Impact Sciences, Inc., "Operational Emissions: URBEMIS2007 Area and Operational Emissions, Newhall Ranch Alternative 2" (March 5, 2008)

3/5/2008 10:09:54 AM

Urbemis 2007 Version 9.2.4

Combined Summer Emissions Reports (Pounds/Day)

File Name: Z:\Glu\aqNewhall\August 2007 Revision to Newhall\Operational Emissions\URBEMIS2007 Files and Printouts\Newhall Ranch Project Name: Newhall Ranch Alternative 2 Project Location: Los Angeles County On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:							
AREA SOURCE EMISSION ESTIMATES	i						
		ROG	NOx	<u>CO</u>	<u>SO2</u>	PM10	PM2.5
TOTALS (lbs/day, unmitigated)		1,266.01	316.96	572.26	0.02	1.71	1.70
OPERATIONAL (VEHICLE) EMISSION E	STIMATES						
		ROG	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	PM2.5
TOTALS (lbs/day, unmitigated)		759.01	645.08	7,323.77	21.91	3,576.43	693.41
SUM OF AREA SOURCE AND OPERAT	IONAL EMISSION E	STIMATES					
		ROG	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	PM2.5
TOTALS (lbs/day, unmitigated)		2,025.02	962.04	7,896.03	21.93	3,578.14	695.11
Area Source Unmitigated Detail Report:							
AREA SOURCE EMISSION ESTIMATES	Summer Pounds Po	er Day, Unmitigate	ed				
Source	ROG	NOx	<u>C(</u>	<u>0</u>	<u>SO2</u>	<u>PM10</u>	PM2.5
Natural Gas	23.89	312.21	152.9	8	0.00	0.59	0.59
Hearth - No Summer Emissions							
Landscape	74.37	4.75	419.2	8	0.02	1.12	1.11
Consumer Products	1,071.40						
Architectural Coatings	96.35						
TOTALS (lbs/day, unmitigated)	1,266.01	316.96	572.2	6	0.02	1.71	1.70

Area Source Changes to Defaults

Percentage of residences with wood stoves changed from 10% to 0%

Percentage of residences with wood fireplaces changed from 5% to 0%

Percentage of residences with natural gas fireplaces changed from 85% to 100%

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	
Single family housing	218.01	193.29	2,226.36	6.65	1,083.44	210.10	
Condo/townhouse general	237.16	203.03	2,338.54	6.99	1,138.03	220.69	
Elementary school	31.27	11.68	130.41	0.39	63.24	12.26	
High school	14.81	6.96	76.73	0.23	38.44	7.44	
City park	2.53	2.00	21.89	0.07	10.95	2.12	
Free-standing discount superstore	154.39	139.17	1,519.68	4.55	745.95	144.58	
Strip mall	9.71	7.94	86.58	0.25	41.46	8.05	
Office park	34.77	30.63	349.23	1.05	172.01	33.34	
Developed Park	0.46	0.25	2.77	0.01	1.38	0.27	
Commercial Office	55.90	50.13	571.58	1.72	281.53	54.56	
TOTALS (lbs/day, unmitigated)	759.01	645.08	7,323.77	21.91	3,576.43	693.41	

Operational Settings:

Includes correction for passby trips

Includes the following double counting adjustment for internal trips:

Residential Trip % Reduction: 21.04 Nonresidential Trip % Reduction: 24.72

Analysis Year: 2030 Temperature (F): 80 Season: Summer

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

	Summ	nary of Land L	<u>lses</u>			
Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Single family housing	3,027.00	7.82	dwelling units	9,081.00	70,983.54	627,849.50
Condo/townhouse general	737.75	6.32	dwelling units	11,804.00	74,560.36	659,486.47
Elementary school		1.09	students	5,250.00	5,730.83	36,644.79
High school		1.35	students	2,230.00	3,005.03	22,287.18
City park		5.99	acres	152.80	915.64	6,345.37
Free-standing discount superstore		40.70	1000 sq ft	1,820.00	74,069.26	432,337.52
Strip mall		27.90	1000 sq ft	174.00	4,854.51	24,023.06
Office park		7.68	1000 sq ft	1,454.50	11,168.75	99,696.43
Developed Park		1.96	acres	59.11	115.70	801.78
Commercial Office		8.70	1000 sq ft	2,100.50	18,279.78	163,172.23
					263,683.40	2,072,644.33

		Vehicle Flee	<u>t Mix</u>			
Vehicle Type		Percent Type	Non-Catalyst	(Catalyst	Diesel
Light Auto		51.7	0.0		100.0	0.0
Light Truck < 3750 lbs		6.7	0.0		100.0	0.0
Light Truck 3751-5750 lbs		23.5	0.0		100.0	0.0
Med Truck 5751-8500 lbs		10.6	0.0		100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs		1.7	0.0		82.4	17.6
Lite-Heavy Truck 10,001-14,000 lbs		0.5	0.0		60.0	40.0
Med-Heavy Truck 14,001-33,000 lbs		1.0	0.0		20.0	80.0
Heavy-Heavy Truck 33,001-60,000 lbs		0.5	0.0		0.0	100.0
Other Bus		0.1	0.0		0.0	100.0
Urban Bus		0.1	0.0		0.0	100.0
Motorcycle		2.5	32.0		68.0	0.0
School Bus		0.1	0.0		0.0	100.0
Motor Home		1.0	0.0		90.0	10.0
		Travel Cond	itions			
		Residential			Commercial	
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	12.7	7.0	9.5	13.3	7.4	8.9
Rural Trip Length (miles)	17.6	12.1	14.9	15.4	9.6	12.6
Trip speeds (mph)	30.0	30.0	30.0	30.0	30.0	30.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
Elementary school				20.0	10.0	70.0
High school				10.0	5.0	85.0
City park				5.0	2.5	92.5
Free-standing discount superstore				2.0	1.0	97.0
Strip mall				2.0	1.0	97.0
Office park				48.0	24.0	28.0
Developed Park				5.0	2.5	92.5
Commercial Office				48.0	24.0	28.0

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Combined Winter Emissions Reports (Pounds/Day)

File Name: Z:\Glu\aqNewhall\August 2007 Revision to Newhall\Operational Emissions\URBEMIS2007 Files and Printouts\Newhall Ranch Alter Project Name: Newhall Ranch Alternative 2 Project Location: Los Angeles County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

AREA SOURCE EMISSION ESTIMATES							
		ROG	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	PM2.5
TOTALS (lbs/day, unmitigated)		1,199.87	452.80	212.80	0.90	11.96	11.84
OPERATIONAL (VEHICLE) EMISSION E	STIMATES						
		ROG	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>
TOTALS (lbs/day, unmitigated)		802.50	774.90	6,890.46	18.18	3,576.43	693.41
SUM OF AREA SOURCE AND OPERAT	IONAL EMISSION EST						
		ROG	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>
TOTALS (lbs/day, unmitigated)		2,002.37	1,227.70	7,103.26	19.08	3,588.39	705.25
Area Source Unmitigated Detail Report:							
AREA SOURCE EMISSION ESTIMATES	Winter Pounds Per Da	ay, Unmitigated					
Source	ROG	<u>NOx</u>	<u>CC</u>	<u>)</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>
Natural Gas	23.89	312.21	152.98	3	0.00	0.59	0.59
Hearth	8.23	140.59	59.82	2	0.90	11.37	11.25
Landscaping - No Winter Emissions							
Consumer Products	1,071.40						
Architectural Coatings	96.35						
TOTALS (lbs/day, unmitigated)	1,199.87	452.80	212.80	0	0.90	11.96	11.84

Area Source Changes to Defaults

Percentage of residences with wood stoves changed from 10% to 0%

Percentage of residences with wood fireplaces changed from 5% to 0%

Percentage of residences with natural gas fireplaces changed from 85% to 100%

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25
Single family housing	230.71	232.38	2,084.46	5.52	1,083.44	210.10
Condo/townhouse general	246.51	244.09	2,189.50	5.80	1,138.03	220.69
Elementary school	24.24	14.01	123.86	0.32	63.24	12.26
High school	12.00	8.35	72.41	0.19	38.44	7.44
City park	2.60	2.39	20.74	0.06	10.95	2.12
Free-standing discount superstore	177.95	166.79	1,453.91	3.77	745.95	144.58
Strip mall	11.15	9.50	83.68	0.21	41.46	8.05
Office park	36.96	36.82	325.89	0.87	172.01	33.34
Developed Park	0.40	0.30	2.62	0.01	1.38	0.27
Commercial Office	59.98	60.27	533.39	1.43	281.53	54.56
TOTALS (lbs/day, unmitigated)	802.50	774.90	6,890.46	18.18	3,576.43	693.41

Operational Settings:

Includes correction for passby trips Includes the following double counting adjustment for internal trips:

Residential Trip % Reduction: 21.04 Nonresidential Trip % Reduction: 24.72

Analysis Year: 2030 Temperature (F): 60 Season: Winter

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

	Summ	nary of Land U	<u>ses</u>			
Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
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High school		1.35	students	2,230.00	3,005.03	22,287.18
City park		5.99	acres	152.80	915.64	6,345.37
Free-standing discount superstore		40.70	1000 sq ft	1,820.00	74,069.26	432,337.52
Strip mall		27.90	1000 sq ft	174.00	4,854.51	24,023.06
Office park		7.68	1000 sq ft	1,454.50	11,168.75	99,696.43
Developed Park		1.96	acres	59.11	115.70	801.78
Commercial Office		8.70	1000 sq ft	2,100.50	18,279.78	163,172.23
					263,683.40	2,072,644.33

		Vehicle Fleet	Mix			
Vehicle Type		Percent Type	Non-Catalyst	(Catalyst	Diesel
Light Auto		51.7	0.0		100.0	0.0
Light Truck < 3750 lbs		6.7	0.0		100.0	0.0
Light Truck 3751-5750 lbs		23.5	0.0		100.0	0.0
Med Truck 5751-8500 lbs		10.6	0.0		100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs		1.7	0.0		82.4	17.6
Lite-Heavy Truck 10,001-14,000 lbs		0.5	0.0		60.0	40.0
Med-Heavy Truck 14,001-33,000 lbs		1.0	0.0		20.0	80.0
Heavy-Heavy Truck 33,001-60,000 lbs		0.5	0.0		0.0	100.0
Other Bus		0.1	0.0		0.0	100.0
Urban Bus		0.1	0.0		0.0	100.0
Motorcycle		2.5	32.0		68.0	0.0
School Bus		0.1	0.0		0.0	100.0
Motor Home		1.0	0.0		90.0	10.0
		Travel Condi	tions			
		Residential			Commercial	
	Home-Work	Home-Shop	Home-Other	Commute	Commercial Non-Work	Customer
Urban Trip Length (miles)	12.7	Home-Shop 7.0	9.5	Commute 13.3	Non-Work 7.4	8.9
Rural Trip Length (miles)	12.7 17.6	Home-Shop 7.0 12.1	9.5 14.9	Commute 13.3 15.4	Non-Work 7.4 9.6	8.9 12.6
Rural Trip Length (miles) Trip speeds (mph)	12.7 17.6 30.0	Home-Shop 7.0 12.1 30.0	9.5 14.9 30.0	Commute 13.3	Non-Work 7.4	8.9
Rural Trip Length (miles)	12.7 17.6	Home-Shop 7.0 12.1	9.5 14.9	Commute 13.3 15.4	Non-Work 7.4 9.6	8.9 12.6
Rural Trip Length (miles) Trip speeds (mph)	12.7 17.6 30.0	Home-Shop 7.0 12.1 30.0	9.5 14.9 30.0	Commute 13.3 15.4	Non-Work 7.4 9.6	8.9 12.6
Rural Trip Length (miles) Trip speeds (mph) % of Trips - Residential	12.7 17.6 30.0	Home-Shop 7.0 12.1 30.0	9.5 14.9 30.0	Commute 13.3 15.4	Non-Work 7.4 9.6	8.9 12.6
Rural Trip Length (miles) Trip speeds (mph) % of Trips - Residential % of Trips - Commercial (by land use)	12.7 17.6 30.0	Home-Shop 7.0 12.1 30.0	9.5 14.9 30.0	Commute 13.3 15.4 30.0	Non-Work 7.4 9.6 30.0	8.9 12.6 30.0
Rural Trip Length (miles) Trip speeds (mph) % of Trips - Residential % of Trips - Commercial (by land use) Elementary school	12.7 17.6 30.0	Home-Shop 7.0 12.1 30.0	9.5 14.9 30.0	Commute 13.3 15.4 30.0 20.0	Non-Work 7.4 9.6 30.0 10.0	8.9 12.6 30.0 70.0
Rural Trip Length (miles) Trip speeds (mph) % of Trips - Residential % of Trips - Commercial (by land use) Elementary school High school	12.7 17.6 30.0	Home-Shop 7.0 12.1 30.0	9.5 14.9 30.0	Commute 13.3 15.4 30.0 20.0 10.0	Non-Work 7.4 9.6 30.0 10.0 5.0	8.9 12.6 30.0 70.0 85.0
Rural Trip Length (miles) Trip speeds (mph) % of Trips - Residential % of Trips - Commercial (by land use) Elementary school High school City park	12.7 17.6 30.0	Home-Shop 7.0 12.1 30.0	9.5 14.9 30.0	Commute 13.3 15.4 30.0 20.0 10.0 5.0	Non-Work 7.4 9.6 30.0 10.0 5.0 2.5	8.9 12.6 30.0 70.0 85.0 92.5
Rural Trip Length (miles) Trip speeds (mph) % of Trips - Residential % of Trips - Commercial (by land use) Elementary school High school City park Free-standing discount superstore	12.7 17.6 30.0	Home-Shop 7.0 12.1 30.0	9.5 14.9 30.0	Commute 13.3 15.4 30.0 20.0 10.0 5.0 2.0	Non-Work 7.4 9.6 30.0 10.0 5.0 2.5 1.0	8.9 12.6 30.0 70.0 85.0 92.5 97.0
Rural Trip Length (miles) Trip speeds (mph) % of Trips - Residential % of Trips - Commercial (by land use) Elementary school High school City park Free-standing discount superstore Strip mall	12.7 17.6 30.0	Home-Shop 7.0 12.1 30.0	9.5 14.9 30.0	Commute 13.3 15.4 30.0 20.0 10.0 5.0 2.0 2.0	Non-Work 7.4 9.6 30.0 10.0 5.0 2.5 1.0 1.0	8.9 12.6 30.0 70.0 85.0 92.5 97.0 97.0