Appendix A Air Quality Data

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URBEMIS 2002 For Windows 7.4.2

File Name: C:\Program Files\URBEMIS 2002 For Windows\Projects2k2\Arrowhead Springs.urb
Project Name: Arrowhead Springs Development
Project Location: South Coast Air Basin (Los Angeles area)
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
(Pounds/Day - Summer)

CONSTRUCTION EMISSION ESTIMATES

*** 2005 ***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (lbs/day,unmitigated)	23.36	178.03	175.93	0.00	3,362.42	8.17	3,354.25

*** 2006 ***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (lbs/day,unmitigated)	23.36	167.56	183.60	0.00	3,361.82	7.57	3,354.25

*** 2007 ***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (lbs/day,unmitigated)	23.36	157.23	191.35	0.00	3,360.97	6.72	3,354.25

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	67.88	19.00	11.74	0.07	0.04

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	117.03	112.73	1,221.60	1.50	230.14

SUM OF AREA AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	184.91	131.73	1,233.34	1.57	230.18

URBEMIS 2002 For Windows 7.4.2

File Name: C:\Program Files\URBEMIS 2002 For Windows\Projects2k2\Arrowhead Springs.urb
Project Name: Arrowhead Springs Development
Project Location: South Coast Air Basin (Los Angeles area)
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
(Pounds/Day - Winter)

CONSTRUCTION EMISSION ESTIMATES

*** 2005 ***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (lbs/day,unmitigated)	23.36	178.03	175.93	0.00	3,362.42	8.17	3,354.25

*** 2006 ***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (lbs/day,unmitigated)	23.36	167.56	183.60	0.00	3,361.82	7.57	3,354.25

*** 2007 ***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (lbs/day,unmitigated)	23.36	157.23	191.35	0.00	3,360.97	6.72	3,354.25

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	1,579.60	36.09	1,675.83	2.64	228.50

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	99.03	161.86	1,154.82	1.21	230.14

SUM OF AREA AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	1,678.62	197.95	2,830.64	3.85	458.64

URBEMIS 2002 For Windows 7.4.2

File Name: C:\Program Files\URBEMIS 2002 For Windows\Projects2k2\Arrowhead Springs.urb
Project Name: Arrowhead Springs Development
Project Location: South Coast Air Basin (Los Angeles area)
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
(Pounds/Day - Winter)

Construction Start Month and Year: November, 2005
Construction Duration: 24
Total Land Use Area to be Developed: 185 acres
Maximum Acreage Disturbed Per Day: 18 acres
Single Family Units: 336 Multi-Family Units: 1014
Retail/Office/Institutional/Industrial Square Footage: 808167

CONSTRUCTION EMISSION ESTIMATES UNMITIGATED (lbs/day)

Source	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
*** 2005***							
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	-	-	-	-	3,354.24	-	3,354.24
Off-Road Diesel	23.17	177.66	172.00	-	8.16	8.16	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.19	0.37	3.93	0.00	0.02	0.01	0.01
Maximum lbs/day	23.36	178.03	175.93	0.00	3,362.42	8.17	3,354.25
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	23.36	178.03	175.93	0.00	3,362.42	8.17	3,354.25
*** 2006***							
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	-		-	-	3,354.24	-	3,354.24
Off-Road Diesel	23.17	167.19	179.71	-	7.56	7.56	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Worker Trips	0.19	0.37	3.89	0.00	0.02	0.01	0.01
Maximum lbs/day	23.36	167.56	183.60	0.00	3,361.82	7.57	3,354.25
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	23.36	167.56	183.60	0.00	3,361.82	7.57	3,354.25

*** 2007***

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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	-	-	-	-	3,354.24	-	3,354.24
Off-Road Diesel	23.17	156.87	187.51	-	6.71	6.71	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.19	0.36	3.84	0.00	0.02	0.01	0.01
Maximum lbs/day	23.36	157.23	191.35	0.00	3,360.97	6.72	3,354.25
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	23.36	157.23	191.35	0.00	3,360.97	6.72	3,354.25

Phase 3 - Building Construction Assumptions: Phase Turned OFF

Phase 2 - Site Grading Assumptions
Start Month/Year for Phase 2: Nov '05
Phase 2 Duration: 24 months
On-Road Truck Travel (VMT): 0
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
2	Rubber Tired Dozers	352	0.590	8.0
4	Scrapers	313	0.660	8.0
2	Tractor/Loaders/Backhoes	79	0.465	8.0

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AREA SOURCE EMISSION ESTIMATES (Winter Pounds per Day, Unmitigated)

Source	ROG	NOx	CO	SO2	PM10
Natural Gas	1.43	18.92	7.87	-	0.04
Wood Stoves	0.00	0.00	0.00	0.00	0.00
Fireplaces	1,512.12	17.17	1,667.95	2.64	228.47
Landscaping - No winter emissions					
Consumer Prdcts	66.05	-	-	-	-
TOTALS(lbs/day,unmitigated)	1,579.60	36.09	1,675.83	2.64	228.50

UNMITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	SO2	PM10
Single family housing	1.55	2.44	17.79	0.02	3.49
Apartments low rise	1.03	1.61	11.76	0.01	2.31
Condo/townhouse general	26.02	40.58	296.22	0.31	58.16
Retirement community	4.80	7.38	53.85	0.06	10.57
Golf Course	3.78	6.18	43.71	0.05	8.71
Quality resturant	6.73	11.34	80.07	0.08	16.01
Hotel	18.15	29.99	211.97	0.22	42.23
Strip mall	23.95	39.98	282.92	0.29	56.15
Office park	13.02	22.37	156.52	0.17	32.50
TOTAL EMISSIONS (lbs/day)	99.03	161.86	1,154.82	1.21	230.14

Does not include correction for passby trips.
Does not include double counting adjustment for internal trips.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2015 Temperature (F): 50 Season: Winter

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Trip Rate	Size	Total Trips
Single family housing	9.58 trips / dwelling units	36.00	345.00
Apartments low rise	6.71 trips / dwelling units	34.00	228.00
Condo/townhouse general	5.86 trips / dwelling units	980.00	5,743.00
Retirement community	3.48 trips / dwelling units	300.00	1,044.00
Golf Course	5.04 trips / acres	199.00	1,003.00
Quality resturant	89.95 trips / 1000 sq. ft.	20.00	1,799.00
Hotel	8.00 trips / rooms	608.00	4,864.00
Strip mall	28.33 trips / 1000 sq. ft.	234.17	6,633.00
Office park	11.01 trips / 1000 sq. ft.	250.00	2,753.00

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	54.40	0.40	99.40	0.20
Light Truck < 3,750 lbs	15.30	0.70	98.00	1.30
Light Truck 3,751- 5,750	16.40	0.60	98.80	0.60
Med Truck 5,751- 8,500	7.30	0.00	98.60	1.40
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	0.80	0.00	0.00	100.00
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	50.00	50.00	0.00
School Bus	0.10	0.00	0.00	100.00
Motor Home	1.50	0.00	93.30	6.70

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	11.5	4.9	6.0	10.3	5.5	5.5
Rural Trip Length (miles)	11.5	4.9	6.0	10.3	5.5	5.5
Trip Speeds (mph)	35.0	40.0	40.0	40.0	40.0	40.0
% of Trips - Residential	20.0	37.0	43.0			
% of Trips - Commercial (by land use)						
Golf Course				5.0	2.5	92.5
Quality resturant				8.0	4.0	88.0
Hotel				5.0	2.5	92.5
Strip mall				2.0	1.0	97.0
Office park				48.0	24.0	28.0

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Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Construction

Site Grading Fugitive Dust Option changed from Level 1 to Level 2

Changes made to the default values for Area

The wood stove option switch changed from on to off.
The landscape year changed from 2004 to 2015.

Changes made to the default values for Operations

The operational emission year changed from 2004 to 2015.
The double counting internal work trip limit changed from to 1471.9999792.
The double counting shopping trip limit changed from to 945.6850038948.
The double counting other trip limit changed from to 3164.79995528.
The travel mode environment settings changed from both to: both

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URBEMIS 2002 For Windows 7.4.2

File Name: C:\Program Files\URBEMIS 2002 For Windows\Projects2k2\Arrowhead Springs.urb
Project Name: Arrowhead Springs Development
Project Location: South Coast Air Basin (Los Angeles area)
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
(Pounds/Day - Summer)

Construction Start Month and Year: November, 2005
Construction Duration: 24
Total Land Use Area to be Developed: 185 acres
Maximum Acreage Disturbed Per Day: 18 acres
Single Family Units: 336 Multi-Family Units: 1014
Retail/Office/Institutional/Industrial Square Footage: 808167

CONSTRUCTION EMISSION ESTIMATES UNMITIGATED (lbs/day)

Source	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
*** 2005***							
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	-	-	-	-	3,354.24	-	3,354.24
Off-Road Diesel	23.17	177.66	172.00	-	8.16	8.16	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.19	0.37	3.93	0.00	0.02	0.01	0.01
Maximum lbs/day	23.36	178.03	175.93	0.00	3,362.42	8.17	3,354.25
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	23.36	178.03	175.93	0.00	3,362.42	8.17	3,354.25

*** 2006***

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	-	-	-	-	3,354.24	-	3,354.24
Off-Road Diesel	23.17	167.19	179.71	-	7.56	7.56	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.19	0.37	3.89	0.00	0.02	0.01	0.01
Maximum lbs/day	23.36	167.56	183.60	0.00	3,361.82	7.57	3,354.25
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	23.36	167.56	183.60	0.00	3,361.82	7.57	3,354.25

*** 2007***

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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	-	-	-	-	3,354.24	-	3,354.24
Off-Road Diesel	23.17	156.87	187.51	-	6.71	6.71	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.19	0.36	3.84	0.00	0.02	0.01	0.01
Maximum lbs/day	23.36	157.23	191.35	0.00	3,360.97	6.72	3,354.25
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	23.36	157.23	191.35	0.00	3,360.97	6.72	3,354.25

Phase 3 - Building Construction Assumptions: Phase Turned OFF

Phase 2 - Site Grading Assumptions
Start Month/Year for Phase 2: Nov '05
Phase 2 Duration: 24 months
On-Road Truck Travel (VMT): 0
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
2	Rubber Tired Dozers	352	0.590	8.0
4	Scrapers	313	0.660	8.0
2	Tractor/Loaders/Backhoes	79	0.465	8.0

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AREA SOURCE EMISSION ESTIMATES (Summer Pounds per Day, Unmitigated)

Source	ROG	NOx	CO	SO2	PM10
Natural Gas	1.43	18.92	7.87	-	0.04
Wood Stoves - No summer emissions					
Fireplaces - No summer emissions					
Landscaping	0.40	0.08	3.87	0.07	0.00
Consumer Prdcts	66.05	-	-	-	-
TOTALS(lbs/day,unmitigated)	67.88	19.00	11.74	0.07	0.04

UNMITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	SO2	PM10
Single family housing	1.77	1.70	19.05	0.02	3.49
Apartments low rise	1.28	1.12	12.59	0.02	2.31
Condo/townhouse general	33.68	28.22	317.13	0.38	58.16
Retirement community	7.45	5.13	57.65	0.07	10.57
Golf Course	5.48	4.31	45.53	0.06	8.71
Quality resturant	6.27	7.90	83.80	0.10	16.01
Hotel	22.69	20.92	220.79	0.27	42.23
Strip mall	24.01	27.91	293.21	0.37	56.15
Office park	14.38	15.51	171.86	0.21	32.50
TOTAL EMISSIONS (lbs/day)	117.03	112.73	1,221.60	1.50	230.14

Does not include correction for passby trips.
Does not include double counting adjustment for internal trips.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2015 Temperature (F): 90 Season: Summer

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Trip Rate	Size	Total Trips
Single family housing	9.58 trips / dwelling units	36.00	345.00
Apartments low rise	6.71 trips / dwelling units	34.00	228.00
Condo/townhouse general	5.86 trips / dwelling units	980.00	5,743.00
Retirement community	3.48 trips / dwelling units	300.00	1,044.00
Golf Course	5.04 trips / acres	199.00	1,003.00
Quality resturant	89.95 trips / 1000 sq. ft.	20.00	1,799.00
Hotel	8.00 trips / rooms	608.00	4,864.00
Strip mall	28.33 trips / 1000 sq. ft.	234.17	6,633.00
Office park	11.01 trips / 1000 sq. ft.	250.00	2,753.00

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	54.40	0.40	99.40	0.20
Light Truck < 3,750 lbs	15.30	0.70	98.00	1.30
Light Truck 3,751- 5,750	16.40	0.60	98.80	0.60
Med Truck 5,751- 8,500	7.30	0.00	98.60	1.40
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	0.80	0.00	0.00	100.00
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	50.00	50.00	0.00
School Bus	0.10	0.00	0.00	100.00
Motor Home	1.50	0.00	93.30	6.70

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	11.5	4.9	6.0	10.3	5.5	5.5

Rural Trip Length (miles)	11.5	4.9	6.0	10.3	5.5	5.5
Trip Speeds (mph)	35.0	40.0	40.0	40.0	40.0	40.0
% of Trips - Residential	20.0	37.0	43.0			

% of Trips - Commercial (by land use)

Golf Course	5.0	2.5	92.5
Quality resturant	8.0	4.0	88.0
Hotel	5.0	2.5	92.5
Strip mall	2.0	1.0	97.0
Office park	48.0	24.0	28.0

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Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Construction

Site Grading Fugitive Dust Option changed from Level 1 to Level 2

Changes made to the default values for Area

The wood stove option switch changed from on to off.
The landscape year changed from 2004 to 2015.

Changes made to the default values for Operations

The operational emission year changed from 2004 to 2015.
The double counting internal work trip limit changed from to 1471.9999792.
The double counting shopping trip limit changed from to 945.6850038948.
The double counting other trip limit changed from to 3164.79995528.
The travel mode environment settings changed from both to: both

URBEMIS 2002 For Windows 7.4.2

File Name: C:\Program Files\URBEMIS 2002 For Windows\Projects2k2\Arrowhead Springs-building construction.urb
Project Name: Arrowhead Springs Development-building construction
Project Location: South Coast Air Basin (Los Angeles area)
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
(Pounds/Day - Summer)

CONSTRUCTION EMISSION ESTIMATES

*** 2007 ***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (lbs/day,unmitigated)	25.50	104.02	391.02	0.17	4.70	3.75	0.95

*** 2008 ***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (lbs/day,unmitigated)	25.08	100.61	388.73	0.17	4.40	3.45	0.95

*** 2009 ***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (lbs/day,unmitigated)	24.64	97.32	386.23	0.17	4.20	3.25	0.95

*** 2010 ***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (lbs/day,unmitigated)	24.23	94.29	383.91	0.17	3.97	3.02	0.95

*** 2011 ***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (lbs/day,unmitigated)	24.23	94.29	383.91	0.17	3.97	3.02	0.95

*** 2012 ***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (lbs/day,unmitigated)	815.49	131.09	482.58	0.18	6.11	4.20	1.91

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	67.88	19.00	11.74	0.07	0.04

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	117.03	112.73	1,221.60	1.50	230.14

SUM OF AREA AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	184.91	131.73	1,233.34	1.57	230.18

URBEMIS 2002 For Windows 7.4.2

File Name: C:\Program Files\URBEMIS 2002 For Windows\Projects2k2\Arrowhead Springs-building construction.urb
Project Name: Arrowhead Springs Development-building construction
Project Location: South Coast Air Basin (Los Angeles area)
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
(Pounds/Day - Winter)

CONSTRUCTION EMISSION ESTIMATES

*** 2007 ***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST

TOTALS (lbs/day,unmitigated)	25.50	104.02	391.02	0.17	4.70	3.75	0.95

*** 2008 ***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (lbs/day,unmitigated)	25.08	100.61	388.73	0.17	4.40	3.45	0.95

*** 2009 ***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (lbs/day,unmitigated)	24.64	97.32	386.23	0.17	4.20	3.25	0.95

*** 2010 ***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (lbs/day,unmitigated)	24.23	94.29	383.91	0.17	3.97	3.02	0.95

*** 2011 ***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (lbs/day,unmitigated)	24.23	94.29	383.91	0.17	3.97	3.02	0.95

*** 2012 ***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (lbs/day,unmitigated)	815.49	131.09	482.58	0.18	6.11	4.20	1.91

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	1,579.60	36.09	1,675.83	2.64	228.50

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	99.03	161.86	1,154.82	1.21	230.14

SUM OF AREA AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	1,678.62	197.95	2,830.64	3.85	458.64

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URBEMIS 2002 For Windows 7.4.2

File Name: C:\Program Files\URBEMIS 2002 For Windows\Projects2k2\Arrowhead Springs-building construction.urb
Project Name: Arrowhead Springs Development-building construction
Project Location: South Coast Air Basin (Los Angeles area)
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
(Pounds/Day - Winter)

Construction Start Month and Year: November, 2007
Construction Duration: 60
Total Land Use Area to be Developed: 185 acres
Maximum Acreage Disturbed Per Day: 18 acres
Single Family Units: 336 Multi-Family Units: 1014
Retail/Office/Institutional/Industrial Square Footage: 808167

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	10.60	75.96	81.78	-	3.18	3.18	0.00
Bldg Const Worker Trips	14.90	28.06	309.23	0.17	1.52	0.57	0.95
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	25.50	104.02	391.02	0.17	4.70	3.75	0.95
Max lbs/day all phases	25.50	104.02	391.02	0.17	4.70	3.75	0.95

*** 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	10.60	72.76	83.83	-	2.88	2.88	0.00
Bldg Const Worker Trips	14.48	27.85	304.90	0.17	1.52	0.57	0.95
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	25.08	100.61	388.73	0.17	4.40	3.45	0.95
Max lbs/day all phases	25.08	100.61	388.73	0.17	4.40	3.45	0.95

*** 2009***

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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	10.60	69.70	85.96	-	2.68	2.68	0.00
Bldg Const Worker Trips	14.04	27.63	300.27	0.17	1.52	0.57	0.95
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	24.64	97.32	386.23	0.17	4.20	3.25	0.95
Max lbs/day all phases	24.64	97.32	386.23	0.17	4.20	3.25	0.95

*** 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	10.60	66.89	88.01	-	2.46	2.46	0.00
Bldg Const Worker Trips	13.63	27.40	295.90	0.17	1.52	0.57	0.95
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	24.23	94.29	383.91	0.17	3.97	3.02	0.95
Max lbs/day all phases	24.23	94.29	383.91	0.17	3.97	3.02	0.95

*** 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	10.60	66.89	88.01	-	2.46	2.46	0.00
Bldg Const Worker Trips	13.63	27.40	295.90	0.17	1.52	0.57	0.95
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	-	-	-	-	-	-

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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	24.23	94.29	383.91	0.17	3.97	3.02	0.95
Max lbs/day all phases	24.23	94.29	383.91	0.17	3.97	3.02	0.95

*** 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	10.60	66.89	88.01	-	2.46	2.46	0.00
Bldg Const Worker Trips	13.63	27.40	295.90	0.17	1.52	0.57	0.95
Arch Coatings Off-Gas	781.54	-	-	-	-	-	-
Arch Coatings Worker Trips	4.00	2.36	50.61	0.01	1.01	0.06	0.95
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	5.68	34.43	47.71	-	1.12	1.12	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.03	0.02	0.34	0.00	0.01	0.00	0.01
Maximum lbs/day	815.49	131.09	482.58	0.18	6.11	4.20	1.91
Max lbs/day all phases	815.49	131.09	482.58	0.18	6.11	4.20	1.91

Phase 2 - Site Grading Assumptions: Phase Turned OFF

Phase 3 - Building Construction Assumptions
Start Month/Year for Phase 3: Nov '07
Phase 3 Duration: 60 months
Start Month/Year for SubPhase Building: Nov '07
SubPhase Building Duration: 60 months
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Cranes	190	0.430	8.0
2	Other Equipment	190	0.620	8.0
2	Rough Terrain Forklifts	94	0.475	8.0
2	Signal Boards	119	0.820	8.0

Start Month/Year for SubPhase Architectural Coatings: May '12
SubPhase Architectural Coatings Duration: 6 months
Start Month/Year for SubPhase Asphalt: Aug '12
SubPhase Asphalt Duration: 3 months
Acres to be Paved: 0
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
2	Pavers	132	0.590	8.0
2	Paving Equipment	111	0.530	8.0
1	Rollers	114	0.430	8.0

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AREA SOURCE EMISSION ESTIMATES (Winter Pounds per Day, Unmitigated)

Source	ROG	NOx	CO	SO2	PM10
Natural Gas	1.43	18.92	7.87	-	0.04
Wood Stoves	0.00	0.00	0.00	0.00	0.00
Fireplaces	1,512.12	17.17	1,667.95	2.64	228.47
Landscaping - No winter emissions					
Consumer Prdcts	66.05	-		-	-
TOTALS(lbs/day,unmitigated)	1,579.60	36.09	1,675.83	2.64	228.50

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UNMITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	SO2	PM10
Single family housing	1.55	2.44	17.79	0.02	3.49
Apartments low rise	1.03	1.61	11.76	0.01	2.31
Condo/townhouse general	26.02	40.58	296.22	0.31	58.16
Retirement community	4.80	7.38	53.85	0.06	10.57
Golf Course	3.78	6.18	43.71	0.05	8.71
Quality resturant	6.73	11.34	80.07	0.08	16.01
Hotel	18.15	29.99	211.97	0.22	42.23
Strip mall	23.95	39.98	282.92	0.29	56.15
Office park	13.02	22.37	156.52	0.17	32.50
TOTAL EMISSIONS (lbs/day)	99.03	161.86	1,154.82	1.21	230.14

Does not include correction for passby trips.
Does not include double counting adjustment for internal trips.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2015 Temperature (F): 50 Season: Winter

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Trip Rate	Size	Total Trips
Single family housing	9.58 trips / dwelling units	36.00	345.00
Apartments low rise	6.71 trips / dwelling units	34.00	228.00
Condo/townhouse general	5.86 trips / dwelling units	980.00	5,743.00
Retirement community	3.48 trips / dwelling units	300.00	1,044.00
Golf Course	5.04 trips / acres	199.00	1,003.00
Quality resturant	89.95 trips / 1000 sq. ft.	20.00	1,799.00
Hotel	8.00 trips / rooms	608.00	4,864.00
Strip mall	28.33 trips / 1000 sq. ft.	234.17	6,633.00
Office park	11.01 trips / 1000 sq. ft.	250.00	2,753.00

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	54.40	0.40	99.40	0.20
Light Truck < 3,750 lbs	15.30	0.70	98.00	1.30
Light Truck 3,751- 5,750	16.40	0.60	98.80	0.60
Med Truck 5,751- 8,500	7.30	0.00	98.60	1.40
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	0.80	0.00	0.00	100.00
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	50.00	50.00	0.00
School Bus	0.10	0.00	0.00	100.00
Motor Home	1.50	0.00	93.30	6.70

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	11.5	4.9	6.0	10.3	5.5	5.5
Rural Trip Length (miles)	11.5	4.9	6.0	10.3	5.5	5.5
Trip Speeds (mph)	35.0	40.0	40.0	40.0	40.0	40.0
% of Trips - Residential	20.0	37.0	43.0			

% of Trips - Commercial (by land use)

Golf Course	5.0	2.5	92.5
Quality resturant	8.0	4.0	88.0
Hotel	5.0	2.5	92.5
Strip mall	2.0	1.0	97.0
Office park	48.0	24.0	28.0

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Changes made to the default values for Land Use Trip Percentages

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The wood stove option switch changed from on to off.
The landscape year changed from 2004 to 2015.

Changes made to the default values for Operations

The operational emission year changed from 2004 to 2015.
The double counting internal work trip limit changed from to 1471.9999792.
The double counting shopping trip limit changed from to 945.6850038948.
The double counting other trip limit changed from to 3164.79995528.
The travel mode environment settings changed from both to: both

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URBEMIS 2002 For Windows 7.4.2

File Name: C:\Program Files\URBEMIS 2002 For Windows\Projects2k2\Arrowhead Springs-building construction.urb
Project Name: Arrowhead Springs Development-building construction
Project Location: South Coast Air Basin (Los Angeles area)
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
(Pounds/Day - Summer)

Construction Start Month and Year: November, 2007
Construction Duration: 60
Total Land Use Area to be Developed: 185 acres
Maximum Acreage Disturbed Per Day: 18 acres
Single Family Units: 336 Multi-Family Units: 1014
Retail/Office/Institutional/Industrial Square Footage: 808167

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	10.60	75.96	81.78	-	3.18	3.18	0.00
Bldg Const Worker Trips	14.90	28.06	309.23	0.17	1.52	0.57	0.95
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	25.50	104.02	391.02	0.17	4.70	3.75	0.95
Max lbs/day all phases	25.50	104.02	391.02	0.17	4.70	3.75	0.95
*** 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	10.60	72.76	83.83	-	2.88	2.88	0.00
Bldg Const Worker Trips	14.48	27.85	304.90	0.17	1.52	0.57	0.95
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	25.08	100.61	388.73	0.17	4.40	3.45	0.95
Max lbs/day all phases	25.08	100.61	388.73	0.17	4.40	3.45	0.95

*** 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	10.60	69.70	85.96	-	2.68	2.68	0.00
Bldg Const Worker Trips	14.04	27.63	300.27	0.17	1.52	0.57	0.95
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	24.64	97.32	386.23	0.17	4.20	3.25	0.95
Max lbs/day all phases	24.64	97.32	386.23	0.17	4.20	3.25	0.95

*** 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	10.60	66.89	88.01	-	2.46	2.46	0.00
Bldg Const Worker Trips	13.63	27.40	295.90	0.17	1.52	0.57	0.95
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	24.23	94.29	383.91	0.17	3.97	3.02	0.95
Max lbs/day all phases	24.23	94.29	383.91	0.17	3.97	3.02	0.95

*** 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	10.60	66.89	88.01	-	2.46	2.46	0.00

Bldg Const Worker Trips	13.63	27.40	295.90	0.17	1.52	0.57	0.95
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	24.23	94.29	383.91	0.17	3.97	3.02	0.95
Max lbs/day all phases	24.23	94.29	383.91	0.17	3.97	3.02	0.95

*** 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	10.60	66.89	88.01	-	2.46	2.46	0.00
Bldg Const Worker Trips	13.63	27.40	295.90	0.17	1.52	0.57	0.95
Arch Coatings Off-Gas	781.54	-	-	-	-	-	-
Arch Coatings Worker Trips	4.00	2.36	50.61	0.01	1.01	0.06	0.95
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	5.68	34.43	47.71	-	1.12	1.12	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.03	0.02	0.34	0.00	0.01	0.00	0.01
Maximum lbs/day	815.49	131.09	482.58	0.18	6.11	4.20	1.91
Max lbs/day all phases	815.49	131.09	482.58	0.18	6.11	4.20	1.91

Phase 2 - Site Grading Assumptions: Phase Turned OFF

Phase 3 - Building Construction Assumptions
Start Month/Year for Phase 3: Nov '07
Phase 3 Duration: 60 months
Start Month/Year for SubPhase Building: Nov '07
SubPhase Building Duration: 60 months
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Cranes	190	0.430	8.0
2	Other Equipment	190	0.620	8.0
2	Rough Terrain Forklifts	94	0.475	8.0
2	Signal Boards	119	0.820	8.0

Start Month/Year for SubPhase Architectural Coatings: May '12
SubPhase Architectural Coatings Duration: 6 months
Start Month/Year for SubPhase Asphalt: Aug '12
SubPhase Asphalt Duration: 3 months
Acres to be Paved: 0
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
2	Pavers	132	0.590	8.0
2	Paving Equipment	111	0.530	8.0
1	Rollers	114	0.430	8.0

AREA SOURCE EMISSION ESTIMATES (Summer Pounds per Day, Unmitigated)

Source	ROG	NOx	CO	SO2	PM10
Natural Gas	1.43	18.92	7.87	-	0.04
Wood Stoves - No summer emissions					
Fireplaces - No summer emissions					
Landscaping	0.40	0.08	3.87	0.07	0.00
Consumer Prdcts	66.05	-	-	-	
TOTALS(lbs/day,unmitigated)	67.88	19.00	11.74	0.07	0.04

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UNMITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	SO2	PM10
Single family housing	1.77	1.70	19.05	0.02	3.49
Apartments low rise	1.28	1.12	12.59	0.02	2.31
Condo/townhouse general	33.68	28.22	317.13	0.38	58.16
Retirement community	7.45	5.13	57.65	0.07	10.57
Golf Course	5.48	4.31	45.53	0.06	8.71
Quality resturant	6.27	7.90	83.80	0.10	16.01
Hotel	22.69	20.92	220.79	0.27	42.23
Strip mall	24.01	27.91	293.21	0.37	56.15
Office park	14.38	15.51	171.86	0.21	32.50
TOTAL EMISSIONS (lbs/day)	117.03	112.73	1,221.60	1.50	230.14

Does not include correction for passby trips.
Does not include double counting adjustment for internal trips.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2015 Temperature (F): 90 Season: Summer

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Trip Rate	Size	Total Trips
Single family housing	9.58 trips / dwelling units	36.00	345.00
Apartments low rise	6.71 trips / dwelling units	34.00	228.00
Condo/townhouse general	5.86 trips / dwelling units	980.00	5,743.00
Retirement community	3.48 trips / dwelling units	300.00	1,044.00
Golf Course	5.04 trips / acres	199.00	1,003.00
Quality resturant	89.95 trips / 1000 sq. ft.	20.00	1,799.00
Hotel	8.00 trips / rooms	608.00	4,864.00
Strip mall	28.33 trips / 1000 sq. ft.	234.17	6,633.00
Office park	11.01 trips / 1000 sq. ft.	250.00	2,753.00

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	54.40	0.40	99.40	0.20
Light Truck < 3,750 lbs	15.30	0.70	98.00	1.30
Light Truck 3,751- 5,750	16.40	0.60	98.80	0.60
Med Truck 5,751- 8,500	7.30	0.00	98.60	1.40
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	0.80	0.00	0.00	100.00
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	50.00	50.00	0.00
School Bus	0.10	0.00	0.00	100.00
Motor Home	1.50	0.00	93.30	6.70

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	11.5	4.9	6.0	10.3	5.5	5.5
Rural Trip Length (miles)	11.5	4.9	6.0	10.3	5.5	5.5
Trip Speeds (mph)	35.0	40.0	40.0	40.0	40.0	40.0
% of Trips - Residential	20.0	37.0	43.0			

% of Trips - Commercial (by land use)			
Golf Course	5.0	2.5	92.5
Quality resturant	8.0	4.0	88.0
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