

## **APPENDIX D**

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### **AIR QUALITY MODELING DATA AND FEE WORKSHEET**

**SMAQMD CO SCREENING ANALYSIS WORKSHEET**

	EXISTING ISOPLETH CONC.	PREDICTED CONCENTRATION (ppm)*	
		PHASE I (YR 2009)	PHASE I & II (YR2012)
BACKGROUND CONCENTRATIONS 1-HR	6	3.06	2.64
BACKGROUND CONCENTRATIONS 8-HR	3	1.53	1.32
ESTIMATED DAILY TRIPS - PHASE I:**	11,178.85		
ESTIMATED DAILY TRIPS - PHASE II:**	24,352.06		
TOTAL DAILY TRIPS - PHASE I & II:	35,530.91		
CALCULATED PEAK-HOUR TRIPS - PHASE I:	1,117.89		
CALCULATED PEAK-HOUR TRIPS - PHASE I & II:	3,553.09		
PREDICTED CO CONCENTRATION CONTRIBUTION:**			
	1-HR	3.1	9.2
	8-HR	2.17	6.5
TOTAL PREDICTED CONCENTRATION:			
	1-HR	6.16	11.84
	8-HR	3.7	7.8
CALIFORNIA AMBIENT AIR QUALITY STANDARDS (CAAQS):			
	1-HR	20	
	8-HR	9.0	
PREDICTED CONCENTRATIONS EXCEED CAAQS?			
	1-HR	NO	NO
	8-HR	NO	NO

\*\* Project's contribution to local CO concentrations based on a trend analysis of SMAQMD-recommended contribution values (see attached worksheet).

\* Daily trip generation rates were calculated based on proposed land uses identified in the Project development phasing plan and the trip generation rates for corresponding land uses obtained from the traffic analysis prepared for this project.

PREDICTED PROJECT CO CONTRIBUTION WORKSHEET

	PEAK HOUR VOLUME	PPM CO	
		1-HOUR	8-HOUR
SMAQMD-RECOMMENDED VALUES	100	0.4	0.28
	200	0.7	0.49
	300	1.1	0.77
	500	1.7	1.19
	1000	3.1	2.17
	2000	5.6	3.92
	3000	7.7	5.39
TREND VALUES	3400	8.9	6.2
	3500	9.2	6.5
	3600	9.5	6.7
	3700	9.8	6.9
	3800	10.1	7.1
*Trend values are approximate, based on trend analysis of SMAQMD-recommended contribution values.			

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**URBEMIS 8.7 MODELING OUTPUT FOR SITE PREPARATION OF ENTIRE  
SITE AND OPERATION OF ALL PROPOSED USES**

URBEMIS MODELING OUTPUT FILE

INITIAL SITE PREPARATION  
OPERATIONAL EMISSIONS - BUILDOUT

URBEMIS 2002 For Windows 8.7.0

file Name: H:\Projects2\_6\Greenbriar\GradingandOperation1\_2.urb  
project Name: Greenbriar Grading of Entire Site and Operational Emissions  
project Location: Lower Sacramento Valley Air Basin  
on-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT  
(Pounds/Day - Summer)

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
*** 2007 *** TOTALS (lbs/day,unmitigated)	94.07	638.70	762.74	0.01	1,468.43	25.87	1,442.56

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	184.89	49.15	113.77	0.58	0.38

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	233.43	216.87	2,201.43	1.42	240.73

SUM OF AREA AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	418.32	266.02	2,315.19	2.00	241.12

URBEMIS 2002 For Windows 8.7.0

File Name: H:\Projects2\_6\Greenbriar\GradingandOperation1\_2.urb  
Project Name: Greenbriar Grading of Entire Site and Operational Emissions  
Project Location: Lower Sacramento Valley Air Basin  
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT  
(Pounds/Day - Winter)

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
*** 2007 *** TOTALS (lbs/day,unmitigated)	94.07	638.70	762.74	0.01	1,468.43	25.87	1,442.56

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	2,144.87	115.00	3,628.41	8.57	537.48

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	237.38	323.26	2,642.72	1.41	240.73

SUM OF AREA AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	2,382.25	438.27	6,271.13	9.98	778.22

File Name: H:\Projects2\_6\Greenbriar\GradingandOperation1\_2.urb  
 Project Name: Greenbriar Grading of Entire Site and Operational Emissions  
 Project Location: Lower Sacramento Valley Air Basin  
 On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT  
 (Pounds/Day - Winter)

Construction Start Month and Year: June, 2007  
 Construction Duration: 60  
 Total Land Use Area to be Developed: 577 acres  
 Maximum Acreage Disturbed Per Day: 144.25 acres  
 Single Family Units: 2886 Multi-Family Units: 587  
 Retail/Office/Institutional/Industrial Square Footage: 732312

CONSTRUCTION EMISSION ESTIMATES UNMITIGATED (lbs/day)

Source	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
*** 2007***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	1,442.50	-	1,442.50
Off-Road Diesel	92.89	637.27	737.07	-	25.83	25.83	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	1.18	1.43	25.67	0.01	0.10	0.04	0.06
Maximum lbs/day	94.07	638.70	762.74	0.01	1,468.43	25.87	1,442.56
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Bldg Const Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Max lbs/day all phases	94.07	638.70	762.74	0.01	1,468.43	25.87	1,442.56

Phase 1 - Demolition Assumptions: Phase Turned OFF

Phase 2 - Site Grading Assumptions  
 Start Month/Year for Phase 2: Jun '07  
 Phase 2 Duration: 6.6 months  
 On-Road Truck Travel (VMT): 0  
 Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
15	Crawler Tractors	143	0.575	8.0
15	Graders	174	0.575	8.0
15	Off Highway Tractors	255	0.410	8.0
15	Rubber Tired Loaders	165	0.465	8.0

Phase 3 - Building Construction Assumptions  
 Start Month/Year for Phase 3: Dec '07  
 Phase 3 Duration: 53.4 months  
 SubPhase Building Turned OFF  
 SubPhase Architectural Coatings Turned OFF  
 SubPhase Asphalt Turned OFF

02/10/2006 2:10 PM

AREA SOURCE EMISSION ESTIMATES (Winter Pounds per Day, Unmitigated)						
Source	ROG	NOx	CO	SO2	PM10	
Natural Gas	3.65	47.67	23.22	0	0.09	
Hearth	1,971.31	67.34	3,605.19	8.57	537.39	
Landscaping - No winter emissions						
Consumer Prdcts	169.91	-	-	-	-	
Architectural Coatings	0.00	-	-	-	-	
TOTALS (lbs/day, unmitigated)	2,144.87	115.00	3,628.41	8.57	537.48	

## UNMITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	SO2	PM10
Single family housing low	115.03	171.78	1,356.52	0.78	133.45
Apartments/Senior/Mixed-U	23.39	34.93	275.80	0.16	27.13
Elementary school	8.58	11.23	92.58	0.05	8.19
park/water/openspace/oth	0.00	0.00	0.00	0.00	0.00
Community/Village Commerc	90.39	105.33	917.82	0.42	71.96
<b>TOTAL EMISSIONS (lbs/day)</b>	<b>237.38</b>	<b>323.26</b>	<b>2,642.72</b>	<b>1.41</b>	<b>240.73</b>

Includes correction for passby trips.

Includes the following double counting adjustment for internal trips:

Residential trips: 11.13 % reduction. Nonresidential trips: 11.32 % reduction.

## OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2010 Temperature (F): 40 Season: Winter

EMFAC Version: EMFAC2002 (9/2002)

## Summary of Land Uses:

Unit Type	Acreage	Trip Rate	No. Units	Total Trips
Single family housing low	226.10	5.97 trips/dwelling unit	2,886.00	17,241.31
Apartments/Senior/Mixed-U	29.90	5.97 trips/dwelling unit	587.00	3,505.45
Elementary school		3.54 trips/1000 sq. ft.	444.31	1,572.89
park/water/openspace/oth		0.00 trips/acres	283.40	0.00
Community/Village Commerc		65.28 trips/1000 sq. ft.	288.00	18,799.37
Sum of Total Trips				41,119.02
Total Vehicle Miles Traveled				158,491.01

## Vehicle Assumptions:

## Fleet Mix:

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	54.70	1.10	98.70	0.20
Light Truck < 3,750 lbs	15.20	2.00	96.00	2.00
Light Truck 3,751- 5,750	16.20	1.20	98.10	0.70
Med Truck 5,751- 8,500	7.30	1.40	95.90	2.70
Lite-Heavy 8,501-10,000	1.10	0.00	81.80	18.20
Lite-Heavy 10,001-14,000	0.30	0.00	66.70	33.30
Med-Heavy 14,001-33,000	1.00	0.00	20.00	80.00
heavy-Heavy 33,001-60,000	0.90	0.00	11.10	88.90
Line Haul > 60,000 lbs	0.00	0.00	0.00	100.00
Urban Bus	0.20	0.00	50.00	50.00
Motorcycle	1.60	68.80	31.20	0.00
School Bus	0.10	0.00	0.00	100.00
Motor Home	1.40	7.10	85.70	7.20

## Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	9.7	3.8	4.6	7.8	4.5	4.5
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip Speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	27.3	21.2	51.5			
% of Trips - Commercial (by land use)						
Elementary school				20.0	10.0	70.0
park/water/openspace/other				0.0	0.0	100.0
Community/Village Commercial				2.0	1.0	97.0

URBEMIS 2002 For Windows 8.7.0

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 On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT  
 (Pounds/Day ~ Summer)

Construction Start Month and Year: June, 2007  
 Construction Duration: 60  
 Total Land Use Area to be Developed: 577 acres  
 Maximum Acreage Disturbed Per Day: 144.25 acres  
 Single Family Units: 2886 Multi-Family Units: 587  
 Retail/Office/Institutional/Industrial Square Footage: 732312

CONSTRUCTION EMISSION ESTIMATES UNMITIGATED (lbs/day)

Source	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
*** 2007***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	1,442.50	-	1,442.50
Off-Road Diesel	92.89	637.27	737.07	-	25.83	25.83	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	1.18	1.43	25.67	0.01	0.10	0.04	0.06
Maximum lbs/day	94.07	638.70	762.74	0.01	1,468.43	25.87	1,442.56
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Bldg Const Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Max lbs/day all phases	94.07	638.70	762.74	0.01	1,468.43	25.87	1,442.56

Phase 1 - Demolition Assumptions: Phase Turned OFF

Phase 2 - Site Grading Assumptions  
 Start Month/Year for Phase 2: Jun '07  
 Phase 2 Duration: 6.6 months  
 On-Road Truck Travel (VMT): 0  
 Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
15	Crawler Tractors	143	0.575	8.0
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Phase 3 - Building Construction Assumptions  
 Start Month/Year for Phase 3: Dec '07  
 Phase 3 Duration: 53.4 months  
 SubPhase Building Turned OFF  
 SubPhase Architectural Coatings Turned OFF  
 SubPhase Asphalt Turned OFF

AREA SOURCE EMISSION ESTIMATES (Summer Pounds per Day, Unmitigated)					
Source	ROG	NOx	CO	SO2	PM10
Natural Gas	3.65	47.67	23.22	0	0.09
Hearth - No summer emissions					
Landscaping	11.33	1.48	90.55	0.58	0.29
Consumer Prdcts	169.91	-	-	-	-
Architectural Coatings	0.00	-	-	-	-
TOTALS(lbs/day,unmitigated)	184.89	49.15	113.77	0.58	0.38

UNMITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	SO2	PM10
Single family housing low	123.48	114.55	1,189.15	0.79	133.45
Apartments/Senior/Mixed-U	25.11	23.29	241.78	0.16	27.13
Elementary school	11.50	7.55	75.81	0.05	8.19
park/water/openspace/oth	3.15	0.00	0.00	0.00	0.00
Community/Village Commerc	70.20	71.48	694.69	0.43	71.96
<b>TOTAL EMISSIONS (lbs/day)</b>	<b>233.43</b>	<b>216.87</b>	<b>2,201.43</b>	<b>1.42</b>	<b>240.73</b>

Includes correction for passby trips.

Includes the following double counting adjustment for internal trips:

Residential trips: 11.13 % reduction. Nonresidential trips: 11.32 % reduction.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2010 Temperature (F): 85 Season: Summer

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Acreage	Trip Rate	No. Units	Total Trips
Single family housing low	226.10	5.97 trips/dwelling unit	2,886.00	17,241.31
Apartments/Senior/Mixed-U	29.90	5.97 trips/dwelling unit	587.00	3,505.45
Elementary school		3.54 trips/1000 sq. ft.	444.31	1,572.89
park/water/openspace/oth		0.00 trips/acres	283.40	0.00
Community/Village Commerc		65.28 trips/1000 sq. ft.	288.00	18,799.37
Sum of Total Trips				41,119.02
Total Vehicle Miles Traveled				158,491.01

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	54.70	1.10	98.70	0.20
Light Truck < 3,750 lbs	15.20	2.00	96.00	2.00
Light Truck 3,751- 5,750	16.20	1.20	98.10	0.70
Med Truck 5,751- 8,500	7.30	1.40	95.90	2.70
Lite-Heavy 8,501-10,000	1.10	0.00	81.80	18.20
Lite-Heavy 10,001-14,000	0.30	0.00	66.70	33.30
Med-Heavy 14,001-33,000	1.00	0.00	20.00	80.00
Heavy-Heavy 33,001-60,000	0.90	0.00	11.10	88.90
Line Haul > 60,000 lbs	0.00	0.00	0.00	100.00
Urban Bus	0.20	0.00	50.00	50.00
Motorcycle	1.60	68.80	31.20	0.00
School Bus	0.10	0.00	0.00	100.00
Motor Home	1.40	7.10	85.70	7.20

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	9.7	3.8	4.6	7.8	4.5	4.5
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip Speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	27.3	21.2	51.5			
% of Trips - Commercial (by land use)						
Elementary school				20.0	10.0	70.0
park/water/openspace/other				0.0	0.0	100.0
Community/Village Commercial				2.0	1.0	97.0

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**URBEMIS 8.7 MODELING OUTPUT FOR BUILDING OF PROPOSED USES  
NORTH OF MEISTER**

URBEMIS 2002 For Windows 8.7.0

File Name: C:\Program Files\URBEMIS 2002 Version 8.7\Projects2k2\greenbriar\_buildingconstructi  
 Project Name: Greenbriar Grading of Entire Site and Operational Emissions  
 Project Location: Lower Sacramento Valley Air Basin  
 On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT  
 (Pounds/Day - Summer)

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
*** 2007 ***							
TOTALS (lbs/day,unmitigated)	54.37	265.66	736.15	0.27	12.65	11.38	1.27
*** 2008 ***							
TOTALS (lbs/day,unmitigated)	53.68	253.78	737.02	0.27	11.72	10.45	1.27
*** 2009 ***							
TOTALS (lbs/day,unmitigated)	52.96	241.54	737.71	0.27	11.09	9.82	1.27
*** 2010 ***							
TOTALS (lbs/day,unmitigated)	78.65	356.55	897.80	0.30	13.73	12.42	1.31

URBEMIS 2002 For Windows 8.7.0

File Name: C:\Program Files\URBEMIS 2002 Version 8.7\Projects2k2\greenbriar\_buildingconstruct  
 Project Name: Greenbriar Grading of Entire Site and Operational Emissions  
 Project Location: Lower Sacramento Valley Air Basin  
 On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT  
 (Pounds/Day - Winter)

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
*** 2007 *** TOTALS (lbs/day,unmitigated)	54.37	265.66	736.15	0.27	12.65	11.38	1.27
*** 2008 *** TOTALS (lbs/day,unmitigated)	53.68	253.78	737.02	0.27	11.72	10.45	1.27
*** 2009 *** TOTALS (lbs/day,unmitigated)	52.96	241.54	737.71	0.27	11.09	9.82	1.27
*** 2010 *** TOTALS (lbs/day,unmitigated)	78.65	356.55	897.80	0.30	13.73	12.42	1.31

URBEMIS 2002 For Windows 8.7.0

File Name: C:\Program Files\URBEMIS 2002 Version 8.7\Projects2k2\greenbriar\_buildingconstruction  
 Project Name: Greenbriar Grading of Entire Site and Operational Emissions  
 Project Location: Lower Sacramento Valley Air Basin  
 On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT  
(Pounds/Day - Winter)

Construction Start Month and Year: June, 2007  
 Construction Duration: 36  
 Total Land Use Area to be Developed: 302.77 acres  
 Maximum Acreage Disturbed Per Day: 75.7 acres  
 Single Family Units: 1689 Multi-Family Units: 307  
 Retail/Office/Institutional/Industrial Square Footage: 288000

CONSTRUCTION EMISSION ESTIMATES UNMITIGATED (lbs/day)

Source	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
*** 2007***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	31.14	237.57	230.41	-	10.59	10.59	0.00
Bldg Const Worker Trips	23.24	28.08	505.74	0.27	2.06	0.79	1.27
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	54.37	265.66	736.15	0.27	12.65	11.38	1.27
Max lbs/day all phases	54.37	265.66	736.15	0.27	12.65	11.38	1.27
*** 2008***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	31.14	226.05	238.82	-	9.65	9.65	0.00
Bldg Const Worker Trips	22.54	27.72	498.20	0.27	2.06	0.79	1.27
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	53.68	253.78	737.02	0.27	11.72	10.45	1.27
Max lbs/day all phases	53.68	253.78	737.02	0.27	11.72	10.45	1.27
*** 2009***							

Phase 1 - Demolition Emissions

Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Phase 2 - Site Grading Emissions

Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Phase 3 - Building Construction

Bldg Const Off-Road Diesel	31.14	214.22	247.54	-	9.03	9.03	0.00
Bldg Const Worker Trips	21.83	27.32	490.17	0.27	2.06	0.79	1.27
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	52.96	241.54	737.71	0.27	11.09	9.82	1.27
Max lbs/day all phases	52.96	241.54	737.71	0.27	11.09	9.82	1.27

\*\*\* 2010\*\*\*

Phase 1 - Demolition Emissions

Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Phase 2 - Site Grading Emissions

Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Phase 3 - Building Construction

Bldg Const Off-Road Diesel	31.14	202.70	255.94	-	8.10	8.10	0.00
Bldg Const Worker Trips	21.16	26.94	482.58	0.27	2.06	0.79	1.27
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	6.06	-	-	-	-	-	-
Asphalt Off-Road Diesel	20.13	116.73	171.06	-	3.22	3.22	0.00
Asphalt On-Road Diesel	0.75	11.42	2.76	0.03	0.33	0.31	0.02
Asphalt Worker Trips	0.09	0.04	1.12	0.00	0.02	0.00	0.02
Maximum lbs/day	78.65	356.55	897.80	0.30	13.73	12.42	1.31
Max lbs/day all phases	78.65	356.55	897.80	0.30	13.73	12.42	1.31

Phase 2 - Site Grading Assumptions: Phase Turned OFF

Phase 3 - Building Construction Assumptions

Start Month/Year for Phase 3: Jun '07

Phase 3 Duration: 36 months

Start Month/Year for SubPhase Building: Jun '07

SubPhase Building Duration: 36 months

Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
15	Other Equipment	190	0.620	8.0

SubPhase Architectural Coatings Turned OFF

Start Month/Year for SubPhase Asphalt: Apr '10

SubPhase Asphalt Duration: 1.8 months

Acres to be Paved: 91.6

Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
9	Pavers	132	0.590	8.0
9	Rollers	114	0.430	8.0



URBEMIS 2002 For Windows 8.7.0

File Name: C:\Program Files\URBEMIS 2002 Version 8.7\Projects2k2\greenbriar\_buildingconstructio  
 Project Name: Greenbriar Grading of Entire Site and Operational Emissions  
 Project Location: Lower Sacramento Valley Air Basin  
 On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT  
(Pounds/Day - Summer)

Construction Start Month and Year: June, 2007  
 Construction Duration: 36  
 Total Land Use Area to be Developed: 302.77 acres  
 Maximum Acreage Disturbed Per Day: 75.7 acres  
 Single Family Units: 1689 Multi-Family Units: 307  
 Retail/Office/Institutional/Industrial Square Footage: 288000

CONSTRUCTION EMISSION ESTIMATES UNMITIGATED (lbs/day)

Source	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
*** 2007***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	31.14	237.57	230.41	-	10.59	10.59	0.00
Bldg Const Worker Trips	23.24	28.08	505.74	0.27	2.06	0.79	1.27
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	54.37	265.66	736.15	0.27	12.65	11.38	1.27
Max lbs/day all phases	54.37	265.66	736.15	0.27	12.65	11.38	1.27
*** 2008***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	31.14	226.05	238.82	-	9.65	9.65	0.00
Bldg Const Worker Trips	22.54	27.72	498.20	0.27	2.06	0.79	1.27
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	53.68	253.78	737.02	0.27	11.72	10.45	1.27
Max lbs/day all phases	53.68	253.78	737.02	0.27	11.72	10.45	1.27
*** 2009***							

Phase 1 - Demolition Emissions

Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Phase 2 - Site Grading Emissions

Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Phase 3 - Building Construction

Bldg Const Off-Road Diesel	31.14	214.22	247.54	-	9.03	9.03	0.00
Bldg Const Worker Trips	21.83	27.32	490.17	0.27	2.06	0.79	1.27
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	52.96	241.54	737.71	0.27	11.09	9.82	1.27
Max lbs/day all phases	52.96	241.54	737.71	0.27	11.09	9.82	1.27

\*\*\* 2010\*\*\*

Phase 1 - Demolition Emissions

Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Phase 2 - Site Grading Emissions

Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Phase 3 - Building Construction

Bldg Const Off-Road Diesel	31.14	202.70	255.94	-	8.10	8.10	0.00
Bldg Const Worker Trips	21.16	26.94	482.58	0.27	2.06	0.79	1.27
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	6.06	-	-	-	-	-	-
Asphalt Off-Road Diesel	20.13	116.73	171.06	-	3.22	3.22	0.00
Asphalt On-Road Diesel	0.75	11.42	2.76	0.03	0.33	0.31	0.02
Asphalt Worker Trips	0.09	0.04	1.12	0.00	0.02	0.00	0.02
Maximum lbs/day	78.65	356.55	897.80	0.30	13.73	12.42	1.31
Max lbs/day all phases	78.65	356.55	897.80	0.30	13.73	12.42	1.31

Phase 2 - Site Grading Assumptions: Phase Turned OFF

Phase 3 - Building Construction Assumptions

Start Month/Year for Phase 3: Jun '07  
 Phase 3 Duration: 36 months  
 Start Month/Year for SubPhase Building: Jun '07  
 SubPhase Building Duration: 36 months

Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
15	Other Equipment	190	0.620	8.0

SubPhase Architectural Coatings Turned OFF  
 Start Month/Year for SubPhase Asphalt: Apr '10  
 SubPhase Asphalt Duration: 1.8 months

Acres to be Paved: 91.6  
 Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
9	Pavers	132	0.590	8.0
9	Rollers	114	0.430	8.0



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**URBEMIS 8.7 MODELING OUTPUT FOR BUILDING OF PROPOSED USES  
SOUTH OF MEISTER**

URBEMIS 2002 For Windows 8.7.0

File Name: C:\Program Files\URBEMIS 2002 Version 8.7\Projects2k2\greenbriar\_buildingconstruction  
 Project Name: Greenbriar Building Construction of Phase 2  
 Project Location: Lower Sacramento Valley Air Basin  
 On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT  
 (Pounds/Day - Summer)

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
*** 2009 *** TOTALS (lbs/day, unmitigated)	42.95	210.88	556.31	0.21	9.71	8.72	0.99
*** 2010 *** TOTALS (lbs/day, unmitigated)	42.43	200.21	557.96	0.21	8.87	7.88	0.99
*** 2011 *** TOTALS (lbs/day, unmitigated)	42.43	200.21	557.96	0.21	8.87	7.88	0.99
*** 2012 *** TOTALS (lbs/day, unmitigated)	<del>62.27</del>	<del>295.98</del>	677.94	0.24	11.56	10.54	1.02

62.8 296.96

URBEMIS 2002 For Windows 8.7.0

file Name: C:\Program Files\URBEMIS 2002 Version 8.7\Projects2k2\greenbriar\_buildingconstructi  
project Name: Greenbriar Building Construction of Phase 2  
project Location: Lower Sacramento Valley Air Basin  
n-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT  
(Pounds/Day - Winter)

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
*** 2009 ***							
TOTALS (lbs/day,unmitigated)	42.95	210.88	556.31	0.21	9.71	8.72	0.99
*** 2010 ***							
TOTALS (lbs/day,unmitigated)	42.43	200.21	557.96	0.21	8.87	7.88	0.99
*** 2011 ***							
TOTALS (lbs/day,unmitigated)	42.43	200.21	557.96	0.21	8.87	7.88	0.99
*** 2012 ***							
TOTALS (lbs/day,unmitigated)	62.27	295.88	677.94	0.24	11.56	10.54	1.02

62.8 296.94

URBEMIS 2002 For Windows 8.7.0

File Name: C:\Program Files\URBEMIS 2002 Version 8.7\Projects2k2\greenbriar\_buildingconstructio  
 Project Name: Greenbriar Building Construction of Phase 2  
 Project Location: Lower Sacramento Valley Air Basin  
 On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT  
 (Pounds/Day - Winter)

Construction Start Month and Year: June, 2009  
 Construction Duration: 36  
 Total Land Use Area to be Developed: 274.27 acres  
 Maximum Acreage Disturbed Per Day: 68.57 acres  
 Single Family Units: 1197 Multi-Family Units: 280  
 Retail/Office/Institutional/Industrial Square Footage: 444310

CONSTRUCTION EMISSION ESTIMATES UNMITIGATED (lbs/day)

Source	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
*** 2009***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	28.02	192.80	222.78	-	8.13	8.13	0.00
Bldg Const Worker Trips	14.92	18.08	333.53	0.21	1.58	0.59	0.99
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	42.95	210.88	556.31	0.21	9.71	8.72	0.99
Max lbs/day all phases	42.95	210.88	556.31	0.21	9.71	8.72	0.99
*** 2010***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	28.02	182.43	230.35	-	7.29	7.29	0.00
Bldg Const Worker Trips	14.40	17.78	327.62	0.21	1.58	0.59	0.99
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	42.43	200.21	557.96	0.21	8.87	7.88	0.99
Max lbs/day all phases	42.43	200.21	557.96	0.21	8.87	7.88	0.99

\*\*\* 2011\*\*\*

Phase 1 - Demolition Emissions

Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Phase 2 - Site Grading Emissions

Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Phase 3 - Building Construction

Bldg Const Off-Road Diesel	28.02	182.43	230.35	-	7.29	7.29	0.00
Bldg Const Worker Trips	14.40	17.78	327.62	0.21	1.58	0.59	0.99
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	42.43	200.21	557.96	0.21	8.87	7.88	0.99

Max lbs/day all phases 42.43 200.21 557.96 0.21 8.87 7.88 0.99

\*\*\* 2012\*\*\*

Phase 1 - Demolition Emissions

Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Phase 2 - Site Grading Emissions

Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Phase 3 - Building Construction

Bldg Const Off-Road Diesel	28.02	182.43	230.35	-	7.29	7.29	0.00
Bldg Const Worker Trips	14.40	17.78	327.62	0.21	1.58	0.59	0.99
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	4.53	-	-	-	-	-	-
Asphalt Off-Road Diesel	15.21	88.19	129.25	-	2.43	2.43	0.00
Asphalt On-Road Diesel	0.56	8.53	2.06	0.03	0.25	0.23	0.02
Asphalt Worker Trips	0.07	0.03	0.86	0.00	0.02	0.00	0.02
Maximum lbs/day	62.27	295.98	677.94	0.24	11.56	10.54	1.02

Max lbs/day all phases 62.27 295.98 677.94 0.24 11.56 10.54 1.02

62.8 296.84

Phase 2 - Site Grading Assumptions: Phase Turned OFF

Phase 3 - Building Construction Assumptions

Start Month/Year for Phase 3: Jun '09

Phase 3 Duration: 36 months

Start Month/Year for SubPhase Building: Jun '09

SubPhase Building Duration: 36 months

Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
14	Other Equipment	190	0.620	8.0

SubPhase Architectural Coatings Turned OFF

Start Month/Year for SubPhase Asphalt: Apr '12

SubPhase Asphalt Duration: 1.8 months

Acres to be Paved: 68.4

Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
7	Pavers	132	0.590	8.0
7	Rollers	114	0.430	8.0



URBEMIS 2002 For Windows 8.7.0

File Name: C:\Program Files\URBEMIS 2002 Version 8.7\Projects2k2\greenbriar\_buildingconstructor  
 Project Name: Greenbriar Building Construction of Phase 2  
 Project Location: Lower Sacramento Valley Air Basin  
 On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT  
 (Pounds/Day - Summer)

Construction Start Month and Year: June, 2009  
 Construction Duration: 36  
 Total Land Use Area to be Developed: 274.27 acres  
 Maximum Acreage Disturbed Per Day: 68.57 acres  
 Single Family Units: 1197 Multi-Family Units: 280  
 Retail/Office/Institutional/Industrial Square Footage: 444310

CONSTRUCTION EMISSION ESTIMATES UNMITIGATED (lbs/day)

Source	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
*** 2009***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	28.02	192.80	222.78	-	8.13	8.13	0.00
Bldg Const Worker Trips	14.92	18.08	333.53	0.21	1.58	0.59	0.99
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	42.95	210.88	556.31	0.21	9.71	8.72	0.99
Max lbs/day all phases	42.95	210.88	556.31	0.21	9.71	8.72	0.99
*** 2010***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	28.02	182.43	230.35	-	7.29	7.29	0.00
Bldg Const Worker Trips	14.40	17.78	327.62	0.21	1.58	0.59	0.99
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	42.43	200.21	557.96	0.21	8.87	7.88	0.99
Max lbs/day all phases	42.43	200.21	557.96	0.21	8.87	7.88	0.99

\*\*\* 2011\*\*\*

Phase 1 - Demolition Emissions

Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Phase 2 - Site Grading Emissions

Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Phase 3 - Building Construction

Bldg Const Off-Road Diesel	28.02	182.43	230.35	-	7.29	7.29	0.00
Bldg Const Worker Trips	14.40	17.78	327.62	0.21	1.58	0.59	0.99
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	42.43	200.21	557.96	0.21	8.87	7.88	0.99

Max lbs/day all phases 42.43 200.21 557.96 0.21 8.87 7.88 0.99

\*\*\* 2012\*\*\*

Phase 1 - Demolition Emissions

Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Phase 2 - Site Grading Emissions

Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Phase 3 - Building Construction

Bldg Const Off-Road Diesel	28.02	182.43	230.35	-	7.29	7.29	0.00
Bldg Const Worker Trips	14.40	17.78	327.62	0.21	1.58	0.59	0.99
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	4.53	-	-	-	-	-	-
Asphalt Off-Road Diesel	15.21	88.19	129.25	-	2.43	2.43	0.00
Asphalt On-Road Diesel	0.56	8.53	2.06	0.03	0.25	0.23	0.02
Asphalt Worker Trips	0.07	0.03	0.86	0.00	0.02	0.00	0.02
Maximum lbs/day	62.27	295.98	677.94	0.24	11.56	10.54	1.02

Max lbs/day all phases ~~62.27~~ 295.98 677.94 0.24 11.56 10.54 1.02

628294.94

Phase 2 - Site Grading Assumptions: Phase Turned OFF

Phase 3 - Building Construction Assumptions

Start Month/Year for Phase 3: Jun '09  
 Phase 3 Duration: 36 months  
 Start Month/Year for SubPhase Building: Jun '09  
 SubPhase Building Duration: 36 months

No.	Type	Horsepower	Load Factor	Hours/Day
14	Other Equipment	190	0.620	8.0

SubPhase Architectural Coatings Turned OFF  
 Start Month/Year for SubPhase Asphalt: Apr '12  
 SubPhase Asphalt Duration: 1.8 months

Acres to be Paved: 68.4

No.	Type	Horsepower	Load Factor	Hours/Day
7	Pavers	132	0.590	8.0
7	Rollers	114	0.430	8.0

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