas	44.04	15% reduction
Water Exposed Surfaces Twice Daily	99.83	34% reduction
Water Exposed Surfaces Three Times Daily	179.10	61% reduction (percent reduction from URBEMIS2007)
Total Dust Mitigation	179.10	Maximum of 61% reduction.

GRADING OFF-ROAD DIESEL EXHAUST EMISSIONS

			Emissions in Pounds per Day (Input emission factor for correct year.)						Emission Factors in lbs/hr (2011)			
Equipment Type	No. of Vehicles	Hours of Operation/Day	ROG	NOx	CO	SO_x	PM10	CO_2	ROG	NOx	CO	SOx
Bore/Drill Rigs		8	0.0	0.0	0.0	0.0	0.0	0.0	0.094	1.008	0.510	0.002
Concrete/Industrial Saws		8	0.0	0.0	0.0	0.0	0.0	0.0	0.118	0.624	0.421	0.001
Cranes		8	0.0	0.0	0.0	0.0	0.0	0.0	0.151	1.362	0.518	0.001
Crawler Tractors	1	8	2.4	22.1	9.5	0.0	0.9	2,231.6	0.300	2.757	1.186	0.003
Crushing/Proc. Equipment		8	0.0	0.0	0.0	0.0	0.0	0.0	1.299	15.210	4.418	0.013
Excavators		8	0.0	0.0	0.0	0.0	0.0	0.0	0.288	2.747	0.877	0.004
Graders	1	8	1.4	13.5	4.0	0.0	0.5	1,422.8	0.170	1.689	0.494	0.002
Off-Highway Tractors		8	0.0	0.0	0.0	0.0	0.0	0.0	0.180	1.615	0.511	0.001
Off-Highway Water Trucks	2	8	3.8	34.0	11.3	0.0	1.3	4,357.3	0.237	2.124	0.706	0.003
Off-Highway Trucks		8	0.0	0.0	0.0	0.0	0.0	0.0	0.332	3.030	0.982	0.004
Other Construction Equipment		8	0.0	0.0	0.0	0.0	0.0	0.0	0.094	0.275	0.283	0.000
Pavers		8	0.0	0.0	0.0	0.0	0.0	0.0	0.155	0.924	0.516	0.001
Paving Equipment		8	0.0	0.0	0.0	0.0	0.0	0.0	0.015	0.098	0.052	0.000
Rollers		8	0.0	0.0	0.0	0.0	0.0	0.0	0.119	0.271	0.308	0.000
Rough Terrain Forklifts		8	0.0	0.0	0.0	0.0	0.0	0.0	0.145	0.350	0.405	0.000
Rubber Tired Dozers	1	8	3.1	27.0	14.4	0.0	1.1	2,341.8	0.385	3.376	1.797	0.003
Rubber Tired Loaders		8	0.0	0.0	0.0	0.0	0.0	0.0	0.140	1.267	0.505	0.001
Scrapers	2	8	7.0	65.1	28.1	0.1	2.6	6,444.9	0.438	4.069	1.754	0.004
Scraper 2A	2	8	6.6	61.3	26.5	0.1	2.4	6,085.7	0.413	3.834	1.657	0.004
Scraper 2B	2	8	5.1	47.0	18.9	0.0	1.9	4,576.8	0.317	2.935	1.181	0.003
Signal Boards		8	0.0	0.0	0.0	0.0	0.0	0.0	0.317	2.935	1.181	0.003
Skid Steer Loaders		8	0.0	0.0	0.0	0.0	0.0	0.0	0.438	4.069	1.754	0.004
Surfacing Equipment		8	0.0	0.0	0.0	0.0	0.0	0.0	0.188	2.332	0.576	0.003
Tractors/Loaders/Backhoes		8	0.0	0.0	0.0	0.0	0.0	0.0	0.135	0.323	0.371	0.000
Trenchers		8	0.0	0.0	0.0	0.0	0.0	0.0	0.134	1.409	0.388	0.002
Water Pull		8	0.0	0.0	0.0	0.0	0.0	0.0	0.371	3.431	1.491	0.003
Total Pieces of Equipment	11	Total Emissions:	29.3	270.0	112.6	0.3	10.7	27,461.0				

CARB, In-Use Construction Equipment ATCM

Altfillisch Contractors, Inc. Fleet Emissions Data

SCAQMD, Off-Road Mobile Source Emission Factors (Scenario Years 2007-2025) SCAB Fleet Average Emission Factors (Diesel), http://www.aqmd.gov/ceqa/handbook/offroad/offroadEF07_25.xls

GRADING WORKER COMMUTE EMISSIONS

Assumes number of workers is 125% of total pieces of grading equipment.

Number of Worker Trips:	14
Number of Construction Worker Trucks/Pick-Ups	2

EMFAC2007 Emission Rates	Emission Factors in lbs/mile (2011)						
	ROG	NOx	CO	SOx	PM10	PM2.5	CO_2
Passenger Vehicles	0.000852	0.000845	0.008263	0.000011	0.000089	0.000057	1.102352

One-Way Trip Length	12.7	Miles (URBEMIS2007 Home-Work Trip Distance in Los Angeles County)
VMT:	475.60	

SCAQMD, Highest (Most Conservative) EMFAC2007 (version 2.3) Emission Factors for On-Road Paasenger Vehicles [for] Projects in the SCAQMD (Scenario Years 2007-2026), http://www.aqmd.gov/ceqa/handbook/onroad/onroadEF07_26.xls

Worker Commute Emissions (pounds/day) **Apply emission factors for appropriate year.**:

	ROG	NOx	CO	SOx	PM10	PM2.5	CO_2	
Passenger Vehicles	0.41	0.40	3.93	0.01	0.04	0.03	524.28	**Formula: (Round Trip * Number of Passenger Vehicles * Emission Factors fo**
Total Emissions	0.41	0.40	3.93	0.01	0.04	0.03	524.28	

TOTAL SUBPHASE GRADING EMISSIONS

Emissions Source	Emissions (Pounds per Day) ROG	NOx	CO	SOx	PM10	PM2.5	DPM	CO_2	
Fugitive Dust	--	--	--	--	293.61	61.07	--	--	
On-Road Diesel Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Off-Road Diesel Exhaust	29.33	269.97	112.58	0.27	10.68	9.83	10.68	27,461.04	
Grading Worker Commute Trips	0.41	0.40	3.93	0.01	0.04	0.03	--	524.28	
Mitigation/Reduction									**Mitigation**
Fugitive Dust	--	--	--	--	179.10	37.25		--	Water Exposed Surfaces Three Times Daily
On-Road Diesel Exhaust	0.00	0.00	0.00	0.00	0.00	0.00		0.00	None
Off-Road Diesel Exhaust	0.00	0.00	0.00	n/a	0.00	0.00		0.00	None
Worker Commute Trips	0.00	0.00	0.00	0.00	0.00	0.00		0.00	No Feasible Mitigation Available
Net Emission Totals:	29.73	270.37	116.51	0.28	125.23	33.67	10.68	27,985.32	
SCAQMD Threshold:	75	100	550	150	150	55	--	--	
Exceeds Threshold?	No	Yes	No	No	No	No	--	--	
HRA/LST Emissions	29.33	269.97	112.58	0.27	125.19	33.64	10.68	--	

GRADING PHASE EMISSIONS BASED ON URBEMIS2007

Project Name	**Chiquito Canyon**
Subphase	**Grading - Direct**
Quarter	**1, 2(4)**

Length of Subphase Grading (Work Days):	80
Months of Grading Activity:	4.0
Number of Days/Month	20
Grading Year:	2015
Maximum Daily Acreage Graded in Subphase (ac):	0.00
Amount of On-Site Cut and Fill Per Day (cy)	7,234.00
Amount of Off-Site Cut and Fill Per Day (cy)	

	Input Required
	Constant Factor
	Mitigation
	Applied Emission Factor from Appropriate Year
	Intermediate Calculated Values
	Calculated/Totaled Emissions

FUGITIVE DUST EMISSIONS

Fugitive Dust Emissions (lbs/day): 853.61

FUGITIVE DUST MITIGATION

Apply Soil Stabilizers to Inactive Areas	256.08	30% reduction
Replace Ground Cover in Disturbed Areas	128.04	15% reduction
Water Exposed Surfaces Twice Daily	290.23	34% reduction
Water Exposed Surfaces Three Times Daily	520.70	61% reduction (percent reduction from URBEMIS2007)
Total Dust Mitigation	520.70	Maximum of 61% reduction.

GRADING OFF-ROAD DIESEL EXHAUST EMISSIONS

			Emissions in Pounds per Day (Input emission factor for correct year.)						Emission Factors in lbs/hr (2015)			
Equipment Type	No. of Vehicles	Hours of Operation/Day	ROG	NOx	CO	SO_x	PM10	CO_2	ROG	NOx	CO	SOx
Bore/Drill Rigs		8	0.0	0.0	0.0	0.0	0.0	0.0	0.067	0.614	0.502	0.002
Concrete/Industrial Saws		8	0.0	0.0	0.0	0.0	0.0	0.0	0.084	0.492	0.398	0.001
Cranes		8	0.0	0.0	0.0	0.0	0.0	0.0	0.120	1.020	0.440	0.001
Crawler Tractors	2	8	4.0	32.8	14.4	0.0	1.3	4,463.3	0.248	2.051	0.898	0.003
Crushing/Proc. Equipment	1	8	7.8	92.5	24.7	0.1	2.6	10,462.1	0.973	11.563	3.090	0.013
Excavators	2	8	3.8	29.0	12.0	0.1	1.0	5,667.5	0.240	1.813	0.752	0.004
Graders	2	8	2.2	18.9	6.7	0.0	0.7	2,845.6	0.136	1.181	0.422	0.002
Off-Highway Tractors		8	0.0	0.0	0.0	0.0	0.0	0.0	0.149	1.264	0.432	0.001
Off-Highway Water Trucks	6	8	9.4	68.0	28.6	0.1	2.4	13,072.0	0.196	1.416	0.595	0.003
Off-Highway Trucks	1	8	2.2	16.2	6.6	0.0	0.6	3,035.2	0.274	2.024	0.828	0.004
Other Construction Equipment		8	0.0	0.0	0.0	0.0	0.0	0.0	0.060	0.237	0.251	0.000
Pavers		8	0.0	0.0	0.0	0.0	0.0	0.0	0.124	0.748	0.497	0.001
Paving Equipment		8	0.0	0.0	0.0	0.0	0.0	0.0	0.015	0.096	0.052	0.000
Rollers	2	8	1.4	3.8	4.4	0.0	0.3	415.7	0.087	0.241	0.275	0.000
Rough Terrain Forklifts		8	0.0	0.0	0.0	0.0	0.0	0.0	0.094	0.307	0.355	0.000
Rubber Tired Dozers	2	8	5.2	42.6	22.0	0.0	1.7	4,683.6	0.324	2.661	1.375	0.003
Rubber Tired Loaders	2	8	1.8	14.5	7.5	0.0	0.6	2,074.2	0.111	0.907	0.472	0.001
Scrapers	3	8	8.7	73.3	32.1	0.1	2.8	9,667.4	0.362	3.055	1.338	0.004
Scraper 2A	3	8	8.2	69.1	30.3	0.1	2.7	9,128.6	0.342	2.877	1.264	0.004
Scraper 2B	3	8	6.3	52.8	22.0	0.1	2.0	6,865.2	0.261	2.201	0.918	0.003
Signal Boards		8	0.0	0.0	0.0	0.0	0.0	0.0	0.261	2.201	0.918	0.003
Skid Steer Loaders		8	0.0	0.0	0.0	0.0	0.0	0.0	0.362	3.055	1.338	0.004
Surfacing Equipment		8	0.0	0.0	0.0	0.0	0.0	0.0	0.142	1.623	0.510	0.003
Tractors/Loaders/Backhoes		8	0.0	0.0	0.0	0.0	0.0	0.0	0.078	0.283	0.319	0.000
Trenchers		8	0.0	0.0	0.0	0.0	0.0	0.0	0.108	0.905	0.357	0.002
Water Pull		8	0.0	0.0	0.0	0.0	0.0	0.0	0.307	2.573	1.137	0.003
Total Pieces of Equipment	29	Total Emissions:	60.9	513.5	211.5	0.7	18.7	72,380.4				

CARB, In-Use Construction Equipment ATCM

Altfillisch Contractors, Inc. Fleet Emissions Data

SCAQMD, Off-Road Mobile Source Emission Factors (Scenario Years 2007-2025) SCAB Fleet Average Emission Factors (Diesel), http://www.aqmd.gov/ceqa/handbook/offroad/offroadEF07_25.xls

GRADING WORKER COMMUTE EMISSIONS

Assumes number of workers is 125% of total pieces of grading equipment.

Number of Worker Trips:	36
Number of Construction Worker Trucks/Pick-Ups	8

EMFAC2007 Emission Rates	Emission Factors in lbs/mile (2015)						
	ROG	NOx	CO	SOx	PM10	PM2.5	CO_2
Passenger Vehicles	0.000664	0.000602	0.006141	0.000011	0.000093	0.000060	1.101928

One-Way Trip Length	12.7	Miles (URBEMIS2007 Home-Work Trip Distance in Los Angeles County)
VMT:	1,364.40	

SCAQMD, Highest (Most Conservative) EMFAC2007 (version 2.3) Emission Factors for On-Road Paasenger Vehicles [for] Projects in the SCAQMD (Scenario Years 2007-2026), http://www.aqmd.gov/ceqa/handbook/onroad/onroadEF07_26.xls

Worker Commute Emissions (pounds/day) **Apply emission factors for appropriate year.**:

	ROG	NOx	CO	SOx	PM10	PM2.5	CO_2	
Passenger Vehicles	0.91	0.82	8.38	0.01	0.13	0.08	1,503.47	**Formula: (Round Trip * Number of Passenger Vehicles * Emission Factors fo**
Total Emissions	0.91	0.82	8.38	0.01	0.13	0.08	1,503.47	

TOTAL SUBPHASE GRADING EMISSIONS

Emissions Source	Emissions (Pounds per Day) ROG	NOx	CO	SOx	PM10	PM2.5	DPM	CO_2	
Fugitive Dust	--	--	--	--	853.61	177.55	--	--	
On-Road Diesel Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Off-Road Diesel Exhaust	60.87	513.54	211.47	0.73	18.70	17.20	18.70	72,380.39	
Grading Worker Commute Trips	0.91	0.82	8.38	0.01	0.13	0.08	--	1,503.47	
Mitigation/Reduction									**Mitigation**
Fugitive Dust	--	--	--	--	520.70	108.31		--	Water Exposed Surfaces Three Times Daily
On-Road Diesel Exhaust	0.00	0.00	0.00	0.00	0.00	0.00		0.00	None
Off-Road Diesel Exhaust	0.00	0.00	0.00	n/a	0.00	0.00		0.00	None
Worker Commute Trips	0.00	0.00	0.00	0.00	0.00	0.00		0.00	No Feasible Mitigation Available
Net Emission Totals:	61.77	514.36	219.85	0.74	351.73	86.53	18.70	73,883.86	
SCAQMD Threshold:	75	100	550	150	150	55	--	--	
Exceeds Threshold?	No	Yes	No	No	Yes	Yes	--	--	
HRA/LST Emissions	60.87	513.54	211.47	0.73	351.61	86.45	18.70	--	

GRADING PHASE EMISSIONS BASED ON URBEMIS2007

Project Name	**Entrada North Commercial**
Subphase	**Grading - Direct**
Quarter	**2(6)**

Input Required	
Constant Factor	
Mitigation	
Applied Emission Factor from Appropriate Year	
Intermediate Calculated Values	
Calculated/Totaled Emissions	

Length of Subphase Grading (Work Days):	10
Months of Grading Activity:	0.5
Number of Days/Month	20
Grading Year:	2011
Maximum Daily Acreage Graded in Subphase (ac):	0.00
Amount of On-Site Cut and Fill Per Day (cy)	1,875.00
Amount of Off-Site Cut and Fill Per Day (cy)	0.00

FUGITIVE DUST EMISSIONS

Fugitive Dust Emissions (lbs/day): 221.25

FUGITIVE DUST MITIGATION

Apply Soil Stabilizers to Inactive Areas	66.38	30% reduction
Replace Ground Cover in Disturbed Areas	33.19	15% reduction
Water Exposed Surfaces Twice Daily	75.23	34% reduction
Water Exposed Surfaces Three Times Daily	134.96	61% reduction (percent reduction from URBEMIS2007)
Total Dust Mitigation	134.96	Maximum of 61% reduction.

GRADING OFF-ROAD DIESEL EXHAUST EMISSIONS

Equipment Type	No. of Vehicles	Hours of Operation/Day	Emissions in Pounds per Day (Input emission factor for correct year.) ROG	NOx	CO	SO_x	PM10	CO_2	Emission Factors in lbs/hr (2011) ROG	NOx	CO	SOx
Bore/Drill Rigs		8	0.0	0.0	0.0	0.0	0.0	0.0	0.094	1.008	0.510	0.002
Concrete/Industrial Saws		8	0.0	0.0	0.0	0.0	0.0	0.0	0.118	0.624	0.421	0.001
Cranes		8	0.0	0.0	0.0	0.0	0.0	0.0	0.151	1.362	0.518	0.001
Crawler Tractors	2	8	4.8	44.1	19.0	0.0	1.8	4,463.3	0.300	2.757	1.186	0.003
Crushing/Proc. Equipment		8	0.0	0.0	0.0	0.0	0.0	0.0	1.299	15.210	4.418	0.013
Excavators	1	8	2.3	22.0	7.0	0.0	0.8	2,833.8	0.288	2.747	0.877	0.004
Graders	1	8	1.4	13.5	4.0	0.0	0.5	1,422.8	0.170	1.689	0.494	0.002
Off-Highway Tractors		8	0.0	0.0	0.0	0.0	0.0	0.0	0.180	1.615	0.511	0.001
Off-Highway Water Trucks	3	8	5.7	51.0	16.9	0.1	1.9	6,536.0	0.237	2.124	0.706	0.003
Off-Highway Trucks	1	8	2.7	24.2	7.9	0.0	0.9	3,035.2	0.332	3.030	0.982	0.004
Other Construction Equipment		8	0.0	0.0	0.0	0.0	0.0	0.0	0.094	0.275	0.283	0.000
Pavers		8	0.0	0.0	0.0	0.0	0.0	0.0	0.155	0.924	0.516	0.001
Paving Equipment		8	0.0	0.0	0.0	0.0	0.0	0.0	0.015	0.098	0.052	0.000
Rollers		8	0.0	0.0	0.0	0.0	0.0	0.0	0.119	0.271	0.308	0.000
Rough Terrain Forklifts		8	0.0	0.0	0.0	0.0	0.0	0.0	0.145	0.350	0.405	0.000
Rubber Tired Dozers	1	8	3.1	27.0	14.4	0.0	1.1	2,341.8	0.385	3.376	1.797	0.003
Rubber Tired Loaders		8	0.0	0.0	0.0	0.0	0.0	0.0	0.140	1.267	0.505	0.001
Scrapers	1.5	8	5.3	48.8	21.0	0.0	1.9	4,833.7	0.438	4.069	1.754	0.004
Scraper 2A	1.5	8	5.0	46.0	19.9	0.0	1.8	4,564.3	0.413	3.834	1.657	0.004
Scraper 2B	1.5	8	3.8	35.2	14.2	0.0	1.4	3,432.6	0.317	2.935	1.181	0.003
Signal Boards		8	0.0	0.0	0.0	0.0	0.0	0.0	0.317	2.935	1.181	0.003
Skid Steer Loaders		8	0.0	0.0	0.0	0.0	0.0	0.0	0.438	4.069	1.754	0.004
Surfacing Equipment		8	0.0	0.0	0.0	0.0	0.0	0.0	0.188	2.332	0.576	0.003
Tractors/Loaders/Backhoes		8	0.0	0.0	0.0	0.0	0.0	0.0	0.135	0.323	0.371	0.000
Trenchers		8	0.0	0.0	0.0	0.0	0.0	0.0	0.134	1.409	0.388	0.002
Water Pull		8	0.0	0.0	0.0	0.0	0.0	0.0	0.371	3.431	1.491	0.003
Total Pieces of Equipment	13.5	Total Emissions:	33.9	311.9	124.2	0.3	12.1	33,463.4				

CARB, In-Use Construction Equipment ATCM

Altfillisch Contractors, Inc. Fleet Emissions Data

SCAQMD, Off-Road Mobile Source Emission Factors (Scenario Years 2007-2025) SCAB Fleet Average Emission Factors (Diesel), http://www.aqmd.gov/ceqa/handbook/offroad/offroadEF07_25.xls

GRADING WORKER COMMUTE EMISSIONS

Assumes number of workers is 125% of total pieces of grading equipment.

Number of Worker Trips:	17
Number of Construction Worker Trucks/Pick-Ups	3

EMFAC2007 Emission Rates	Emission Factors in lbs/mile (2011)						
	ROG	NOx	CO	SOx	PM10	PM2.5	CO_2
Passenger Vehicles	0.000852	0.000845	0.008263	0.000011	0.000089	0.000057	1.102352

One-Way Trip Length	12.7	Miles (URBEMIS2007 Home-Work Trip Distance in Los Angeles County)
VMT:	611.80	

SCAQMD, Highest (Most Conservative) EMFAC2007 (version 2.3) Emission Factors for On-Road Paasenger Vehicles [for] Projects in the SCAQMD (Scenario Years 2007-2026), http://www.aqmd.gov/ceqa/handbook/onroad/onroadEF07_26.xls

Worker Commute Emissions (pounds/day) **Apply emission factors for appropriate year.**:

	ROG	NOx	CO	SOx	PM10	PM2.5	CO_2	
Passenger Vehicles	0.52	0.52	5.06	0.01	0.05	0.03	674.42	**Formula: (Round Trip * Number of Passenger Vehicles * Emission Factors fo**
Total Emissions	0.52	0.52	5.06	0.01	0.05	0.03	674.42	

TOTAL SUBPHASE GRADING EMISSIONS

Emissions Source	Emissions (Pounds per Day) ROG	NOx	CO	SOx	PM10	PM2.5	DPM	CO_2	
Fugitive Dust	--	--	--	--	221.25	46.02	--	--	
On-Road Diesel Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Off-Road Diesel Exhaust	33.91	311.89	124.21	0.33	12.13	11.16	12.13	33,463.41	
Grading Worker Commute Trips	0.52	0.52	5.06	0.01	0.05	0.03	--	674.42	
Mitigation/Reduction									**Mitigation**
Fugitive Dust	--	--	--	--	134.96	28.07		--	Water Exposed Surfaces Three Times Daily
On-Road Diesel Exhaust	0.00	0.00	0.00	0.00	0.00	0.00		0.00	None
Off-Road Diesel Exhaust	0.00	0.00	0.00	n/a	0.00	0.00		0.00	None
Worker Commute Trips	0.00	0.00	0.00	0.00	0.00	0.00		0.00	No Feasible Mitigation Available
Net Emission Totals:	34.43	312.40	129.27	0.34	98.47	29.14	12.13	34,137.83	
SCAQMD Threshold:	75	100	550	150	150	55	--	--	
Exceeds Threshold?	No	Yes	No	No	No	No	--	--	
HRA/LST Emissions	33.91	311.89	124.21	0.33	98.42	29.11	12.13	--	

GRADING PHASE EMISSIONS BASED ON URBEMIS2007

Project Name	**Entrada Terrazo**	
Subphase	**Grading - Direct**	
Quarter	**3**	
Length of Subphase Grading (Work Days):	55	
Months of Grading Activity:	2.8	
Number of Days/Month	20	
Grading Year:	2011	
Maximum Daily Acreage Graded in Subphase (ac):	0.00	
Amount of On-Site Cut and Fill Per Day (cy)	3,098.00	
Amount of Off-Site Cut and Fill Per Day (cy)	0.00	

	Input Required
	Constant Factor
	Mitigation
	Applied Emission Factor from Appropriate Year
	Intermediate Calculated Values
	Calculated/Totaled Emissions

FUGITIVE DUST EMISSIONS

Fugitive Dust Emissions (lbs/day): 365.56

FUGITIVE DUST MITIGATION

Apply Soil Stabilizers to Inactive Areas	109.67	30% reduction
Replace Ground Cover in Disturbed Areas	54.83	15% reduction
Water Exposed Surfaces Twice Daily	124.29	34% reduction
Water Exposed Surfaces Three Times Daily	222.99	61% reduction (percent reduction from URBEMIS2007)
Total Dust Mitigation	222.99	Maximum of 61% reduction.

GRADING OFF-ROAD DIESEL EXHAUST EMISSIONS

	No. of	Hours of	Emissions in Pounds per Day (Input emission factor for correct year.)						Emission Factors in lbs/hr (2011)			
Equipment Type	Vehicles	Operation/Day	ROG	NOx	CO	SO_x	PM10	CO_2	ROG	NOx	CO	SOx
Bore/Drill Rigs		8	0.0	0.0	0.0	0.0	0.0	0.0	0.094	1.008	0.510	0.002
Concrete/Industrial Saws		8	0.0	0.0	0.0	0.0	0.0	0.0	0.118	0.624	0.421	0.001
Cranes		8	0.0	0.0	0.0	0.0	0.0	0.0	0.151	1.362	0.518	0.001
Crawler Tractors	2	8	4.8	44.1	19.0	0.0	1.8	4,463.3	0.300	2.757	1.186	0.003
Crushing/Proc. Equipment		8	0.0	0.0	0.0	0.0	0.0	0.0	1.299	15.210	4.418	0.013
Excavators	1	8	2.3	22.0	7.0	0.0	0.8	2,833.8	0.288	2.747	0.877	0.004
Graders	1	8	1.4	13.5	4.0	0.0	0.5	1,422.8	0.170	1.689	0.494	0.002
Off-Highway Tractors		8	0.0	0.0	0.0	0.0	0.0	0.0	0.180	1.615	0.511	0.001
Off-Highway Water Trucks	3	8	5.7	51.0	16.9	0.1	1.9	6,536.0	0.237	2.124	0.706	0.003
Off-Highway Trucks	1	8	2.7	24.2	7.9	0.0	0.9	3,035.2	0.332	3.030	0.982	0.004
Other Construction Equipment		8	0.0	0.0	0.0	0.0	0.0	0.0	0.094	0.275	0.283	0.000
Pavers		8	0.0	0.0	0.0	0.0	0.0	0.0	0.155	0.924	0.516	0.001
Paving Equipment		8	0.0	0.0	0.0	0.0	0.0	0.0	0.015	0.098	0.052	0.000
Rollers		8	0.0	0.0	0.0	0.0	0.0	0.0	0.119	0.271	0.308	0.000
Rough Terrain Forklifts		8	0.0	0.0	0.0	0.0	0.0	0.0	0.145	0.350	0.405	0.000
Rubber Tired Dozers	1	8	3.1	27.0	14.4	0.0	1.1	2,341.8	0.385	3.376	1.797	0.003
Rubber Tired Loaders		8	0.0	0.0	0.0	0.0	0.0	0.0	0.140	1.267	0.505	0.001
Scrapers	1.5	8	5.3	48.8	21.0	0.0	1.9	4,833.7	0.438	4.069	1.754	0.004
Scraper 2A	1.5	8	5.0	46.0	19.9	0.0	1.8	4,564.3	0.413	3.834	1.657	0.004
Scraper 2B	1.5	8	3.8	35.2	14.2	0.0	1.4	3,432.6	0.317	2.935	1.181	0.003
Signal Boards		8	0.0	0.0	0.0	0.0	0.0	0.0	0.317	2.935	1.181	0.003
Skid Steer Loaders		8	0.0	0.0	0.0	0.0	0.0	0.0	0.438	4.069	1.754	0.004
Surfacing Equipment		8	0.0	0.0	0.0	0.0	0.0	0.0	0.188	2.332	0.576	0.003
Tractors/Loaders/Backhoes		8	0.0	0.0	0.0	0.0	0.0	0.0	0.135	0.323	0.371	0.000
Trenchers		8	0.0	0.0	0.0	0.0	0.0	0.0	0.134	1.409	0.388	0.002
Water Pull		8	0.0	0.0	0.0	0.0	0.0	0.0	0.371	3.431	1.491	0.003
Total Pieces of Equipment	13.5	Total Emissions:	33.9	311.9	124.2	0.3	12.1	33,463.4				

CARB, In-Use Construction Equipment ATCM

Altfillisch Contractors, Inc. Fleet Emissions Data

SCAQMD, Off-Road Mobile Source Emission Factors (Scenario Years 2007-2025) SCAB Fleet Average Emission Factors (Diesel), http://www.aqmd.gov/ceqa/handbook/offroad/offroadEF07_25.xls

GRADING WORKER COMMUTE EMISSIONS

Assumes number of workers is 125% of total pieces of grading equipment.

Number of Worker Trips:	17
Number of Construction Worker Trucks/Pick-Ups	3

EMFAC2007 Emission Rates	Emission Factors in lbs/mile (2011)						
	ROG	NOx	CO	SOx	PM10	PM2.5	CO_2
Passenger Vehicles	0.000852	0.000845	0.008263	0.000011	0.000089	0.000057	1.102352

One-Way Trip Length	12.7	Miles (URBEMIS2007 Home-Work Trip Distance in Los Angeles County)
VMT:	611.80	

SCAQMD, Highest (Most Conservative) EMFAC2007 (version 2.3) Emission Factors for On-Road Paasenger Vehicles [for] Projects in the SCAQMD (Scenario Years 2007-2026), http://www.aqmd.gov/ceqa/handbook/onroad/onroadEF07_26.xls

Worker Commute Emissions (pounds/day) **Apply emission factors for appropriate year.**:

	ROG	NOx	CO	SOx	PM10	PM2.5	CO_2	
Passenger Vehicles	0.52	0.52	5.06	0.01	0.05	0.03	674.42	**Formula: (Round Trip * Number of Passenger Vehicles * Emission Factors fo**
Total Emissions	0.52	0.52	5.06	0.01	0.05	0.03	674.42	

TOTAL SUBPHASE GRADING EMISSIONS

Emissions Source	Emissions (Pounds per Day) ROG	NOx	CO	SOx	PM10	PM2.5	DPM	CO_2	
Fugitive Dust	--	--	--	--	365.56	76.04	--	--	
On-Road Diesel Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Off-Road Diesel Exhaust	33.91	311.89	124.21	0.33	12.13	11.16	12.13	33,463.41	
Grading Worker Commute Trips	0.52	0.52	5.06	0.01	0.05	0.03	--	674.42	
Mitigation/Reduction									**Mitigation**
Fugitive Dust	--	--	--	--	222.99	46.38		--	Water Exposed Surfaces Three Times Daily
On-Road Diesel Exhaust	0.00	0.00	0.00	0.00	0.00	0.00		0.00	None
Off-Road Diesel Exhaust	0.00	0.00	0.00	n/a	0.00	0.00		0.00	None
Worker Commute Trips	0.00	0.00	0.00	0.00	0.00	0.00		0.00	No Feasible Mitigation Available
Net Emission Totals:	34.43	312.40	129.27	0.34	154.76	40.85	12.13	34,137.83	
SCAQMD Threshold:	75	100	550	150	150	55	--	--	
Exceeds Threshold?	No	Yes	No	No	Yes	No	--	--	
HRA/LST Emissions	33.91	311.89	124.21	0.33	154.70	40.82	12.13	--	

GRADING PHASE EMISSIONS BASED ON URBEMIS2007

Project Name	**Homestead Central**
Subphase	**Grading - Direct**
Quarter	**1, 2(4)**

Input Required	
Constant Factor	
Mitigation	
Applied Emission Factor from Appropriate Year	
Intermediate Calculated Values	
Calculated/Totaled Emissions	

Length of Subphase Grading (Work Days):	80
Months of Grading Activity:	4.0
Number of Days/Month	20
Grading Year:	2015
Maximum Daily Acreage Graded in Subphase (ac):	0.00
Amount of On-Site Cut and Fill Per Day (cy)	7,234.00
Amount of Off-Site Cut and Fill Per Day (cy)	0.00

FUGITIVE DUST EMISSIONS

Fugitive Dust Emissions (lbs/day): 853.61

FUGITIVE DUST MITIGATION

Apply Soil Stabilizers to Inactive Areas	256.08	30% reduction
Replace Ground Cover in Disturbed Areas	128.04	15% reduction
Water Exposed Surfaces Twice Daily	290.23	34% reduction
Water Exposed Surfaces Three Times Daily	520.70	61% reduction (percent reduction from URBEMIS2007)
Total Dust Mitigation	520.70	Maximum of 61% reduction.

GRADING OFF-ROAD DIESEL EXHAUST EMISSIONS

			Emissions in Pounds per Day (Input emission factor for correct year.)						Emission Factors in lbs/hr (2015)			
Equipment Type	No. of Vehicles	Hours of Operation/Day	ROG	NOx	CO	SO_x	PM10	CO_2	ROG	NOx	CO	SOx
Bore/Drill Rigs		8	0.0	0.0	0.0	0.0	0.0	0.0	0.067	0.614	0.502	0.002
Concrete/Industrial Saws		8	0.0	0.0	0.0	0.0	0.0	0.0	0.084	0.492	0.398	0.001
Cranes		8	0.0	0.0	0.0	0.0	0.0	0.0	0.120	1.020	0.440	0.001
Crawler Tractors	2	8	4.0	32.8	14.4	0.0	1.3	4,463.3	0.248	2.051	0.898	0.003
Crushing/Proc. Equipment	1	8	7.8	92.5	24.7	0.1	2.6	10,462.1	0.973	11.563	3.090	0.013
Excavators	2	8	3.8	29.0	12.0	0.1	1.0	5,667.5	0.240	1.813	0.752	0.004
Graders	2	8	2.2	18.9	6.7	0.0	0.7	2,845.6	0.136	1.181	0.422	0.002
Off-Highway Tractors		8	0.0	0.0	0.0	0.0	0.0	0.0	0.149	1.264	0.432	0.001
Off-Highway Water Trucks	6	8	9.4	68.0	28.6	0.1	2.4	13,072.0	0.196	1.416	0.595	0.003
Off-Highway Trucks	1	8	2.2	16.2	6.6	0.0	0.6	3,035.2	0.274	2.024	0.828	0.004
Other Construction Equipment		8	0.0	0.0	0.0	0.0	0.0	0.0	0.060	0.237	0.251	0.000
Pavers		8	0.0	0.0	0.0	0.0	0.0	0.0	0.124	0.748	0.497	0.001
Paving Equipment		8	0.0	0.0	0.0	0.0	0.0	0.0	0.015	0.096	0.052	0.000
Rollers	2	8	1.4	3.8	4.4	0.0	0.3	415.7	0.087	0.241	0.275	0.000
Rough Terrain Forklifts		8	0.0	0.0	0.0	0.0	0.0	0.0	0.094	0.307	0.355	0.000
Rubber Tired Dozers	2	8	5.2	42.6	22.0	0.0	1.7	4,683.6	0.324	2.661	1.375	0.003
Rubber Tired Loaders	2	8	1.8	14.5	7.5	0.0	0.6	2,074.2	0.111	0.907	0.472	0.001
Scrapers	3	8	8.7	73.3	32.1	0.1	2.8	9,667.4	0.362	3.055	1.338	0.004
Scraper 2A	3	8	8.2	69.1	30.3	0.1	2.7	9,128.6	0.342	2.877	1.264	0.004
Scraper 2B	3	8	6.3	52.8	22.0	0.1	2.0	6,865.2	0.261	2.201	0.918	0.003
Signal Boards		8	0.0	0.0	0.0	0.0	0.0	0.0	0.261	2.201	0.918	0.003
Skid Steer Loaders		8	0.0	0.0	0.0	0.0	0.0	0.0	0.362	3.055	1.338	0.004
Surfacing Equipment		8	0.0	0.0	0.0	0.0	0.0	0.0	0.142	1.623	0.510	0.003
Tractors/Loaders/Backhoes		8	0.0	0.0	0.0	0.0	0.0	0.0	0.078	0.283	0.319	0.000
Trenchers		8	0.0	0.0	0.0	0.0	0.0	0.0	0.108	0.905	0.357	0.002
Water Pull		8	0.0	0.0	0.0	0.0	0.0	0.0	0.307	2.573	1.137	0.003
Total Pieces of Equipment	29	Total Emissions:	60.9	513.5	211.5	0.7	18.7	72,380.4				

CARB, In-Use Construction Equipment ATCM

Altfillisch Contractors, Inc. Fleet Emissions Data

SCAQMD, Off-Road Mobile Source Emission Factors (Scenario Years 2007-2025) SCAB Fleet Average Emission Factors (Diesel), http://www.aqmd.gov/ceqa/handbook/offroad/offroadEF07_25.xls

GRADING WORKER COMMUTE EMISSIONS

Assumes number of workers is 125% of total pieces of grading equipment.

Number of Worker Trips:	36
Number of Construction Worker Trucks/Pick-Ups	8

EMFAC2007 Emission Rates	Emission Factors in lbs/mile (2015)						
	ROG	NOx	CO	SOx	PM10	PM2.5	CO_2
Passenger Vehicles	0.000664	0.000602	0.006141	0.000011	0.000093	0.000060	1.101928

One-Way Trip Length	12.7	Miles (URBEMIS2007 Home-Work Trip Distance in Los Angeles County)
VMT:	1,364.40	

SCAQMD, Highest (Most Conservative) EMFAC2007 (version 2.3) Emission Factors for On-Road Paasenger Vehicles [for] Projects in the SCAQMD (Scenario Years 2007-2026), http://www.aqmd.gov/ceqa/handbook/onroad/onroadEF07_26.xls

Worker Commute Emissions (pounds/day) **Apply emission factors for appropriate year.**:

	ROG	NOx	CO	SOx	PM10	PM2.5	CO_2	
Passenger Vehicles	0.91	0.82	8.38	0.01	0.13	0.08	1,503.47	**Formula: (Round Trip * Number of Passenger Vehicles * Emission Factors fo**
Total Emissions	0.91	0.82	8.38	0.01	0.13	0.08	1,503.47	

TOTAL SUBPHASE GRADING EMISSIONS

Emissions Source	Emissions (Pounds per Day) ROG	NOx	CO	SOx	PM10	PM2.5	DPM	CO_2	
Fugitive Dust	--	--	--	--	853.61	177.55	--	--	
On-Road Diesel Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Off-Road Diesel Exhaust	60.87	513.54	211.47	0.73	18.70	17.20	18.70	72,380.39	
Grading Worker Commute Trips	0.91	0.82	8.38	0.01	0.13	0.08	--	1,503.47	
Mitigation/Reduction									**Mitigation**
Fugitive Dust	--	--	--	--	520.70	108.31		--	Water Exposed Surfaces Three Times Daily
On-Road Diesel Exhaust	0.00	0.00	0.00	0.00	0.00	0.00		0.00	None
Off-Road Diesel Exhaust	0.00	0.00	0.00	n/a	0.00	0.00		0.00	None
Worker Commute Trips	0.00	0.00	0.00	0.00	0.00	0.00		0.00	No Feasible Mitigation Available
Net Emission Totals:	61.77	514.36	219.85	0.74	351.73	86.53	18.70	73,883.86	
SCAQMD Threshold:	75	100	550	150	150	55	--	--	
Exceeds Threshold?	No	Yes	No	No	Yes	Yes	--	--	
HRA/LST Emissions	60.87	513.54	211.47	0.73	351.61	86.45	18.70	--	

GRADING PHASE EMISSIONS BASED ON URBEMIS2007

Project Name	**Homestead West**
Subphase	**Grading - Direct**
Quarter	**2(6), 3(7)**

Input Required	
Constant Factor	
Mitigation	
Applied Emission Factor from Appropriate Year	
Intermediate Calculated Values	
Calculated/Totaled Emissions	

Length of Subphase Grading (Work Days):	40
Months of Grading Activity:	2.0
Number of Days/Month	20
Grading Year:	2016
Maximum Daily Acreage Graded in Subphase (ac):	0.00
Amount of On-Site Cut and Fill Per Day (cy)	7,234.00
Amount of Off-Site Cut and Fill Per Day (cy)	0.00

FUGITIVE DUST EMISSIONS

Fugitive Dust Emissions (lbs/day): 853.61

FUGITIVE DUST MITIGATION

Apply Soil Stabilizers to Inactive Areas	256.08	30% reduction
Replace Ground Cover in Disturbed Areas	128.04	15% reduction
Water Exposed Surfaces Twice Daily	290.23	34% reduction
Water Exposed Surfaces Three Times Daily	520.70	61% reduction (percent reduction from URBEMIS2007)
Total Dust Mitigation	520.70	Maximum of 61% reduction.

GRADING OFF-ROAD DIESEL EXHAUST EMISSIONS

			Emissions in Pounds per Day (Input emission factor for correct year.)						Emission Factors in lbs/hr (2016)			
Equipment Type	No. of Vehicles	Hours of Operation/Day	ROG	NOx	CO	SO_x	PM10	CO_2	ROG	NOx	CO	SOx
Bore/Drill Rigs		8	0.0	0.0	0.0	0.0	0.0	0.0	0.062	0.534	0.502	0.002
Concrete/Industrial Saws		8	0.0	0.0	0.0	0.0	0.0	0.0	0.076	0.459	0.394	0.001
Cranes		8	0.0	0.0	0.0	0.0	0.0	0.0	0.114	0.939	0.426	0.001
Crawler Tractors	2	8	3.8	30.1	13.6	0.0	1.2	4,463.3	0.235	1.884	0.850	0.003
Crushing/Proc. Equipment	1	8	7.3	86.6	23.5	0.1	2.4	10,462.1	0.915	10.828	2.932	0.013
Excavators	2	8	3.6	25.5	11.8	0.1	0.9	5,667.5	0.228	1.597	0.735	0.004
Graders	2	8	2.1	17.0	6.6	0.0	0.6	2,845.6	0.128	1.064	0.410	0.002
Off-Highway Tractors		8	0.0	0.0	0.0	0.0	0.0	0.0	0.142	1.180	0.415	0.001
Off-Highway Water Trucks	6	8	8.9	60.1	27.8	0.1	2.2	13,072.0	0.186	1.252	0.580	0.003
Off-Highway Trucks	1	8	2.1	14.3	6.5	0.0	0.5	3,035.2	0.260	1.790	0.807	0.004
Other Construction Equipment		8	0.0	0.0	0.0	0.0	0.0	0.0	0.053	0.227	0.245	0.000
Pavers		8	0.0	0.0	0.0	0.0	0.0	0.0	0.116	0.703	0.493	0.001
Paving Equipment		8	0.0	0.0	0.0	0.0	0.0	0.0	0.015	0.096	0.052	0.000
Rollers	2	8	1.3	3.7	4.3	0.0	0.3	415.7	0.080	0.232	0.268	0.000
Rough Terrain Forklifts		8	0.0	0.0	0.0	0.0	0.0	0.0	0.084	0.295	0.346	0.000
Rubber Tired Dozers	2	8	4.9	39.8	20.6	0.0	1.6	4,683.6	0.309	2.487	1.289	0.003
Rubber Tired Loaders	2	8	1.7	13.1	7.5	0.0	0.6	2,074.2	0.104	0.817	0.466	0.001
Scrapers	3	8	8.2	67.5	30.4	0.1	2.6	9,667.4	0.344	2.813	1.265	0.004
Scraper 2A	3	8	7.8	63.6	28.7	0.1	2.4	9,128.6	0.324	2.649	1.195	0.004
Scraper 2B	3	8	5.9	48.6	20.9	0.1	1.9	6,865.2	0.248	2.026	0.871	0.003
Signal Boards		8	0.0	0.0	0.0	0.0	0.0	0.0	0.248	2.026	0.871	0.003
Skid Steer Loaders		8	0.0	0.0	0.0	0.0	0.0	0.0	0.344	2.813	1.265	0.004
Surfacing Equipment		8	0.0	0.0	0.0	0.0	0.0	0.0	0.132	1.448	0.500	0.003
Tractors/Loaders/Backhoes		8	0.0	0.0	0.0	0.0	0.0	0.0	0.066	0.272	0.308	0.000
Trenchers		8	0.0	0.0	0.0	0.0	0.0	0.0	0.102	0.791	0.353	0.002
Water Pull		8	0.0	0.0	0.0	0.0	0.0	0.0	0.291	2.369	1.075	0.003
Total Pieces of Equipment	29	Total Emissions:	57.6	470.1	202.0	0.7	17.0	72,380.4				

CARB, In-Use Construction Equipment ATCM

Altfillisch Contractors, Inc. Fleet Emissions Data

SCAQMD, Off-Road Mobile Source Emission Factors (Scenario Years 2007-2025) SCAB Fleet Average Emission Factors (Diesel), http://www.aqmd.gov/ceqa/handbook/offroad/offroadEF07_25.xls

GRADING WORKER COMMUTE EMISSIONS

Assumes number of workers is 125% of total pieces of grading equipment.

Number of Worker Trips:	36
Number of Construction Worker Trucks/Pick-Ups	8

EMFAC2007 Emission Rates	Emission Factors in lbs/mile (2016)						
	ROG	NOx	CO	SOx	PM10	PM2.5	CO_2
Passenger Vehicles	0.000633	0.000557	0.005758	0.000011	0.000094	0.000061	1.106777

One-Way Trip Length: 12.7 Miles (URBEMIS2007 Home-Work Trip Distance in Los Angeles County)

VMT: 1,394.40

SCAQMD, Highest (Most Conservative) EMFAC2007 (version 2.3) Emission Factors for On-Road Paasenger Vehicles [for] Projects in the SCAQMD (Scenario Years 2007-2026), http://www.aqmd.gov/ceqa/handbook/onroad/onroadEF07_26.xls

Worker Commute Emissions (pounds/day) **Apply emission factors for appropriate year.**:

	ROG	NOx	CO	SOx	PM10	PM2.5	CO_2	
Passenger Vehicles	0.88	0.78	8.03	0.01	0.13	0.09	1,543.29	**Formula: (Round Trip * Number of Passenger Vehicles * Emission Factors fo**
Total Emissions	0.88	0.78	8.03	0.01	0.13	0.09	1,543.29	

TOTAL SUBPHASE GRADING EMISSIONS

	Emissions (Pounds per Day)								
Emissions Source	ROG	NOx	CO	SOx	PM10	PM2.5	DPM	CO_2	
Fugitive Dust	--	--	--	--	853.61	177.55	--	--	
On-Road Diesel Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Off-Road Diesel Exhaust	57.62	470.05	201.98	0.73	17.00	15.64	17.00	72,380.38	
Grading Worker Commute Trips	0.88	0.78	8.03	0.01	0.13	0.09	--	1,543.29	
Mitigation/Reduction									**Mitigation**
Fugitive Dust	--	--	--	--	520.70	108.31		--	Water Exposed Surfaces Three Times Daily
On-Road Diesel Exhaust	0.00	0.00	0.00	0.00	0.00	0.00		0.00	None
Off-Road Diesel Exhaust	0.00	0.00	0.00	n/a	0.00	0.00		0.00	None
Worker Commute Trips	0.00	0.00	0.00	0.00	0.00	0.00		0.00	No Feasible Mitigation Available
Net Emission Totals:	58.50	470.83	210.01	0.74	350.04	84.97	17.00	73,923.67	
SCAQMD Threshold:	75	100	550	150	150	55	--	--	
Exceeds Threshold?	No	Yes	No	No	Yes	Yes	--	--	
HRA/LST Emissions	57.62	470.05	201.98	0.73	349.90	84.88	17.00	--	

GRADING PHASE EMISSIONS BASED ON URBEMIS2007

Project Name	**Landmark Village**
Subphase	**Grading - Direct**
Quarter	**3, 4**

Input Required	
Constant Factor	
Mitigation	
Applied Emission Factor from Appropriate Year	
Intermediate Calculated Values	
Calculated/Totaled Emissions	

Length of Subphase Grading (Work Days):	120
Months of Grading Activity:	6.0
Number of Days/Month	20
Grading Year:	2008
Maximum Daily Acreage Graded in Subphase (ac):	0.00
Amount of On-Site Cut and Fill Per Day (cy)	5,184.00
Amount of Off-Site Cut and Fill Per Day (cy)	0.00

FUGITIVE DUST EMISSIONS

Fugitive Dust Emissions (lbs/day): 611.71

FUGITIVE DUST MITIGATION

Apply Soil Stabilizers to Inactive Areas	183.51	30% reduction
Replace Ground Cover in Disturbed Areas	91.76	15% reduction
Water Exposed Surfaces Twice Daily	207.98	34% reduction
Water Exposed Surfaces Three Times Daily	373.14	61% reduction (percent reduction from URBEMIS2007)
Total Dust Mitigation	373.14	Maximum of 61% reduction.

GRADING OFF-ROAD DIESEL EXHAUST EMISSIONS

	No. of	Hours of	Emissions in Pounds per Day (Input emission factor for correct year.)						Emission Factors in lbs/hr (2008)			
Equipment Type	Vehicles	Operation/Day	ROG	NOx	CO	SO_x	PM10	CO_2	ROG	NOx	CO	SOx
Bore/Drill Rigs		8	0.0	0.0	0.0	0.0	0.0	0.0	0.130	1.342	0.528	0.002
Concrete/Industrial Saws		8	0.0	0.0	0.0	0.0	0.0	0.0	0.146	0.726	0.441	0.001
Cranes		8	0.0	0.0	0.0	0.0	0.0	0.0	0.178	1.610	0.601	0.001
Crawler Tractors	1	8	2.7	26.2	12.1	0.0	1.1	2,231.6	0.342	3.272	1.511	0.003
Crushing/Proc. Equipment	1	8	12.2	136.6	44.5	0.1	4.2	10,462.1	1.528	17.075	5.559	0.013
Excavators	0.5	8	1.3	13.8	4.3	0.0	0.5	1,416.9	0.332	3.454	1.072	0.004
Graders	1	8	1.6	16.5	4.7	0.0	0.6	1,422.8	0.201	2.059	0.582	0.002
Off-Highway Tractors		8	0.0	0.0	0.0	0.0	0.0	0.0	0.205	1.867	0.585	0.001
Off-Highway Water Trucks	1	8	2.2	21.3	7.0	0.0	0.8	2,178.7	0.273	2.660	0.874	0.003
Off-Highway Trucks	1	8	3.1	30.3	9.7	0.0	1.1	3,035.2	0.382	3.792	1.215	0.004
Other Construction Equipment		8	0.0	0.0	0.0	0.0	0.0	0.0	0.124	0.288	0.314	0.000
Pavers		8	0.0	0.0	0.0	0.0	0.0	0.0	0.182	1.066	0.536	0.001
Paving Equipment		8	0.0	0.0	0.0	0.0	0.0	0.0	0.017	0.106	0.053	0.000
Rollers	2	8	2.3	4.5	5.4	0.0	0.5	415.7	0.144	0.284	0.335	0.000
Rough Terrain Forklifts		8	0.0	0.0	0.0	0.0	0.0	0.0	0.187	0.368	0.448	0.000
Rubber Tired Dozers	1	8	3.4	31.1	17.5	0.0	1.3	2,341.8	0.431	3.890	2.192	0.003
Rubber Tired Loaders	1	8	1.3	12.3	4.4	0.0	0.5	1,037.1	0.167	1.540	0.545	0.001
Scrapers	2	8	8.0	76.9	35.8	0.1	3.1	6,444.9	0.500	4.807	2.239	0.004
Scraper 2A	2	8	7.5	72.5	33.9	0.1	2.9	6,085.7	0.472	4.529	2.116	0.004
Scraper 2B	2	8	5.8	55.5	23.7	0.0	2.3	4,576.8	0.363	3.470	1.483	0.003
Signal Boards		8	0.0	0.0	0.0	0.0	0.0	0.0	0.363	3.470	1.483	0.003
Skid Steer Loaders		8	0.0	0.0	0.0	0.0	0.0	0.0	0.500	4.807	2.239	0.004
Surfacing Equipment		8	0.0	0.0	0.0	0.0	0.0	0.0	0.235	2.779	0.690	0.003
Tractors/Loaders/Backhoes		8	0.0	0.0	0.0	0.0	0.0	0.0	0.183	0.345	0.426	0.000
Trenchers		8	0.0	0.0	0.0	0.0	0.0	0.0	0.160	1.794	0.445	0.002
Water Pull		8	0.0	0.0	0.0	0.0	0.0	0.0	0.424	4.055	1.905	0.003
Total Pieces of Equipment	15.5	Total Emissions:	51.6	497.6	202.9	0.4	18.9	41,649.3				

CARB, In-Use Construction Equipment ATCM

Altfillisch Contractors, Inc. Fleet Emissions Data

SCAQMD, Off-Road Mobile Source Emission Factors (Scenario Years 2007-2025) SCAB Fleet Average Emission Factors (Diesel), http://www.aqmd.gov/ceqa/handbook/offroad/offroadEF07_25.xls

GRADING WORKER COMMUTE EMISSIONS

Assumes number of workers is 125% of total pieces of grading equipment.

Number of Worker Trips:	19
Number of Construction Worker Trucks/Pick-Ups	2

EMFAC2007 Emission Rates

	Emission Factors in lbs/mile (2008)						
	ROG	NOx	CO	SOx	PM10	PM2.5	CO_2
Passenger Vehicles	0.001079	0.001103	0.010548	0.000011	0.000085	0.000053	1.099532

One-Way Trip Length: 12.7 Miles (URBEMIS2007 Home-Work Trip Distance in Los Angeles County)

VMT: 602.60

SCAQMD, Highest (Most Conservative) EMFAC2007 (version 2.3) Emission Factors for On-Road Paasenger Vehicles [for] Projects in the SCAQMD (Scenario Years 2007-2026), http://www.aqmd.gov/ceqa/handbook/onroad/onroadEF07_26.xls

Worker Commute Emissions (pounds/day) **Apply emission factors for appropriate year.**:

	ROG	NOx	CO	SOx	PM10	PM2.5	CO_2	
Passenger Vehicles	0.65	0.66	6.36	0.01	0.05	0.03	662.58	**Formula: (Round Trip * Number of Passenger Vehicles * Emission Factors fo**
Total Emissions	0.65	0.66	6.36	0.01	0.05	0.03	662.58	

TOTAL SUBPHASE GRADING EMISSIONS

Emissions Source	Emissions (Pounds per Day) ROG	NOx	CO	SOx	PM10	PM2.5	DPM	CO_2	
Fugitive Dust	--	--	--	--	611.71	127.24	--	--	
On-Road Diesel Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Off-Road Diesel Exhaust	51.57	497.55	202.88	0.42	18.89	17.38	18.89	41,649.32	
Grading Worker Commute Trips	0.65	0.66	6.36	0.01	0.05	0.03	--	662.58	
Mitigation/Reduction									**Mitigation**
Fugitive Dust	--	--	--	--	373.14	77.61		--	Water Exposed Surfaces Three Times Daily
On-Road Diesel Exhaust	0.00	0.00	0.00	0.00	0.00	0.00		0.00	None
Off-Road Diesel Exhaust	0.00	0.00	0.00	n/a	0.00	0.00		0.00	None
Worker Commute Trips	0.00	0.00	0.00	0.00	0.00	0.00		0.00	No Feasible Mitigation Available
Net Emission Totals:	52.22	498.22	209.24	0.43	257.51	67.03	18.89	42,311.90	
SCAQMD Threshold:	75	100	550	150	150	55	--	--	
Exceeds Threshold?	No	Yes	No	No	Yes	Yes	--	--	
HRA/LST Emissions	51.57	497.55	202.88	0.42	257.45	67.00	18.89	--	

GRADING PHASE EMISSIONS BASED ON URBEMIS2007

Project Name	**Long Canyon North**
Subphase	**Grading - Direct**
Quarter	**2(6), 3(7,8)**

Input Required	
Constant Factor	
Mitigation	
Applied Emission Factor from Appropriate Year	
Intermediate Calculated Values	
Calculated/Totaled Emissions	

Length of Subphase Grading (Work Days):	50
Months of Grading Activity:	2.5
Number of Days/Month	20
Grading Year:	2012
Maximum Daily Acreage Graded in Subphase (ac):	0.00
Amount of On-Site Cut and Fill Per Day (cy)	4,244.00
Amount of Off-Site Cut and Fill Per Day (cy)	0.00

FUGITIVE DUST EMISSIONS

Fugitive Dust Emissions (lbs/day): 500.79

FUGITIVE DUST MITIGATION

Apply Soil Stabilizers to Inactive Areas	150.24	30% reduction
Replace Ground Cover in Disturbed Areas	75.12	15% reduction
Water Exposed Surfaces Twice Daily	170.27	34% reduction
Water Exposed Surfaces Three Times Daily	305.48	61% reduction (percent reduction from URBEMIS2007)
Total Dust Mitigation	305.48	Maximum of 61% reduction.

GRADING OFF-ROAD DIESEL EXHAUST EMISSIONS

	No. of	Hours of	Emissions in Pounds per Day (Input emission factor for correct year.)						Emission Factors in lbs/hr (2012)			
Equipment Type	Vehicles	Operation/Day	ROG	NOx	CO	SO_x	PM10	CO_2	ROG	NOx	CO	SOx
Bore/Drill Rigs		8	0.0	0.0	0.0	0.0	0.0	0.0	0.085	0.901	0.507	0.002
Concrete/Industrial Saws		8	0.0	0.0	0.0	0.0	0.0	0.0	0.109	0.591	0.415	0.001
Cranes		8	0.0	0.0	0.0	0.0	0.0	0.0	0.142	1.275	0.495	0.001
Crawler Tractors	4	8	9.2	82.6	35.2	0.1	3.2	8,926.5	0.286	2.582	1.099	0.003
Crushing/Proc. Equipment	1	8	9.7	114.1	32.3	0.1	3.4	10,462.1	1.211	14.265	4.033	0.013
Excavators	1.5	8	3.3	30.1	10.0	0.0	1.1	4,250.6	0.275	2.512	0.832	0.004
Graders	2	8	2.6	25.0	7.6	0.0	0.9	2,845.6	0.161	1.563	0.472	0.002
Off-Highway Tractors		8	0.0	0.0	0.0	0.0	0.0	0.0	0.172	1.528	0.490	0.001
Off-Highway Water Trucks	5	8	9.1	77.9	26.6	0.1	2.8	10,893.4	0.226	1.946	0.666	0.003
Off-Highway Trucks	2	8	5.1	44.4	14.8	0.1	1.6	6,070.4	0.317	2.777	0.927	0.004
Other Construction Equipment		8	0.0	0.0	0.0	0.0	0.0	0.0	0.084	0.271	0.274	0.000
Pavers		8	0.0	0.0	0.0	0.0	0.0	0.0	0.147	0.879	0.511	0.001
Paving Equipment		8	0.0	0.0	0.0	0.0	0.0	0.0	0.015	0.097	0.052	0.000
Rollers	2	8	1.8	4.3	4.8	0.0	0.4	415.7	0.110	0.268	0.299	0.000
Rough Terrain Forklifts		8	0.0	0.0	0.0	0.0	0.0	0.0	0.131	0.345	0.391	0.000
Rubber Tired Dozers	1.5	8	4.4	38.4	20.2	0.0	1.6	3,512.7	0.370	3.200	1.680	0.003
Rubber Tired Loaders	1	8	1.1	9.4	4.0	0.0	0.4	1,037.1	0.132	1.177	0.495	0.001
Scrapers	2.5	8	8.4	76.4	32.5	0.1	3.0	8,056.2	0.418	3.819	1.626	0.004
Scraper 2A	2.5	8	7.9	71.9	30.7	0.1	2.8	7,607.2	0.395	3.597	1.536	0.004
Scraper 2B	2.5	8	6.1	55.1	22.0	0.1	2.2	5,721.0	0.303	2.753	1.101	0.003
Signal Boards		8	0.0	0.0	0.0	0.0	0.0	0.0	0.303	2.753	1.101	0.003
Skid Steer Loaders		8	0.0	0.0	0.0	0.0	0.0	0.0	0.418	3.819	1.626	0.004
Surfacing Equipment		8	0.0	0.0	0.0	0.0	0.0	0.0	0.175	2.160	0.552	0.003
Tractors/Loaders/Backhoes		8	0.0	0.0	0.0	0.0	0.0	0.0	0.120	0.318	0.356	0.000
Trenchers		8	0.0	0.0	0.0	0.0	0.0	0.0	0.126	1.281	0.375	0.002
Water Pull		8	0.0	0.0	0.0	0.0	0.0	0.0	0.355	3.219	1.383	0.003
Total Pieces of Equipment	27.5	Total Emissions:	68.4	629.7	240.6	0.7	23.4	69,798.4				

CARB, In-Use Construction Equipment ATCM

Altfillisch Contractors, Inc. Fleet Emissions Data

SCAQMD, Off-Road Mobile Source Emission Factors (Scenario Years 2007-2025) SCAB Fleet Average Emission Factors (Diesel), http://www.aqmd.gov/ceqa/handbook/offroad/offroadEF07_25.xls

GRADING WORKER COMMUTE EMISSIONS

Assumes number of workers is 125% of total pieces of grading equipment.

Number of Worker Trips:	34
Number of Construction Worker Trucks/Pick-Ups	8

EMFAC2007 Emission Rates	Emission Factors in lbs/mile (2012)						
	ROG	NOx	CO	SOx	PM10	PM2.5	CO_2
Passenger Vehicles	0.000796	0.000776	0.007655	0.000011	0.000090	0.000057	1.101525

One-Way Trip Length	12.7	Miles (URBEMIS2007 Home-Work Trip Distance in Los Angeles County)
VMT:	1,343.60	

SCAQMD, Highest (Most Conservative) EMFAC2007 (version 2.3) Emission Factors for On-Road Paasenger Vehicles [for] Projects in the SCAQMD (Scenario Years 2007-2026), http://www.aqmd.gov/ceqa/handbook/onroad/onroadEF07_26.xls

Worker Commute Emissions (pounds/day) **Apply emission factors for appropriate year.**:

	ROG	NOx	CO	SOx	PM10	PM2.5	CO_2	
Passenger Vehicles	1.07	1.04	10.28	0.01	0.12	0.08	1,480.01	**Formula: (Round Trip * Number of Passenger Vehicles * Emission Factors fo**
Total Emissions	1.07	1.04	10.28	0.01	0.12	0.08	1,480.01	

TOTAL SUBPHASE GRADING EMISSIONS

Emissions Source	Emissions (Pounds per Day) ROG	NOx	CO	SOx	PM10	PM2.5	DPM	CO_2	
Fugitive Dust	--	--	--	--	500.79	104.16	--	--	
On-Road Diesel Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Off-Road Diesel Exhaust	68.44	629.70	240.62	0.70	23.42	21.54	23.42	69,798.41	
Grading Worker Commute Trips	1.07	1.04	10.28	0.01	0.12	0.08	--	1,480.01	
Mitigation/Reduction									**Mitigation**
Fugitive Dust	--	--	--	--	305.48	63.54		--	Water Exposed Surfaces Three Times Daily
On-Road Diesel Exhaust	0.00	0.00	0.00	0.00	0.00	0.00		0.00	None
Off-Road Diesel Exhaust	0.00	0.00	0.00	n/a	0.00	0.00		0.00	None
Worker Commute Trips	0.00	0.00	0.00	0.00	0.00	0.00		0.00	No Feasible Mitigation Available
Net Emission Totals:	69.51	630.74	250.91	0.71	218.85	62.25	23.42	71,278.42	
SCAQMD Threshold:	75	100	550	150	150	55	--	--	
Exceeds Threshold?	No	Yes	No	No	Yes	Yes	--	--	
HRA/LST Emissions	68.44	629.70	240.62	0.70	218.73	62.17	23.42	--	

GRADING PHASE EMISSIONS BASED ON URBEMIS2007

Project Name	**Long Canyon South**
Subphase	**Grading - Direct**
Quarter	**1**

Input Required	
Constant Factor	
Mitigation	
Applied Emission Factor from Appropriate Year	
Intermediate Calculated Values	
Calculated/Totaled Emissions	

Length of Subphase Grading (Work Days):	50
Months of Grading Activity:	2.5
Number of Days/Month	20
Grading Year:	2013
Maximum Daily Acreage Graded in Subphase (ac):	0.00
Amount of On-Site Cut and Fill Per Day (cy)	4,244.00
Amount of Off-Site Cut and Fill Per Day (cy)	0.00

FUGITIVE DUST EMISSIONS

Fugitive Dust Emissions (lbs/day): 500.79

FUGITIVE DUST MITIGATION

Apply Soil Stabilizers to Inactive Areas	150.24	30% reduction
Replace Ground Cover in Disturbed Areas	75.12	15% reduction
Water Exposed Surfaces Twice Daily	170.27	34% reduction
Water Exposed Surfaces Three Times Daily	305.48	61% reduction (percent reduction from URBEMIS2007)
Total Dust Mitigation	305.48	Maximum of 61% reduction.

GRADING OFF-ROAD DIESEL EXHAUST EMISSIONS

			Emissions in Pounds per Day (Input emission factor for correct year.)						Emission Factors in lbs/hr (2013)			
Equipment Type	No. of Vehicles	Hours of Operation/Day	ROG	NOx	CO	SO_x	PM10	CO_2	ROG	NOx	CO	SOx
Bore/Drill Rigs		8	0.0	0.0	0.0	0.0	0.0	0.0	0.079	0.812	0.504	0.002
Concrete/Industrial Saws		8	0.0	0.0	0.0	0.0	0.0	0.0	0.100	0.557	0.409	0.001
Cranes		8	0.0	0.0	0.0	0.0	0.0	0.0	0.135	1.193	0.474	0.001
Crawler Tractors	4	8	8.8	77.4	32.7	0.1	3.0	8,926.5	0.274	2.418	1.022	0.003
Crushing/Proc. Equipment	1	8	9.0	106.6	29.4	0.1	3.1	10,462.1	1.127	13.322	3.675	0.013
Excavators	1.5	8	3.2	27.6	9.6	0.0	1.0	4,250.6	0.264	2.302	0.798	0.004
Graders	2	8	2.4	23.1	7.2	0.0	0.8	2,845.6	0.153	1.445	0.453	0.002
Off-Highway Tractors		8	0.0	0.0	0.0	0.0	0.0	0.0	0.164	1.445	0.469	0.001
Off-Highway Water Trucks	5	8	8.7	71.5	25.4	0.1	2.5	10,893.4	0.217	1.787	0.636	0.003
Off-Highway Trucks	2	8	4.9	40.8	14.2	0.1	1.4	6,070.4	0.304	2.550	0.886	0.004
Other Construction Equipment		8	0.0	0.0	0.0	0.0	0.0	0.0	0.075	0.259	0.265	0.000
Pavers		8	0.0	0.0	0.0	0.0	0.0	0.0	0.139	0.836	0.506	0.001
Paving Equipment		8	0.0	0.0	0.0	0.0	0.0	0.0	0.015	0.097	0.052	0.000
Rollers	2	8	1.6	4.1	4.7	0.0	0.4	415.7	0.102	0.258	0.291	0.000
Rough Terrain Forklifts		8	0.0	0.0	0.0	0.0	0.0	0.0	0.118	0.332	0.378	0.000
Rubber Tired Dozers	1.5	8	4.3	36.4	18.8	0.0	1.5	3,512.7	0.355	3.032	1.571	0.003
Rubber Tired Loaders	1	8	1.0	8.7	3.9	0.0	0.4	1,037.1	0.125	1.094	0.486	0.001
Scrapers	2.5	8	8.0	71.7	30.3	0.1	2.8	8,056.2	0.400	3.583	1.516	0.004
Scraper 2A	2.5	8	7.6	67.5	28.6	0.1	2.6	7,607.2	0.378	3.375	1.432	0.004
Scraper 2B	2.5	8	5.8	51.6	20.6	0.1	2.0	5,721.0	0.289	2.582	1.031	0.003
Signal Boards		8	0.0	0.0	0.0	0.0	0.0	0.0	0.289	2.582	1.031	0.003
Skid Steer Loaders		8	0.0	0.0	0.0	0.0	0.0	0.0	0.400	3.583	1.516	0.004
Surfacing Equipment		8	0.0	0.0	0.0	0.0	0.0	0.0	0.163	1.996	0.535	0.003
Tractors/Loaders/Backhoes		8	0.0	0.0	0.0	0.0	0.0	0.0	0.105	0.306	0.342	0.000
Trenchers		8	0.0	0.0	0.0	0.0	0.0	0.0	0.120	1.166	0.367	0.002
Water Pull		8	0.0	0.0	0.0	0.0	0.0	0.0	0.339	3.019	1.288	0.003
Total Pieces of Equipment	27.5	Total Emissions:	65.2	587.0	225.5	0.7	21.5	69,798.4				

CARB, In-Use Construction Equipment ATCM

Altfillisch Contractors, Inc. Fleet Emissions Data

SCAQMD, Off-Road Mobile Source Emission Factors (Scenario Years 2007-2025) SCAB Fleet Average Emission Factors (Diesel), http://www.aqmd.gov/ceqa/handbook/offroad/offroadEF07_25.xls

GRADING WORKER COMMUTE EMISSIONS

Assumes number of workers is 125% of total pieces of grading equipment.

Number of Worker Trips:	34
Number of Construction Worker Trucks/Pick-Ups	8

EMFAC2007 Emission Rates	Emission Factors in lbs/mile (2013)						
	ROG	NOx	CO	SOx	PM10	PM2.5	CO_2
Passenger Vehicles	0.000746	0.000712	0.007092	0.000011	0.000091	0.000058	1.100874

One-Way Trip Length	12.7	Miles (URBEMIS2007 Home-Work Trip Distance in Los Angeles County)
VMT:	1,343.60	

SCAQMD, Highest (Most Conservative) EMFAC2007 (version 2.3) Emission Factors for On-Road Paasenger Vehicles [for] Projects in the SCAQMD (Scenario Years 2007-2026), http://www.aqmd.gov/ceqa/handbook/onroad/onroadEF07_26.xls

Worker Commute Emissions (pounds/day) **Apply emission factors for appropriate year.**:

	ROG	NOx	CO	SOx	PM10	PM2.5	CO_2	
Passenger Vehicles	1.00	0.96	9.53	0.01	0.12	0.08	1,479.13	**Formula: (Round Trip * Number of Passenger Vehicles * Emission Factors fo**
Total Emissions	1.00	0.96	9.53	0.01	0.12	0.08	1,479.13	

TOTAL SUBPHASE GRADING EMISSIONS

Emissions Source	Emissions (Pounds per Day) ROG	NOx	CO	SOx	PM10	PM2.5	DPM	CO_2	
Fugitive Dust	--	--	--	--	500.79	104.16	--	--	
On-Road Diesel Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Off-Road Diesel Exhaust	65.16	586.99	225.52	0.70	21.48	19.76	21.48	69,798.41	
Grading Worker Commute Trips	1.00	0.96	9.53	0.01	0.12	0.08	--	1,479.13	
Mitigation/Reduction									**Mitigation**
Fugitive Dust	--	--	--	--	305.48	63.54		--	Water Exposed Surfaces Three Times Daily
On-Road Diesel Exhaust	0.00	0.00	0.00	0.00	0.00	0.00		0.00	None
Off-Road Diesel Exhaust	0.00	0.00	0.00	n/a	0.00	0.00		0.00	None
Worker Commute Trips	0.00	0.00	0.00	0.00	0.00	0.00		0.00	No Feasible Mitigation Available
Net Emission Totals:	66.17	587.95	235.05	0.71	216.91	60.47	21.48	71,277.54	
SCAQMD Threshold:	75	100	550	150	150	55	--	--	
Exceeds Threshold?	No	Yes	No	No	Yes	Yes	--	--	
HRA/LST Emissions	65.16	586.99	225.52	0.70	216.79	60.39	21.48	--	

GRADING PHASE EMISSIONS BASED ON URBEMIS2007

Project Name	**Mesas West Direct**
Subphase	**Grading**
Quarter	**1(2,3), 2**

Input Required	
Constant Factor	
Mitigation	
Applied Emission Factor from Appropriate Year	
Intermediate Calculated Values	
Calculated/Totaled Emissions	

Length of Subphase Grading (Work Days):	100
Months of Grading Activity:	5.0
Number of Days/Month	20
Grading Year:	2011
Maximum Daily Acreage Graded in Subphase (ac):	0.00
Amount of On-Site Cut and Fill Per Day (cy)	2,262.00
Amount of Off-Site Cut and Fill Per Day (cy)	0.00

FUGITIVE DUST EMISSIONS

Fugitive Dust Emissions (lbs/day): 266.92

FUGITIVE DUST MITIGATION

Apply Soil Stabilizers to Inactive Areas	80.07	30% reduction
Replace Ground Cover in Disturbed Areas	40.04	15% reduction
Water Exposed Surfaces Twice Daily	90.75	34% reduction
Water Exposed Surfaces Three Times Daily	162.82	61% reduction (percent reduction from URBEMIS2007)
Total Dust Mitigation	162.82	Maximum of 61% reduction.

GRADING OFF-ROAD DIESEL EXHAUST EMISSIONS

			Emissions in Pounds per Day (Input emission factor for correct year.)						Emission Factors in lbs/hr (2011)			
Equipment Type	No. of Vehicles	Hours of Operation/Day	ROG	NOx	CO	SO_x	PM10	CO_2	ROG	NOx	CO	SOx
Bore/Drill Rigs		8	0.0	0.0	0.0	0.0	0.0	0.0	0.094	1.008	0.510	0.002
Concrete/Industrial Saws		8	0.0	0.0	0.0	0.0	0.0	0.0	0.118	0.624	0.421	0.001
Cranes		8	0.0	0.0	0.0	0.0	0.0	0.0	0.151	1.362	0.518	0.001
Crawler Tractors	1	8	2.4	22.1	9.5	0.0	0.9	2,231.6	0.300	2.757	1.186	0.003
Crushing/Proc. Equipment		8	0.0	0.0	0.0	0.0	0.0	0.0	1.299	15.210	4.418	0.013
Excavators		8	0.0	0.0	0.0	0.0	0.0	0.0	0.288	2.747	0.877	0.004
Graders	1	8	1.4	13.5	4.0	0.0	0.5	1,422.8	0.170	1.689	0.494	0.002
Off-Highway Tractors		8	0.0	0.0	0.0	0.0	0.0	0.0	0.180	1.615	0.511	0.001
Off-Highway Water Trucks	2	8	3.8	34.0	11.3	0.0	1.3	4,357.3	0.237	2.124	0.706	0.003
Off-Highway Trucks		8	0.0	0.0	0.0	0.0	0.0	0.0	0.332	3.030	0.982	0.004
Other Construction Equipment		8	0.0	0.0	0.0	0.0	0.0	0.0	0.094	0.275	0.283	0.000
Pavers		8	0.0	0.0	0.0	0.0	0.0	0.0	0.155	0.924	0.516	0.001
Paving Equipment		8	0.0	0.0	0.0	0.0	0.0	0.0	0.015	0.098	0.052	0.000
Rollers		8	0.0	0.0	0.0	0.0	0.0	0.0	0.119	0.271	0.308	0.000
Rough Terrain Forklifts		8	0.0	0.0	0.0	0.0	0.0	0.0	0.145	0.350	0.405	0.000
Rubber Tired Dozers	1	8	3.1	27.0	14.4	0.0	1.1	2,341.8	0.385	3.376	1.797	0.003
Rubber Tired Loaders		8	0.0	0.0	0.0	0.0	0.0	0.0	0.140	1.267	0.505	0.001
Scrapers	2	8	7.0	65.1	28.1	0.1	2.6	6,444.9	0.438	4.069	1.754	0.004
Scraper 2A	2	8	6.6	61.3	26.5	0.1	2.4	6,085.7	0.413	3.834	1.657	0.004
Scraper 2B	2	8	5.1	47.0	18.9	0.0	1.9	4,576.8	0.317	2.935	1.181	0.003
Signal Boards		8	0.0	0.0	0.0	0.0	0.0	0.0	0.317	2.935	1.181	0.003
Skid Steer Loaders		8	0.0	0.0	0.0	0.0	0.0	0.0	0.438	4.069	1.754	0.004
Surfacing Equipment		8	0.0	0.0	0.0	0.0	0.0	0.0	0.188	2.332	0.576	0.003
Tractors/Loaders/Backhoes		8	0.0	0.0	0.0	0.0	0.0	0.0	0.135	0.323	0.371	0.000
Trenchers		8	0.0	0.0	0.0	0.0	0.0	0.0	0.134	1.409	0.388	0.002
Water Pull		8	0.0	0.0	0.0	0.0	0.0	0.0	0.371	3.431	1.491	0.003
Total Pieces of Equipment	11	Total Emissions:	29.3	270.0	112.6	0.3	10.7	27,461.0				

CARB, In-Use Construction Equipment ATCM

Altfillisch Contractors, Inc. Fleet Emissions Data

SCAQMD, Off-Road Mobile Source Emission Factors (Scenario Years 2007-2025) SCAB Fleet Average Emission Factors (Diesel), http://www.aqmd.gov/ceqa/handbook/offroad/offroadEF07_25.xls

GRADING WORKER COMMUTE EMISSIONS

Assumes number of workers is 125% of total pieces of grading equipment.

Number of Worker Trips:	14
Number of Construction Worker Trucks/Pick-Ups	2

EMFAC2007 Emission Rates	Emission Factors in lbs/mile (2011)						
	ROG	NOx	CO	SOx	PM10	PM2.5	CO_2
Passenger Vehicles	0.000852	0.000845	0.008263	0.000011	0.000089	0.000057	1.102352

One-Way Trip Length	12.7	Miles (URBEMIS2007 Home-Work Trip Distance in Los Angeles County)
VMT:	475.60	

SCAQMD, Highest (Most Conservative) EMFAC2007 (version 2.3) Emission Factors for On-Road Paasenger Vehicles [for] Projects in the SCAQMD (Scenario Years 2007-2026), http://www.aqmd.gov/ceqa/handbook/onroad/onroadEF07_26.xls

Worker Commute Emissions (pounds/day) **Apply emission factors for appropriate year.**:

	ROG	NOx	CO	SOx	PM10	PM2.5	CO_2	
Passenger Vehicles	0.41	0.40	3.93	0.01	0.04	0.03	524.28	**Formula: (Round Trip * Number of Passenger Vehicles * Emission Factors fo**
Total Emissions	0.41	0.40	3.93	0.01	0.04	0.03	524.28	

TOTAL SUBPHASE GRADING EMISSIONS

Emissions Source	Emissions (Pounds per Day) ROG	NOx	CO	SOx	PM10	PM2.5	DPM	CO_2	
Fugitive Dust	--	--	--	--	266.92	55.52	--	--	
On-Road Diesel Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Off-Road Diesel Exhaust	29.33	269.97	112.58	0.27	10.68	9.83	10.68	27,461.04	
Grading Worker Commute Trips	0.41	0.40	3.93	0.01	0.04	0.03	--	524.28	
Mitigation/Reduction									**Mitigation**
Fugitive Dust	--	--	--	--	162.82	33.87		--	Water Exposed Surfaces Three Times Daily
On-Road Diesel Exhaust	0.00	0.00	0.00	0.00	0.00	0.00		0.00	None
Off-Road Diesel Exhaust	0.00	0.00	0.00	n/a	0.00	0.00		0.00	None
Worker Commute Trips	0.00	0.00	0.00	0.00	0.00	0.00		0.00	No Feasible Mitigation Available
Net Emission Totals:	29.73	270.37	116.51	0.28	114.82	31.50	10.68	27,985.32	
SCAQMD Threshold:	75	100	550	150	150	55	--	--	
Exceeds Threshold?	No	Yes	No	No	No	No	--	--	
HRA/LST Emissions	29.33	269.97	112.58	0.27	114.78	31.48	10.68	--	

GRADING PHASE EMISSIONS BASED ON URBEMIS2007

Project Name	**Mission Village**	
Subphase	**Grading - Direct**	
Quarter	**4**	
Length of Subphase Grading (Work Days):	60	
Months of Grading Activity:	3.0	
Number of Days/Month	20	
Grading Year:	2009	
Maximum Daily Acreage Graded in Subphase (ac):	0.00	
Amount of On-Site Cut and Fill Per Day (cy)	2,546.40	
Amount of Off-Site Cut and Fill Per Day (cy)	0.00	

Input Required
Constant Factor
Mitigation
Applied Emission Factor from Appropriate Year
Intermediate Calculated Values
Calculated/Totaled Emissions

FUGITIVE DUST EMISSIONS

Fugitive Dust Emissions (lbs/day): 300.48

FUGITIVE DUST MITIGATION

Apply Soil Stabilizers to Inactive Areas	90.14	30% reduction
Replace Ground Cover in Disturbed Areas	45.07	15% reduction
Water Exposed Surfaces Twice Daily	102.16	34% reduction
Water Exposed Surfaces Three Times Daily	183.29	61% reduction (percent reduction from URBEMIS2007)
Total Dust Mitigation	183.29	Maximum of 61% reduction.

GRADING OFF-ROAD DIESEL EXHAUST EMISSIONS

	No. of	Hours of	Emissions in Pounds per Day (Input emission factor for correct year.)						Emission Factors in lbs/hr (2009)			
Equipment Type	Vehicles	Operation/Day	ROG	NOx	CO	SO_x	PM10	CO_2	ROG	NOx	CO	SOx
Bore/Drill Rigs		8	0.0	0.0	0.0	0.0	0.0	0.0	0.116	1.229	0.520	0.002
Concrete/Industrial Saws		8	0.0	0.0	0.0	0.0	0.0	0.0	0.136	0.691	0.434	0.001
Cranes		8	0.0	0.0	0.0	0.0	0.0	0.0	0.168	1.529	0.571	0.001
Crawler Tractors	2	8	5.2	49.6	22.3	0.0	2.0	4,463.3	0.327	3.103	1.391	0.003
Crushing/Proc. Equipment	0.5	8	5.8	66.4	20.7	0.1	2.0	5,231.0	1.458	16.606	5.176	0.013
Excavators	2	8	5.1	51.5	16.0	0.1	1.9	5,667.5	0.316	3.220	0.998	0.004
Graders	2	8	3.0	31.0	8.8	0.0	1.2	2,845.6	0.190	1.937	0.548	0.002
Off-Highway Tractors		8	0.0	0.0	0.0	0.0	0.0	0.0	0.196	1.785	0.559	0.001
Off-Highway Water Trucks	6	8	12.5	119.1	38.9	0.1	4.4	13,072.0	0.260	2.482	0.810	0.003
Off-Highway Trucks	1	8	2.9	28.3	9.0	0.0	1.0	3,035.2	0.364	3.539	1.127	0.004
Other Construction Equipment		8	0.0	0.0	0.0	0.0	0.0	0.0	0.114	0.283	0.303	0.000
Pavers		8	0.0	0.0	0.0	0.0	0.0	0.0	0.173	1.016	0.529	0.001
Paving Equipment		8	0.0	0.0	0.0	0.0	0.0	0.0	0.016	0.102	0.052	0.000
Rollers	1	8	1.1	2.2	2.6	0.0	0.2	207.9	0.135	0.279	0.326	0.000
Rough Terrain Forklifts		8	0.0	0.0	0.0	0.0	0.0	0.0	0.173	0.362	0.433	0.000
Rubber Tired Dozers	2	8	6.6	59.5	32.9	0.0	2.5	4,683.6	0.415	3.721	2.053	0.003
Rubber Tired Loaders	1	8	1.3	11.6	4.2	0.0	0.5	1,037.1	0.157	1.448	0.530	0.001
Scrapers	3	8	11.5	109.5	49.5	0.1	4.4	9,667.4	0.478	4.564	2.061	0.004
Scraper 2A	3	8	10.8	103.2	46.7	0.1	4.2	9,128.6	0.451	4.300	1.947	0.004
Scraper 2B	3	8	8.3	79.1	32.9	0.1	3.2	6,865.2	0.347	3.294	1.372	0.003
Signal Boards		8	0.0	0.0	0.0	0.0	0.0	0.0	0.347	3.294	1.372	0.003
Skid Steer Loaders		8	0.0	0.0	0.0	0.0	0.0	0.0	0.478	4.564	2.061	0.004
Surfacing Equipment		8	0.0	0.0	0.0	0.0	0.0	0.0	0.220	2.646	0.652	0.003
Tractors/Loaders/Backhoes		8	0.0	0.0	0.0	0.0	0.0	0.0	0.167	0.337	0.408	0.000
Trenchers		8	0.0	0.0	0.0	0.0	0.0	0.0	0.150	1.666	0.423	0.002
Water Pull		8	0.0	0.0	0.0	0.0	0.0	0.0	0.405	3.849	1.752	0.003
Total Pieces of Equipment	26.5	Total Emissions:	74.2	711.1	284.4	0.7	27.5	65,904.4				

CARB, In-Use Construction Equipment ATCM

Altfillisch Contractors, Inc. Fleet Emissions Data

SCAQMD, Off-Road Mobile Source Emission Factors (Scenario Years 2007-2025) SCAB Fleet Average Emission Factors (Diesel), http://www.aqmd.gov/ceqa/handbook/offroad/offroadEF07_25.xls

GRADING WORKER COMMUTE EMISSIONS

Assumes number of workers is 125% of total pieces of grading equipment.

Number of Worker Trips:	33
Number of Construction Worker Trucks/Pick-Ups	8

EMFAC2007 Emission Rates	Emission Factors in lbs/mile (2009)						
	ROG	NOx	CO	SOx	PM10	PM2.5	CO_2
Passenger Vehicles	0.000992	0.001005	0.009686	0.000011	0.000086	0.000054	1.097554

One-Way Trip Length	12.7	Miles (URBEMIS2007 Home-Work Trip Distance in Los Angeles County)
VMT:	1,318.20	

SCAQMD, Highest (Most Conservative) EMFAC2007 (version 2.3) Emission Factors for On-Road Paasenger Vehicles [for] Projects in the SCAQMD (Scenario Years 2007-2026), http://www.aqmd.gov/ceqa/handbook/onroad/onroadEF07_26.xls

Worker Commute Emissions (pounds/day) **Apply emission factors for appropriate year.**:

	ROG	NOx	CO	SOx	PM10	PM2.5	CO_2	
Passenger Vehicles	1.31	1.33	12.77	0.01	0.11	0.07	1,446.80	**Formula: (Round Trip * Number of Passenger Vehicles * Emission Factors fo**
Total Emissions	1.31	1.33	12.77	0.01	0.11	0.07	1,446.80	

TOTAL SUBPHASE GRADING EMISSIONS

Emissions Source	Emissions (Pounds per Day) ROG	NOx	CO	SOx	PM10	PM2.5	DPM	CO_2	
Fugitive Dust	--	--	--	--	300.48	62.50	--	--	
On-Road Diesel Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Off-Road Diesel Exhaust	74.17	711.15	284.41	0.66	27.55	25.34	27.55	65,904.39	
Grading Worker Commute Trips	1.31	1.33	12.77	0.01	0.11	0.07	--	1,446.80	
Mitigation/Reduction									**Mitigation**
Fugitive Dust	--	--	--	--	183.29	38.12		--	Water Exposed Surfaces Three Times Daily
On-Road Diesel Exhaust	0.00	0.00	0.00	0.00	0.00	0.00		0.00	None
Off-Road Diesel Exhaust	0.00	0.00	0.00	n/a	0.00	0.00		0.00	None
Worker Commute Trips	0.00	0.00	0.00	0.00	0.00	0.00		0.00	No Feasible Mitigation Available
Net Emission Totals:	75.48	712.47	297.18	0.67	144.85	49.79	27.55	67,351.18	
SCAQMD Threshold:	75	100	550	150	150	55	--	--	
Exceeds Threshold?	Yes	Yes	No	No	No	No	--	--	
HRA/LST Emissions	74.17	711.15	284.41	0.66	144.73	49.72	27.55	--	

GRADING PHASE EMISSIONS BASED ON URBEMIS2007

Project Name	**Mission Village**
Subphase	**Grading - Direct**
Quarter (Month)	**1 (1,2)**

Length of Subphase Grading (Work Days):	40
Months of Grading Activity:	2.0
Number of Days/Month	20
Grading Year:	2010
Maximum Daily Acreage Graded in Subphase (ac):	0.00
Amount of On-Site Cut and Fill Per Day (cy)	2,546.40
Amount of Off-Site Cut and Fill Per Day (cy)	0.00

Input Required
Constant Factor
Mitigation
Applied Emission Factor from Appropriate Year
Intermediate Calculated Values
Calculated/Totaled Emissions

FUGITIVE DUST EMISSIONS

Fugitive Dust Emissions (lbs/day): 300.48

FUGITIVE DUST MITIGATION

Apply Soil Stabilizers to Inactive Areas	90.14	30% reduction
Replace Ground Cover in Disturbed Areas	45.07	15% reduction
Water Exposed Surfaces Twice Daily	102.16	34% reduction
Water Exposed Surfaces Three Times Daily	183.29	61% reduction (percent reduction from URBEMIS2007)
Total Dust Mitigation	183.29	Maximum of 61% reduction.

GRADING OFF-ROAD DIESEL EXHAUST EMISSIONS

Equipment Type	No. of Vehicles	Hours of Operation/Day	Emissions in Pounds per Day (Input emission factor for correct year.) ROG	NOx	CO	SO_x	PM10	CO_2	Emission Factors in lbs/hr (2010) ROG	NOx	CO	SOx
Bore/Drill Rigs		8	0.0	0.0	0.0	0.0	0.0	0.0	0.105	1.133	0.515	0.002
Concrete/Industrial Saws		8	0.0	0.0	0.0	0.0	0.0	0.0	0.127	0.657	0.427	0.001
Cranes		8	0.0	0.0	0.0	0.0	0.0	0.0	0.159	1.451	0.543	0.001
Crawler Tractors	2	8	5.0	47.1	20.5	0.0	1.9	4,463.3	0.314	2.943	1.283	0.003
Crushing/Proc. Equipment	0.5	8	5.5	64.3	19.2	0.1	1.9	5,231.0	1.382	16.075	4.801	0.013
Excavators	2	8	4.8	48.1	14.9	0.1	1.7	5,667.5	0.303	3.006	0.932	0.004
Graders	2	8	2.9	29.2	8.3	0.0	1.1	2,845.6	0.180	1.823	0.519	0.002
Off-Highway Tractors		8	0.0	0.0	0.0	0.0	0.0	0.0	0.188	1.705	0.535	0.001
Off-Highway Water Trucks	6	8	12.0	111.3	36.2	0.1	4.2	13,072.0	0.249	2.319	0.754	0.003
Off-Highway Trucks	1	8	2.8	26.5	8.4	0.0	1.0	3,035.2	0.349	3.306	1.049	0.004
Other Construction Equipment		8	0.0	0.0	0.0	0.0	0.0	0.0	0.103	0.279	0.293	0.000
Pavers		8	0.0	0.0	0.0	0.0	0.0	0.0	0.164	0.969	0.522	0.001
Paving Equipment		8	0.0	0.0	0.0	0.0	0.0	0.0	0.016	0.099	0.052	0.000
Rollers	1	8	1.0	2.2	2.5	0.0	0.2	207.9	0.127	0.275	0.317	0.000
Rough Terrain Forklifts		8	0.0	0.0	0.0	0.0	0.0	0.0	0.159	0.356	0.419	0.000
Rubber Tired Dozers	2	8	6.4	57.0	30.7	0.0	2.4	4,683.6	0.400	3.560	1.921	0.003
Rubber Tired Loaders	1	8	1.2	10.9	4.1	0.0	0.5	1,037.1	0.149	1.361	0.517	0.001
Scrapers	3	8	11.0	104.0	45.6	0.1	4.2	9,667.4	0.458	4.334	1.899	0.004
Scraper 2A	3	8	10.4	98.0	43.0	0.1	3.9	9,128.6	0.432	4.083	1.794	0.004
Scraper 2B	3	8	8.0	75.0	30.5	0.1	3.0	6,865.2	0.332	3.127	1.271	0.003
Signal Boards		8	0.0	0.0	0.0	0.0	0.0	0.0	0.332	3.127	1.271	0.003
Skid Steer Loaders		8	0.0	0.0	0.0	0.0	0.0	0.0	0.458	4.334	1.899	0.004
Surfacing Equipment		8	0.0	0.0	0.0	0.0	0.0	0.0	0.205	2.509	0.614	0.003
Tractors/Loaders/Backhoes		8	0.0	0.0	0.0	0.0	0.0	0.0	0.151	0.330	0.389	0.000
Trenchers		8	0.0	0.0	0.0	0.0	0.0	0.0	0.142	1.549	0.404	0.002
Water Pull		8	0.0	0.0	0.0	0.0	0.0	0.0	0.389	3.655	1.614	0.003
Total Pieces of Equipment	26.5	Total Emissions:	71.0	673.5	264.1	0.7	26.1	65,904.4				

CARB, In-Use Construction Equipment ATCM

Altfillisch Contractors, Inc. Fleet Emissions Data

SCAQMD, Off-Road Mobile Source Emission Factors (Scenario Years 2007-2025) SCAB Fleet Average Emission Factors (Diesel), http://www.aqmd.gov/ceqa/handbook/offroad/offroadEF07_25.xls

GRADING WORKER COMMUTE EMISSIONS

Assumes number of workers is 125% of total pieces of grading equipment.

Number of Worker Trips:	33
Number of Construction Worker Trucks/Pick-Ups	8

EMFAC2007 Emission Rates	Emission Factors in lbs/mile (2010)						
	ROG	NOx	CO	SOx	PM10	PM2.5	CO_2
Passenger Vehicles	0.000914	0.000918	0.008263	0.000011	0.000087	0.000055	1.095682

One-Way Trip Length	12.7	Miles (URBEMIS2007 Home-Work Trip Distance in Los Angeles County)
VMT:	1,318.20	

SCAQMD, Highest (Most Conservative) EMFAC2007 (version 2.3) Emission Factors for On-Road Paasenger Vehicles [for] Projects in the SCAQMD (Scenario Years 2007-2026), http://www.aqmd.gov/ceqa/handbook/onroad/onroadEF07_26.xls

Worker Commute Emissions (pounds/day) **Apply emission factors for appropriate year.**:

	ROG	NOx	CO	SOx	PM10	PM2.5	CO_2	
Passenger Vehicles	1.20	1.21	10.89	0.01	0.11	0.07	1,444.33	**Formula: (Round Trip * Number of Passenger Vehicles * Emission Factors fo**
Total Emissions	1.20	1.21	10.89	0.01	0.11	0.07	1,444.33	

TOTAL SUBPHASE GRADING EMISSIONS

	Emissions (Pounds per Day)								
Emissions Source	ROG	NOx	CO	SOx	PM10	PM2.5	DPM	CO_2	
Fugitive Dust	--	--	--	--	300.48	62.50	--	--	
On-Road Diesel Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Off-Road Diesel Exhaust	70.98	673.52	264.10	0.66	26.14	24.04	26.14	65,904.39	
Grading Worker Commute Trips	1.20	1.21	10.89	0.01	0.11	0.07	--	1,444.33	
Mitigation/Reduction									**Mitigation**
Fugitive Dust	--	--	--	--	183.29	38.12		--	Water Exposed Surfaces Three Times Daily
On-Road Diesel Exhaust	0.00	0.00	0.00	0.00	0.00	0.00		0.00	None
Off-Road Diesel Exhaust	0.00	0.00	0.00	n/a	0.00	0.00		0.00	None
Worker Commute Trips	0.00	0.00	0.00	0.00	0.00	0.00		0.00	No Feasible Mitigation Available
Net Emission Totals:	72.19	674.73	274.99	0.67	143.44	48.49	26.14	67,348.72	
SCAQMD Threshold:	75	100	550	150	150	55	--	--	
Exceeds Threshold?	No	Yes	No	No	No	No	--	--	
HRA/LST Emissions	70.98	673.52	264.10	0.66	143.32	48.42	26.14	--	

GRADING PHASE EMISSIONS BASED ON URBEMIS2007

Project Name	**Onion Field**
Subphase	**Grading - Direct**
Quarter	**1, 2(4,5)**

Input Required	
Constant Factor	
Mitigation	
Applied Emission Factor from Appropriate Year	
Intermediate Calculated Values	
Calculated/Totaled Emissions	

Length of Subphase Grading (Work Days):	100
Months of Grading Activity:	5.0
Number of Days/Month	20
Grading Year:	2013
Maximum Daily Acreage Graded in Subphase (ac):	0.00
Amount of On-Site Cut and Fill Per Day (cy)	6,046.00
Amount of Off-Site Cut and Fill Per Day (cy)	0.00

FUGITIVE DUST EMISSIONS

Fugitive Dust Emissions (lbs/day): 713.43

FUGITIVE DUST MITIGATION

Apply Soil Stabilizers to Inactive Areas	214.03	30% reduction
Replace Ground Cover in Disturbed Areas	107.01	15% reduction
Water Exposed Surfaces Twice Daily	242.57	34% reduction
Water Exposed Surfaces Three Times Daily	435.19	61% reduction (percent reduction from URBEMIS2007)
Total Dust Mitigation	435.19	Maximum of 61% reduction.

GRADING OFF-ROAD DIESEL EXHAUST EMISSIONS

	No. of	Hours of	Emissions in Pounds per Day (Input emission factor for correct year.)						Emission Factors in lbs/hr (2013)			
Equipment Type	Vehicles	Operation/Day	ROG	NOx	CO	SO_x	PM10	CO_2	ROG	NOx	CO	SOx
Bore/Drill Rigs		8	0.0	0.0	0.0	0.0	0.0	0.0	0.079	0.812	0.504	0.002
Concrete/Industrial Saws		8	0.0	0.0	0.0	0.0	0.0	0.0	0.100	0.557	0.409	0.001
Cranes		8	0.0	0.0	0.0	0.0	0.0	0.0	0.135	1.193	0.474	0.001
Crawler Tractors	1	8	2.2	19.3	8.2	0.0	0.7	2,231.6	0.274	2.418	1.022	0.003
Crushing/Proc. Equipment	1	8	9.0	106.6	29.4	0.1	3.1	10,462.1	1.127	13.322	3.675	0.013
Excavators	0.5	8	1.1	9.2	3.2	0.0	0.3	1,416.9	0.264	2.302	0.798	0.004
Graders	1	8	1.2	11.6	3.6	0.0	0.4	1,422.8	0.153	1.445	0.453	0.002
Off-Highway Tractors		8	0.0	0.0	0.0	0.0	0.0	0.0	0.164	1.445	0.469	0.001
Off-Highway Water Trucks	2	8	3.5	28.6	10.2	0.0	1.0	4,357.3	0.217	1.787	0.636	0.003
Off-Highway Trucks	1	8	2.4	20.4	7.1	0.0	0.7	3,035.2	0.304	2.550	0.886	0.004
Other Construction Equipment		8	0.0	0.0	0.0	0.0	0.0	0.0	0.075	0.259	0.265	0.000
Pavers		8	0.0	0.0	0.0	0.0	0.0	0.0	0.139	0.836	0.506	0.001
Paving Equipment		8	0.0	0.0	0.0	0.0	0.0	0.0	0.015	0.097	0.052	0.000
Rollers	2	8	1.6	4.1	4.7	0.0	0.4	415.7	0.102	0.258	0.291	0.000
Rough Terrain Forklifts		8	0.0	0.0	0.0	0.0	0.0	0.0	0.118	0.332	0.378	0.000
Rubber Tired Dozers	1	8	2.8	24.3	12.6	0.0	1.0	2,341.8	0.355	3.032	1.571	0.003
Rubber Tired Loaders	1	8	1.0	8.7	3.9	0.0	0.4	1,037.1	0.125	1.094	0.486	0.001
Scrapers	2	8	6.4	57.3	24.3	0.1	2.2	6,444.9	0.400	3.583	1.516	0.004
Scraper 2A	2	8	6.0	54.0	22.9	0.1	2.1	6,085.7	0.378	3.375	1.432	0.004
Scraper 2B	2	8	4.6	41.3	16.5	0.0	1.6	4,576.8	0.289	2.582	1.031	0.003
Signal Boards		8	0.0	0.0	0.0	0.0	0.0	0.0	0.289	2.582	1.031	0.003
Skid Steer Loaders		8	0.0	0.0	0.0	0.0	0.0	0.0	0.400	3.583	1.516	0.004
Surfacing Equipment		8	0.0	0.0	0.0	0.0	0.0	0.0	0.163	1.996	0.535	0.003
Tractors/Loaders/Backhoes		8	0.0	0.0	0.0	0.0	0.0	0.0	0.105	0.306	0.342	0.000
Trenchers		8	0.0	0.0	0.0	0.0	0.0	0.0	0.120	1.166	0.367	0.002
Water Pull		8	0.0	0.0	0.0	0.0	0.0	0.0	0.339	3.019	1.288	0.003
Total Pieces of Equipment	16.5	Total Emissions:	41.9	385.4	146.4	0.4	14.0	43,828.0				

CARB, In-Use Construction Equipment ATCM

Altfillisch Contractors, Inc. Fleet Emissions Data

SCAQMD, Off-Road Mobile Source Emission Factors (Scenario Years 2007-2025) SCAB Fleet Average Emission Factors (Diesel), http://www.aqmd.gov/ceqa/handbook/offroad/offroadEF07_25.xls

GRADING WORKER COMMUTE EMISSIONS

Assumes number of workers is 125% of total pieces of grading equipment.

Number of Worker Trips:	21
Number of Construction Worker Trucks/Pick-Ups	5

EMFAC2007 Emission Rates	Emission Factors in lbs/mile (2013)						
	ROG	NOx	CO	SOx	PM10	PM2.5	CO_2
Passenger Vehicles	0.000746	0.000712	0.007092	0.000011	0.000091	0.000058	1.100874

One-Way Trip Length	12.7	Miles (URBEMIS2007 Home-Work Trip Distance in Los Angeles County)
VMT:	833.40	

SCAQMD, Highest (Most Conservative) EMFAC2007 (version 2.3) Emission Factors for On-Road Paasenger Vehicles [for] Projects in the SCAQMD (Scenario Years 2007-2026), http://www.aqmd.gov/ceqa/handbook/onroad/onroadEF07_26.xls

Worker Commute Emissions (pounds/day) **Apply emission factors for appropriate year.**:

	ROG	NOx	CO	SOx	PM10	PM2.5	CO_2	
Passenger Vehicles	0.62	0.59	5.91	0.01	0.08	0.05	917.47	**Formula: (Round Trip * Number of Passenger Vehicles * Emission Factors fo**
Total Emissions	0.62	0.59	5.91	0.01	0.08	0.05	917.47	

TOTAL SUBPHASE GRADING EMISSIONS

Emissions Source	Emissions (Pounds per Day) ROG	NOx	CO	SOx	PM10	PM2.5	DPM	CO_2	
Fugitive Dust	--	--	--	--	713.43	148.39	--	--	
On-Road Diesel Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Off-Road Diesel Exhaust	41.93	385.43	146.42	0.44	13.98	12.86	13.98	43,828.00	
Grading Worker Commute Trips	0.62	0.59	5.91	0.01	0.08	0.05	--	917.47	
Mitigation/Reduction									**Mitigation**
Fugitive Dust	--	--	--	--	435.19	90.52		--	Water Exposed Surfaces Three Times Daily
On-Road Diesel Exhaust	0.00	0.00	0.00	0.00	0.00	0.00		0.00	None
Off-Road Diesel Exhaust	0.00	0.00	0.00	n/a	0.00	0.00		0.00	None
Worker Commute Trips	0.00	0.00	0.00	0.00	0.00	0.00		0.00	No Feasible Mitigation Available
Net Emission Totals:	42.55	386.02	152.34	0.45	292.29	70.78	13.98	44,745.47	
SCAQMD Threshold:	75	100	550	150	150	55	--	--	
Exceeds Threshold?	No	Yes	No	No	Yes	Yes	--	--	
HRA/LST Emissions	41.93	385.43	146.42	0.44	292.22	70.74	13.98	--	

GRADING PHASE EMISSIONS BASED ON URBEMIS2007

Project Name	**Potrero Village**
Subphase	**Grading - Direct**
Quarter	**1, 2(4,5)**

Input Required	
Constant Factor	
Mitigation	
Applied Emission Factor from Appropriate Year	
Intermediate Calculated Values	
Calculated/Totaled Emissions	

Length of Subphase Grading (Work Days):	100
Months of Grading Activity:	5.0
Number of Days/Month	20
Grading Year:	2012
Maximum Daily Acreage Graded in Subphase (ac):	0.00
Amount of On-Site Cut and Fill Per Day (cy)	1,043.80
Amount of Off-Site Cut and Fill Per Day (cy)	0.00

FUGITIVE DUST EMISSIONS

Fugitive Dust Emissions (lbs/day): 123.17

FUGITIVE DUST MITIGATION

Apply Soil Stabilizers to Inactive Areas	36.95	30% reduction
Replace Ground Cover in Disturbed Areas	18.48	15% reduction
Water Exposed Surfaces Twice Daily	41.88	34% reduction
Water Exposed Surfaces Three Times Daily	75.13	61% reduction (percent reduction from URBEMIS2007)
Total Dust Mitigation	75.13	Maximum of 61% reduction.

GRADING OFF-ROAD DIESEL EXHAUST EMISSIONS

			Emissions in Pounds per Day (Input emission factor for correct year.)						Emission Factors in lbs/hr (2012)			
Equipment Type	No. of Vehicles	Hours of Operation/Day	ROG	NOx	CO	SO_x	PM10	CO_2	ROG	NOx	CO	SOx
Bore/Drill Rigs		8	0.0	0.0	0.0	0.0	0.0	0.0	0.085	0.901	0.507	0.002
Concrete/Industrial Saws		8	0.0	0.0	0.0	0.0	0.0	0.0	0.109	0.591	0.415	0.001
Cranes		8	0.0	0.0	0.0	0.0	0.0	0.0	0.142	1.275	0.495	0.001
Crawler Tractors	1	8	2.3	20.7	8.8	0.0	0.8	2,231.6	0.286	2.582	1.099	0.003
Crushing/Proc. Equipment	1	8	9.7	114.1	32.3	0.1	3.4	10,462.1	1.211	14.265	4.033	0.013
Excavators	0.5	8	1.1	10.0	3.3	0.0	0.4	1,416.9	0.275	2.512	0.832	0.004
Graders	1	8	1.3	12.5	3.8	0.0	0.4	1,422.8	0.161	1.563	0.472	0.002
Off-Highway Tractors		8	0.0	0.0	0.0	0.0	0.0	0.0	0.172	1.528	0.490	0.001
Off-Highway Water Trucks	1	8	1.8	15.6	5.3	0.0	0.6	2,178.7	0.226	1.946	0.666	0.003
Off-Highway Trucks	1	8	2.5	22.2	7.4	0.0	0.8	3,035.2	0.317	2.777	0.927	0.004
Other Construction Equipment		8	0.0	0.0	0.0	0.0	0.0	0.0	0.084	0.271	0.274	0.000
Pavers		8	0.0	0.0	0.0	0.0	0.0	0.0	0.147	0.879	0.511	0.001
Paving Equipment		8	0.0	0.0	0.0	0.0	0.0	0.0	0.015	0.097	0.052	0.000
Rollers	2	8	1.8	4.3	4.8	0.0	0.4	415.7	0.110	0.268	0.299	0.000
Rough Terrain Forklifts		8	0.0	0.0	0.0	0.0	0.0	0.0	0.131	0.345	0.391	0.000
Rubber Tired Dozers	1	8	3.0	25.6	13.4	0.0	1.1	2,341.8	0.370	3.200	1.680	0.003
Rubber Tired Loaders	1	8	1.1	9.4	4.0	0.0	0.4	1,037.1	0.132	1.177	0.495	0.001
Scrapers	2	8	6.7	61.1	26.0	0.1	2.4	6,444.9	0.418	3.819	1.626	0.004
Scraper 2A	2	8	6.3	57.6	24.6	0.1	2.3	6,085.7	0.395	3.597	1.536	0.004
Scraper 2B	2	8	4.8	44.1	17.6	0.0	1.7	4,576.8	0.303	2.753	1.101	0.003
Signal Boards		8	0.0	0.0	0.0	0.0	0.0	0.0	0.303	2.753	1.101	0.003
Skid Steer Loaders		8	0.0	0.0	0.0	0.0	0.0	0.0	0.418	3.819	1.626	0.004
Surfacing Equipment		8	0.0	0.0	0.0	0.0	0.0	0.0	0.175	2.160	0.552	0.003
Tractors/Loaders/Backhoes		8	0.0	0.0	0.0	0.0	0.0	0.0	0.120	0.318	0.356	0.000
Trenchers		8	0.0	0.0	0.0	0.0	0.0	0.0	0.126	1.281	0.375	0.002
Water Pull		8	0.0	0.0	0.0	0.0	0.0	0.0	0.355	3.219	1.383	0.003
Total Pieces of Equipment	15.5	Total Emissions:	42.4	397.1	151.3	0.4	14.6	41,649.3				

CARB, In-Use Construction Equipment ATCM

Altfillisch Contractors, Inc. Fleet Emissions Data

SCAQMD, Off-Road Mobile Source Emission Factors (Scenario Years 2007-2025) SCAB Fleet Average Emission Factors (Diesel), http://www.aqmd.gov/ceqa/handbook/offroad/offroadEF07_25.xls

GRADING WORKER COMMUTE EMISSIONS

Assumes number of workers is 125% of total pieces of grading equipment.

Number of Worker Trips:	19
Number of Construction Worker Trucks/Pick-Ups	2

EMFAC2007 Emission Rates	Emission Factors in lbs/mile (2012)						
	ROG	NOx	CO	SOx	PM10	PM2.5	CO_2
Passenger Vehicles	0.000796	0.000776	0.007655	0.000011	0.000090	0.000057	1.101525

One-Way Trip Length	12.7	Miles (URBEMIS2007 Home-Work Trip Distance in Los Angeles County)
VMT:	602.60	

SCAQMD, Highest (Most Conservative) EMFAC2007 (version 2.3) Emission Factors for On-Road Paasenger Vehicles [for] Projects in the SCAQMD (Scenario Years 2007-2026), http://www.aqmd.gov/ceqa/handbook/onroad/onroadEF07_26.xls

Worker Commute Emissions (pounds/day) **Apply emission factors for appropriate year.**:

	ROG	NOx	CO	SOx	PM10	PM2.5	CO_2	
Passenger Vehicles	0.48	0.47	4.61	0.01	0.05	0.03	663.78	**Formula: (Round Trip * Number of Passenger Vehicles * Emission Factors fo**
Total Emissions	0.48	0.47	4.61	0.01	0.05	0.03	663.78	

TOTAL SUBPHASE GRADING EMISSIONS

Emissions Source	Emissions (Pounds per Day) ROG	NOx	CO	SOx	PM10	PM2.5	DPM	CO_2	
Fugitive Dust	--	--	--	--	123.17	25.62	--	--	
On-Road Diesel Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Off-Road Diesel Exhaust	42.36	397.14	151.31	0.42	14.64	13.47	14.64	41,649.33	
Grading Worker Commute Trips	0.48	0.47	4.61	0.01	0.05	0.03	--	663.78	
Mitigation/Reduction									**Mitigation**
Fugitive Dust	--	--	--	--	75.13	15.63		--	Water Exposed Surfaces Three Times Daily
On-Road Diesel Exhaust	0.00	0.00	0.00	0.00	0.00	0.00		0.00	None
Off-Road Diesel Exhaust	0.00	0.00	0.00	n/a	0.00	0.00		0.00	None
Worker Commute Trips	0.00	0.00	0.00	0.00	0.00	0.00		0.00	No Feasible Mitigation Available
Net Emission Totals:	42.84	397.61	155.92	0.43	62.73	23.49	14.64	42,313.11	
SCAQMD Threshold:	75	100	550	150	150	55	--	--	
Exceeds Threshold?	No	Yes	No	No	No	No	--	--	
HRA/LST Emissions	42.36	397.14	151.31	0.42	62.67	23.46	14.64	--	

GRADING PHASE EMISSIONS BASED ON URBEMIS2007

Project Name	**Valencia Commerce Center**
Subphase	**Grading - Direct**
Quarter (Month)	**2(6), 3, 4**

Length of Subphase Grading (Work Days):	140
Months of Grading Activity:	7.0
Number of Days/Month	20
Grading Year:	2011
Maximum Daily Acreage Graded in Subphase (ac):	0.00
Amount of On-Site Cut and Fill Per Day (cy)	8,550.96
Amount of Off-Site Cut and Fill Per Day (cy)	0.00

Input Required
Constant Factor
Mitigation
Applied Emission Factor from Appropriate Year
Intermediate Calculated Values
Calculated/Totaled Emissions

FUGITIVE DUST EMISSIONS

Fugitive Dust Emissions (lbs/day): 1,009.01

FUGITIVE DUST MITIGATION

Apply Soil Stabilizers to Inactive Areas	302.70	30% reduction
Replace Ground Cover in Disturbed Areas	151.35	15% reduction
Water Exposed Surfaces Twice Daily	343.06	34% reduction
Water Exposed Surfaces Three Times Daily	615.50	61% reduction (percent reduction from URBEMIS2007)
Total Dust Mitigation	615.50	Maximum of 61% reduction.

GRADING OFF-ROAD DIESEL EXHAUST EMISSIONS

	No. of	Hours of	Emissions in Pounds per Day (Input emission factor for correct year.)						Emission Factors in lbs/hr (2011)			
Equipment Type	Vehicles	Operation/Day	ROG	NOx	CO	SO_x	PM10	CO_2	ROG	NOx	CO	SOx
Bore/Drill Rigs		8	0.0	0.0	0.0	0.0	0.0	0.0	0.094	1.008	0.510	0.002
Concrete/Industrial Saws		8	0.0	0.0	0.0	0.0	0.0	0.0	0.118	0.624	0.421	0.001
Cranes		8	0.0	0.0	0.0	0.0	0.0	0.0	0.151	1.362	0.518	0.001
Crawler Tractors	2	8	4.8	44.1	19.0	0.0	1.8	4,463.3	0.300	2.757	1.186	0.003
Crushing/Proc. Equipment	1	8	10.4	121.7	35.3	0.1	3.6	10,462.1	1.299	15.210	4.418	0.013
Excavators	1	8	2.3	22.0	7.0	0.0	0.8	2,833.8	0.288	2.747	0.877	0.004
Graders	2	8	2.7	27.0	7.9	0.0	1.0	2,845.6	0.170	1.689	0.494	0.002
Off-Highway Tractors		8	0.0	0.0	0.0	0.0	0.0	0.0	0.180	1.615	0.511	0.001
Off-Highway Water Trucks	2	8	3.8	34.0	11.3	0.0	1.3	4,357.3	0.237	2.124	0.706	0.003
Off-Highway Trucks	1	8	2.7	24.2	7.9	0.0	0.9	3,035.2	0.332	3.030	0.982	0.004
Other Construction Equipment		8	0.0	0.0	0.0	0.0	0.0	0.0	0.094	0.275	0.283	0.000
Pavers		8	0.0	0.0	0.0	0.0	0.0	0.0	0.155	0.924	0.516	0.001
Paving Equipment		8	0.0	0.0	0.0	0.0	0.0	0.0	0.015	0.098	0.052	0.000
Rollers	2	8	1.9	4.3	4.9	0.0	0.4	415.7	0.119	0.271	0.308	0.000
Rough Terrain Forklifts		8	0.0	0.0	0.0	0.0	0.0	0.0	0.145	0.350	0.405	0.000
Rubber Tired Dozers	1	8	3.1	27.0	14.4	0.0	1.1	2,341.8	0.385	3.376	1.797	0.003
Rubber Tired Loaders	1	8	1.1	10.1	4.0	0.0	0.5	1,037.1	0.140	1.267	0.505	0.001
Scrapers	2	8	7.0	65.1	28.1	0.1	2.6	6,444.9	0.438	4.069	1.754	0.004
Scraper 2A	2	8	6.6	61.3	26.5	0.1	2.4	6,085.7	0.413	3.834	1.657	0.004
Scraper 2B	2	8	5.1	47.0	18.9	0.0	1.9	4,576.8	0.317	2.935	1.181	0.003
Signal Boards		8	0.0	0.0	0.0	0.0	0.0	0.0	0.317	2.935	1.181	0.003
Skid Steer Loaders		8	0.0	0.0	0.0	0.0	0.0	0.0	0.438	4.069	1.754	0.004
Surfacing Equipment		8	0.0	0.0	0.0	0.0	0.0	0.0	0.188	2.332	0.576	0.003
Tractors/Loaders/Backhoes		8	0.0	0.0	0.0	0.0	0.0	0.0	0.135	0.323	0.371	0.000
Trenchers		8	0.0	0.0	0.0	0.0	0.0	0.0	0.134	1.409	0.388	0.002
Water Pull		8	0.0	0.0	0.0	0.0	0.0	0.0	0.371	3.431	1.491	0.003
Total Pieces of Equipment	19	Total Emissions:	51.5	487.9	185.2	0.5	18.2	48,899.3				

CARB, In-Use Construction Equipment ATCM

Altfillisch Contractors, Inc. Fleet Emissions Data

SCAQMD, Off-Road Mobile Source Emission Factors (Scenario Years 2007-2025) SCAB Fleet Average Emission Factors (Diesel), http://www.aqmd.gov/ceqa/handbook/offroad/offroadEF07_25.xls

GRADING WORKER COMMUTE EMISSIONS

Assumes number of workers is 125% of total pieces of grading equipment.

Number of Worker Trips:	24
Number of Construction Worker Trucks/Pick-Ups	6

EMFAC2007 Emission Rates	Emission Factors in lbs/mile (2011)						
	ROG	NOx	CO	SOx	PM10	PM2.5	CO_2
Passenger Vehicles	0.000852	0.000845	0.008263	0.000011	0.000089	0.000057	1.102352

One-Way Trip Length	12.7	Miles (URBEMIS2007 Home-Work Trip Distance in Los Angeles County)
VMT:	969.60	

SCAQMD, Highest (Most Conservative) EMFAC2007 (version 2.3) Emission Factors for On-Road Paasenger Vehicles [for] Projects in the SCAQMD (Scenario Years 2007-2026), http://www.aqmd.gov/ceqa/handbook/onroad/onroadEF07_26.xls

Worker Commute Emissions (pounds/day) **Apply emission factors for appropriate year.**:

	ROG	NOx	CO	SOx	PM10	PM2.5	CO_2	
Passenger Vehicles	0.83	0.82	8.01	0.01	0.09	0.05	1,068.84	**Formula: (Round Trip * Number of Passenger Vehicles * Emission Factors fo**
Total Emissions	0.83	0.82	8.01	0.01	0.09	0.05	1,068.84	

TOTAL SUBPHASE GRADING EMISSIONS

Emissions Source	Emissions (Pounds per Day) ROG	NOx	CO	SOx	PM10	PM2.5	DPM	CO_2	
Fugitive Dust	--	--	--	--	1,009.01	209.87	--	--	
On-Road Diesel Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Off-Road Diesel Exhaust	51.46	487.92	185.21	0.49	18.24	16.78	18.24	48,899.30	
Grading Worker Commute Trips	0.83	0.82	8.01	0.01	0.09	0.05	--	1,068.84	
Mitigation/Reduction									**Mitigation**
Fugitive Dust	--	--	--	--	615.50	128.02		--	Water Exposed Surfaces Three Times Daily
On-Road Diesel Exhaust	0.00	0.00	0.00	0.00	0.00	0.00		0.00	None
Off-Road Diesel Exhaust	0.00	0.00	0.00	n/a	0.00	0.00		0.00	None
Worker Commute Trips	0.00	0.00	0.00	0.00	0.00	0.00		0.00	No Feasible Mitigation Available
Net Emission Totals:	52.28	488.74	193.22	0.50	411.84	98.69	18.24	49,968.14	
SCAQMD Threshold:	75	100	550	150	150	55	--	--	
Exceeds Threshold?	No	Yes	No	No	Yes	Yes	--	--	
HRA/LST Emissions	51.46	487.92	185.21	0.49	411.76	98.63	18.24	--	

GRADING PHASE EMISSIONS BASED ON URBEMIS2007

Project Name	**Valencia Commerce Center**
Subphase	**Grading - Direct**
Quarter (Month)	**1(1)**

Input Required	
Constant Factor	
Mitigation	
Applied Emission Factor from Appropriate Year	
Intermediate Calculated Values	
Calculated/Totaled Emissions	

Length of Subphase Grading (Work Days):	10
Months of Grading Activity:	0.5
Number of Days/Month	20
Grading Year:	2011
Maximum Daily Acreage Graded in Subphase (ac):	0.00
Amount of On-Site Cut and Fill Per Day (cy)	7,773.60
Amount of Off-Site Cut and Fill Per Day (cy)	0.00

FUGITIVE DUST EMISSIONS

Fugitive Dust Emissions (lbs/day): 917.28

FUGITIVE DUST MITIGATION

Apply Soil Stabilizers to Inactive Areas	275.19	30% reduction
Replace Ground Cover in Disturbed Areas	137.59	15% reduction
Water Exposed Surfaces Twice Daily	311.88	34% reduction
Water Exposed Surfaces Three Times Daily	559.54	61% reduction (percent reduction from URBEMIS2007)
Total Dust Mitigation	559.54	Maximum of 61% reduction.

GRADING OFF-ROAD DIESEL EXHAUST EMISSIONS

			Emissions in Pounds per Day (Input emission factor for correct year.)						Emission Factors in lbs/hr (2011)			
Equipment Type	No. of Vehicles	Hours of Operation/Day	ROG	NOx	CO	SO_x	PM10	CO_2	ROG	NOx	CO	SOx
Bore/Drill Rigs		8	0.0	0.0	0.0	0.0	0.0	0.0	0.094	1.008	0.510	0.002
Concrete/Industrial Saws		8	0.0	0.0	0.0	0.0	0.0	0.0	0.118	0.624	0.421	0.001
Cranes		8	0.0	0.0	0.0	0.0	0.0	0.0	0.151	1.362	0.518	0.001
Crawler Tractors	2	8	4.8	44.1	19.0	0.0	1.8	4,463.3	0.300	2.757	1.186	0.003
Crushing/Proc. Equipment	1	8	10.4	121.7	35.3	0.1	3.6	10,462.1	1.299	15.210	4.418	0.013
Excavators	1	8	2.3	22.0	7.0	0.0	0.8	2,833.8	0.288	2.747	0.877	0.004
Graders	2	8	2.7	27.0	7.9	0.0	1.0	2,845.6	0.170	1.689	0.494	0.002
Off-Highway Tractors		8	0.0	0.0	0.0	0.0	0.0	0.0	0.180	1.615	0.511	0.001
Off-Highway Water Trucks	2	8	3.8	34.0	11.3	0.0	1.3	4,357.3	0.237	2.124	0.706	0.003
Off-Highway Trucks	1	8	2.7	24.2	7.9	0.0	0.9	3,035.2	0.332	3.030	0.982	0.004
Other Construction Equipment		8	0.0	0.0	0.0	0.0	0.0	0.0	0.094	0.275	0.283	0.000
Pavers		8	0.0	0.0	0.0	0.0	0.0	0.0	0.155	0.924	0.516	0.001
Paving Equipment		8	0.0	0.0	0.0	0.0	0.0	0.0	0.015	0.098	0.052	0.000
Rollers	2	8	1.9	4.3	4.9	0.0	0.4	415.7	0.119	0.271	0.308	0.000
Rough Terrain Forklifts		8	0.0	0.0	0.0	0.0	0.0	0.0	0.145	0.350	0.405	0.000
Rubber Tired Dozers	1	8	3.1	27.0	14.4	0.0	1.1	2,341.8	0.385	3.376	1.797	0.003
Rubber Tired Loaders	1	8	1.1	10.1	4.0	0.0	0.5	1,037.1	0.140	1.267	0.505	0.001
Scrapers	2	8	7.0	65.1	28.1	0.1	2.6	6,444.9	0.438	4.069	1.754	0.004
Scraper 2A	2	8	6.6	61.3	26.5	0.1	2.4	6,085.7	0.413	3.834	1.657	0.004
Scraper 2B	2	8	5.1	47.0	18.9	0.0	1.9	4,576.8	0.317	2.935	1.181	0.003
Signal Boards		8	0.0	0.0	0.0	0.0	0.0	0.0	0.317	2.935	1.181	0.003
Skid Steer Loaders		8	0.0	0.0	0.0	0.0	0.0	0.0	0.438	4.069	1.754	0.004
Surfacing Equipment		8	0.0	0.0	0.0	0.0	0.0	0.0	0.188	2.332	0.576	0.003
Tractors/Loaders/Backhoes		8	0.0	0.0	0.0	0.0	0.0	0.0	0.135	0.323	0.371	0.000
Trenchers		8	0.0	0.0	0.0	0.0	0.0	0.0	0.134	1.409	0.388	0.002
Water Pull		8	0.0	0.0	0.0	0.0	0.0	0.0	0.371	3.431	1.491	0.003
Total Pieces of Equipment	19	Total Emissions:	51.5	487.9	185.2	0.5	18.2	48,899.3				

CARB, In-Use Construction Equipment ATCM

Altfillisch Contractors, Inc. Fleet Emissions Data

SCAQMD, Off-Road Mobile Source Emission Factors (Scenario Years 2007-2025) SCAB Fleet Average Emission Factors (Diesel), http://www.aqmd.gov/ceqa/handbook/offroad/offroadEF07_25.xls

GRADING WORKER COMMUTE EMISSIONS

Assumes number of workers is 125% of total pieces of grading equipment.

Number of Worker Trips:	24
Number of Construction Worker Trucks/Pick-Ups	6

EMFAC2007 Emission Rates	Emission Factors in lbs/mile (2011)						
	ROG	NOx	CO	SOx	PM10	PM2.5	CO_2
Passenger Vehicles	0.000852	0.000845	0.008263	0.000011	0.000089	0.000057	1.102352

One-Way Trip Length	12.7	Miles (URBEMIS2007 Home-Work Trip Distance in Los Angeles County)
VMT:	969.60	

SCAQMD, Highest (Most Conservative) EMFAC2007 (version 2.3) Emission Factors for On-Road Paasenger Vehicles [for] Projects in the SCAQMD (Scenario Years 2007-2026), http://www.aqmd.gov/ceqa/handbook/onroad/onroadEF07_26.xls

Worker Commute Emissions (pounds/day) **Apply emission factors for appropriate year.**:

	ROG	NOx	CO	SOx	PM10	PM2.5	CO_2	
Passenger Vehicles	0.83	0.82	8.01	0.01	0.09	0.05	1,068.84	**Formula: (Round Trip * Number of Passenger Vehicles * Emission Factors fo**
Total Emissions	0.83	0.82	8.01	0.01	0.09	0.05	1,068.84	

TOTAL SUBPHASE GRADING EMISSIONS

Emissions Source	Emissions (Pounds per Day) ROG	NOx	CO	SOx	PM10	PM2.5	DPM	CO_2	
Fugitive Dust	--	--	--	--	917.28	190.80	--	--	
On-Road Diesel Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Off-Road Diesel Exhaust	51.46	487.92	185.21	0.49	18.24	16.78	18.24	48,899.30	
Grading Worker Commute Trips	0.83	0.82	8.01	0.01	0.09	0.05	--	1,068.84	
Mitigation/Reduction									**Mitigation**
Fugitive Dust	--	--	--	--	559.54	116.39		--	Water Exposed Surfaces Three Times Daily
On-Road Diesel Exhaust	0.00	0.00	0.00	0.00	0.00	0.00		0.00	None
Off-Road Diesel Exhaust	0.00	0.00	0.00	n/a	0.00	0.00		0.00	None
Worker Commute Trips	0.00	0.00	0.00	0.00	0.00	0.00		0.00	No Feasible Mitigation Available
Net Emission Totals:	52.28	488.74	193.22	0.50	376.07	91.25	18.24	49,968.14	
SCAQMD Threshold:	75	100	550	150	150	55	--	--	
Exceeds Threshold?	No	Yes	No	No	Yes	Yes	--	--	
HRA/LST Emissions	51.46	487.92	185.21	0.49	375.98	91.19	18.24	--	

GRADING PHASE EMISSIONS BASED ON URBEMIS2007

Project Name	**Water Reclamation Plant**
Subphase	**Grading - Direct**
Quarter	**1 (1)**

Input Required	
Constant Factor	
Mitigation	
Applied Emission Factor from Appropriate Year	
Intermediate Calculated Values	
Calculated/Totaled Emissions	

Length of Subphase Grading (Work Days):	40
Months of Grading Activity:	2.0
Number of Days/Month	20
Grading Year:	2009
Maximum Daily Acreage Graded in Subphase (ac):	0.00
Amount of On-Site Cut and Fill Per Day (cy)	5,200.00
Amount of Off-Site Cut and Fill Per Day (cy)	0.00

FUGITIVE DUST EMISSIONS

Fugitive Dust Emissions (lbs/day): 613.60

FUGITIVE DUST MITIGATION

Apply Soil Stabilizers to Inactive Areas	184.08	30% reduction
Replace Ground Cover in Disturbed Areas	92.04	15% reduction
Water Exposed Surfaces Twice Daily	208.62	34% reduction
Water Exposed Surfaces Three Times Daily	374.30	61% reduction (percent reduction from URBEMIS2007)
Total Dust Mitigation	374.30	Maximum of 61% reduction.

GRADING OFF-ROAD DIESEL EXHAUST EMISSIONS

			Emissions in Pounds per Day (Input emission factor for correct year.)						Emission Factors in lbs/hr (2009)			
Equipment Type	No. of Vehicles	Hours of Operation/Day	ROG	NOx	CO	SO_x	PM10	CO_2	ROG	NOx	CO	SOx
Bore/Drill Rigs		8	0.0	0.0	0.0	0.0	0.0	0.0	0.116	1.229	0.520	0.002
Concrete/Industrial Saws		8	0.0	0.0	0.0	0.0	0.0	0.0	0.136	0.691	0.434	0.001
Cranes		8	0.0	0.0	0.0	0.0	0.0	0.0	0.168	1.529	0.571	0.001
Crawler Tractors	1	8	2.6	24.8	11.1	0.0	1.0	2,231.6	0.327	3.103	1.391	0.003
Crushing/Proc. Equipment	1	8	11.7	132.8	41.4	0.1	4.0	10,462.1	1.458	16.606	5.176	0.013
Excavators	0.5	8	1.3	12.9	4.0	0.0	0.5	1,416.9	0.316	3.220	0.998	0.004
Graders	1	8	1.5	15.5	4.4	0.0	0.6	1,422.8	0.190	1.937	0.548	0.002
Off-Highway Tractors		8	0.0	0.0	0.0	0.0	0.0	0.0	0.196	1.785	0.559	0.001
Off-Highway Water Trucks	2	8	4.2	39.7	13.0	0.0	1.5	4,357.3	0.260	2.482	0.810	0.003
Off-Highway Trucks	1	8	2.9	28.3	9.0	0.0	1.0	3,035.2	0.364	3.539	1.127	0.004
Other Construction Equipment		8	0.0	0.0	0.0	0.0	0.0	0.0	0.114	0.283	0.303	0.000
Pavers		8	0.0	0.0	0.0	0.0	0.0	0.0	0.173	1.016	0.529	0.001
Paving Equipment		8	0.0	0.0	0.0	0.0	0.0	0.0	0.016	0.102	0.052	0.000
Rollers	2	8	2.2	4.5	5.2	0.0	0.5	415.7	0.135	0.279	0.326	0.000
Rough Terrain Forklifts		8	0.0	0.0	0.0	0.0	0.0	0.0	0.173	0.362	0.433	0.000
Rubber Tired Dozers	1	8	3.3	29.8	16.4	0.0	1.3	2,341.8	0.415	3.721	2.053	0.003
Rubber Tired Loaders	1	8	1.3	11.6	4.2	0.0	0.5	1,037.1	0.157	1.448	0.530	0.001
Scrapers	2	8	7.6	73.0	33.0	0.1	2.9	6,444.9	0.478	4.564	2.061	0.004
Scraper 2A	2	8	7.2	68.8	31.1	0.1	2.8	6,085.7	0.451	4.300	1.947	0.004
Scraper 2B	2	8	5.6	52.7	22.0	0.0	2.1	4,576.8	0.347	3.294	1.372	0.003
Signal Boards		8	0.0	0.0	0.0	0.0	0.0	0.0	0.347	3.294	1.372	0.003
Skid Steer Loaders		8	0.0	0.0	0.0	0.0	0.0	0.0	0.478	4.564	2.061	0.004
Surfacing Equipment		8	0.0	0.0	0.0	0.0	0.0	0.0	0.220	2.646	0.652	0.003
Tractors/Loaders/Backhoes		8	0.0	0.0	0.0	0.0	0.0	0.0	0.167	0.337	0.408	0.000
Trenchers		8	0.0	0.0	0.0	0.0	0.0	0.0	0.150	1.666	0.423	0.002
Water Pull		8	0.0	0.0	0.0	0.0	0.0	0.0	0.405	3.849	1.752	0.003
Total Pieces of Equipment	16.5	Total Emissions:	51.3	494.4	194.8	0.4	18.7	43,828.0				

CARB, In-Use Construction Equipment ATCM

Altfillisch Contractors, Inc. Fleet Emissions Data

SCAQMD, Off-Road Mobile Source Emission Factors (Scenario Years 2007-2025) SCAB Fleet Average Emission Factors (Diesel), http://www.aqmd.gov/ceqa/handbook/offroad/offroadEF07_25.xls

GRADING WORKER COMMUTE EMISSIONS

Assumes number of workers is 125% of total pieces of grading equipment.

Number of Worker Trips:	21
Number of Construction Worker Trucks/Pick-Ups	5

EMFAC2007 Emission Rates	Emission Factors in lbs/mile (2009)						
	ROG	NOx	CO	SOx	PM10	PM2.5	CO_2
Passenger Vehicles	0.000992	0.001005	0.009686	0.000011	0.000086	0.000054	1.097554

One-Way Trip Length	12.7	Miles (URBEMIS2007 Home-Work Trip Distance in Los Angeles County)
VMT:	833.40	

SCAQMD, Highest (Most Conservative) EMFAC2007 (version 2.3) Emission Factors for On-Road Paasenger Vehicles [for] Projects in the SCAQMD (Scenario Years 2007-2026), http://www.aqmd.gov/ceqa/handbook/onroad/onroadEF07_26.xls

Worker Commute Emissions (pounds/day) **Apply emission factors for appropriate year.**:

	ROG	NOx	CO	SOx	PM10	PM2.5	CO_2	
Passenger Vehicles	0.83	0.84	8.07	0.01	0.07	0.04	914.70	**Formula: (Round Trip * Number of Passenger Vehicles * Emission Factors fo**
Total Emissions	0.83	0.84	8.07	0.01	0.07	0.04	914.70	

TOTAL SUBPHASE GRADING EMISSIONS

Emissions Source	Emissions (Pounds per Day) ROG	NOx	CO	SOx	PM10	PM2.5	DPM	CO_2	
Fugitive Dust	--	--	--	--	613.60	127.63	--	--	
On-Road Diesel Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Off-Road Diesel Exhaust	51.30	494.41	194.85	0.44	18.69	17.20	18.69	43,828.00	
Grading Worker Commute Trips	0.83	0.84	8.07	0.01	0.07	0.04	--	914.70	
Mitigation/Reduction									**Mitigation**
Fugitive Dust	--	--	--	--	374.30	77.85		--	Water Exposed Surfaces Three Times Daily
On-Road Diesel Exhaust	0.00	0.00	0.00	0.00	0.00	0.00		0.00	None
Off-Road Diesel Exhaust	0.00	0.00	0.00	n/a	0.00	0.00		0.00	None
Worker Commute Trips	0.00	0.00	0.00	0.00	0.00	0.00		0.00	No Feasible Mitigation Available
Net Emission Totals:	52.13	495.24638	202.92	0.45	258.07	67.02	18.69	44,742.70	
SCAQMD Threshold:	75	100	550	150	150	55	--	--	
Exceeds Threshold?	No	Yes	No	No	Yes	Yes	--	--	
HRA/LST Emissions	51.30	494.41	194.85	0.44	257.99	66.97	18.69	--	