

APPENDIX H

Air Quality Data

Summary Report for Summer Emissions (Pounds/Day)

File Name: C:\Documents and Settings\lequinn\Application Data\Urbemis\Version9a\Projects\Thunder Valley Casino Expansion\Thunder Valley Casino Expansion.urb9

Project Name: Thunder Valley Expansion

Project Location: Placer County APCD

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

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10 Dust</u>	<u>PM10 Exhaust</u>	<u>PM10</u>	<u>PM2.5 Dust</u>	<u>PM2.5 Exhaust</u>	<u>PM2.5</u>	<u>CO2</u>
2008 TOTALS (lbs/day unmitigated)	5.02	37.84	71.09	0.06	131.21	2.03	133.24	27.40	1.87	29.27	7,905.63
2008 TOTALS (lbs/day mitigated)	5.02	37.84	71.09	0.06	29.88	2.03	31.91	6.24	1.87	8.11	7,905.63
2009 TOTALS (lbs/day unmitigated)	72.35	22.24	66.93	0.06	0.32	1.33	1.65	0.12	1.21	1.33	8,032.27
2009 TOTALS (lbs/day mitigated)	48.77	20.04	66.93	0.06	0.32	0.46	0.78	0.12	0.42	0.53	8,032.27
2010 TOTALS (lbs/day unmitigated)	67.66	15.65	11.16	0.00	0.02	1.31	1.33	0.01	1.21	1.21	1,534.26
2010 TOTALS (lbs/day mitigated)	16.84	13.41	11.16	0.00	0.02	0.22	0.24	0.01	0.20	0.21	1,534.26

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AREA SOURCE EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	4.23	6.90	10.56	0.00	0.02	0.02	8,219.76
TOTALS (lbs/day, mitigated)	4.23	6.90	10.56	0.00	0.02	0.02	8,219.76
Percent Reduction	0.00	0.00	0.00	NaN	0.00	0.00	0.00

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	44.87	48.09	408.98	0.38	65.22	12.67	38,621.92
TOTALS (lbs/day, mitigated)	43.96	46.92	399.03	0.36	63.64	12.37	37,682.11
Percent Reduction	2.03	2.43	2.43	5.26	2.42	2.37	2.43

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	49.10	54.99	419.54	0.38	65.24	12.69	46,841.68
TOTALS (lbs/day, mitigated)	48.19	53.82	409.59	0.36	63.66	12.39	45,901.87
Percent Reduction	1.85	2.13	2.37	5.26	2.42	2.36	2.01

Summary Report for Annual Emissions (Tons/Year)

File Name: C:\Documents and Settings\equinn\Application Data\Urbemis\Version9a\Projects\Thunder Valley Casino Expansion\Thunder Valley Casino Expansion.urb9

Project Name: Thunder Valley Expansion

Project Location: Placer County APCD

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

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10 Dust</u>	<u>PM10 Exhaust</u>	<u>PM10</u>	<u>PM2.5 Dust</u>	<u>PM2.5 Exhaust</u>	<u>PM2.5</u>	<u>CO2</u>
2008 TOTALS (tons/year unmitigated)	0.44	2.90	3.90	0.00	6.84	0.16	7.00	1.43	0.15	1.58	478.83
2008 TOTALS (tons/year mitigated)	0.44	2.81	3.90	0.00	1.57	0.12	1.69	0.33	0.11	0.44	478.83
Percent Reduction	0.00	3.16	0.00	0.00	77.09	22.26	75.83	76.99	22.32	71.89	0.00
2009 TOTALS (tons/year unmitigated)	5.16	3.47	10.37	0.01	0.05	0.21	0.26	0.02	0.19	0.21	1,245.80
2009 TOTALS (tons/year mitigated)	3.62	3.13	10.37	0.01	0.05	0.07	0.12	0.02	0.06	0.08	1,245.80
Percent Reduction	29.90	9.88	0.00	0.00	0.00	65.30	52.69	0.00	65.81	60.15	0.00
2010 TOTALS (tons/year unmitigated)	1.80	0.62	0.47	0.00	0.00	0.05	0.05	0.00	0.05	0.05	63.69
2010 TOTALS (tons/year mitigated)	0.53	0.53	0.47	0.00	0.00	0.01	0.01	0.00	0.01	0.01	63.69
Percent Reduction	70.48	14.22	0.00	0.00	0.00	82.90	81.51	0.00	82.94	82.40	0.00

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AREA SOURCE EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (tons/year, unmitigated)	0.74	1.26	1.48	0.00	0.00	0.00	1,499.34
TOTALS (tons/year, mitigated)	0.74	1.26	1.48	0.00	0.00	0.00	1,499.34
Percent Reduction	0.00	0.00	0.00	NaN	NaN	NaN	0.00

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (tons/year, unmitigated)	8.42	10.02	79.41	0.07	11.91	2.31	6,750.61
TOTALS (tons/year, mitigated)	8.24	9.79	77.49	0.07	11.62	2.26	6,586.34
Percent Reduction	2.14	2.30	2.42	0.00	2.43	2.16	2.43

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (tons/year, unmitigated)	9.16	11.28	80.89	0.07	11.91	2.31	8,249.95
TOTALS (tons/year, mitigated)	8.98	11.05	78.97	0.07	11.62	2.26	8,085.68
Percent Reduction	1.97	2.04	2.37	0.00	2.43	2.16	1.99

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Time Slice 8/1/2008-9/30/2008 Active Days: 52	4.68	37.84	20.93	0.00	131.21	2.03	133.24	27.40	1.87	29.27	3,203.10
Fine Grading 08/01/2008- 09/30/2008	4.68	37.84	20.93	0.00	131.21	2.03	133.24	27.40	1.87	29.27	3,203.10
Fine Grading Dust	0.00	0.00	0.00	0.00	131.20	0.00	131.20	27.40	0.00	27.40	0.00
Fine Grading Off Road Diesel	4.62	37.73	18.93	0.00	0.00	2.03	2.03	0.00	1.87	1.87	3,007.48
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.06	0.11	2.00	0.00	0.01	0.00	0.01	0.00	0.00	0.01	195.63
Time Slice 10/1/2008-12/31/2008 Active Days: 79	5.02	23.66	71.09	0.06	0.31	1.38	1.69	0.11	1.26	1.37	7,905.63
Building 10/01/2008-12/31/2009	5.02	23.66	71.09	0.06	0.31	1.38	1.69	0.11	1.26	1.37	7,905.63
Building Off Road Diesel	2.99	15.45	9.16	0.00	0.00	1.06	1.06	0.00	0.98	0.98	1,352.25
Building Vendor Trips	0.35	4.89	3.54	0.01	0.03	0.19	0.22	0.01	0.18	0.19	829.79
Building Worker Trips	1.67	3.31	58.39	0.06	0.28	0.13	0.41	0.10	0.11	0.21	5,723.59
Time Slice 1/1/2009-7/31/2009 Active Days: 182	4.68	22.17	65.77	0.06	0.31	1.33	1.64	0.11	1.21	1.32	7,908.68
Building 10/01/2008-12/31/2009	4.68	22.17	65.77	0.06	0.31	1.33	1.64	0.11	1.21	1.32	7,908.68
Building Off Road Diesel	2.84	14.62	8.91	0.00	0.00	1.02	1.02	0.00	0.94	0.94	1,352.25
Building Vendor Trips	0.33	4.57	3.29	0.01	0.03	0.17	0.20	0.01	0.16	0.17	829.80
Building Worker Trips	1.51	2.99	53.57	0.06	0.28	0.13	0.42	0.10	0.11	0.22	5,726.63

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Time Slice 8/1/2009-12/31/2009 Active Days: 131	72.35	22.24	66.93	0.06	0.32	1.33	1.65	0.12	1.21	1.33	8,032.27
Building 10/01/2008-12/31/2009	4.68	22.17	65.77	0.06	0.31	1.33	1.64	0.11	1.21	1.32	7,908.68
Building Off Road Diesel	2.84	14.62	8.91	0.00	0.00	1.02	1.02	0.00	0.94	0.94	1,352.25
Building Vendor Trips	0.33	4.57	3.29	0.01	0.03	0.17	0.20	0.01	0.16	0.17	829.80
Building Worker Trips	1.51	2.99	53.57	0.06	0.28	0.13	0.42	0.10	0.11	0.22	5,726.63
Coating 08/01/2009-02/28/2010	67.66	0.06	1.16	0.00	0.01	0.00	0.01	0.00	0.00	0.00	123.59
Architectural Coating	67.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.03	0.06	1.16	0.00	0.01	0.00	0.01	0.00	0.00	0.00	123.59
Time Slice 1/1/2010-2/27/2010 Active Days: 50	57.66	0.06	1.06	0.00	0.01	0.00	0.01	0.00	0.00	0.00	123.66
Coating 08/01/2009-02/28/2010	67.66	0.06	1.06	0.00	0.01	0.00	0.01	0.00	0.00	0.00	123.66
Architectural Coating	67.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.03	0.06	1.06	0.00	0.01	0.00	0.01	0.00	0.00	0.00	123.66
Time Slice 3/1/2010-5/31/2010 Active Days: 79	2.81	15.65	11.16	0.00	0.02	1.31	1.33	0.01	1.21	1.21	1,534.26
Asphalt 03/01/2010-05/31/2010	2.81	15.65	11.16	0.00	0.02	1.31	1.33	0.01	1.21	1.21	1,534.26
Paving Off-Gas	0.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	2.48	14.87	8.27	0.00	0.00	1.28	1.28	0.00	1.18	1.18	1,131.92
Paving On Road Diesel	0.04	0.63	0.21	0.00	0.00	0.02	0.03	0.00	0.02	0.02	88.99
Paving Worker Trips	0.07	0.15	2.68	0.00	0.02	0.01	0.02	0.01	0.01	0.01	313.35

Phase Assumptions

Phase: Fine Grading 8/1/2008 - 9/30/2008 - Default Paving Description

Total Acres Disturbed: 26.24

Maximum Daily Acreage Disturbed: 6.56

Fugitive Dust Level of Detail: Default

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20 lbs per acre-day

On Road Truck Travel (VMT): 0

Off-Road Equipment:

- 1 Graders (174 hp) operating at a 0.61 load factor for 8 hours per day
- 1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 8 hours per day
- 2 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day
- 1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Mass Grading 6/1/2008 - 7/31/2008 - Default Fine Site Grading Description

Total Acres Disturbed: 26.24

Maximum Daily Acreage Disturbed: 6.56

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 0

Off-Road Equipment:

- 1 Graders (174 hp) operating at a 0.61 load factor for 8 hours per day
- 1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 8 hours per day
- 2 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day
- 1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Paving 3/1/2010 - 5/31/2010 - Type Your Description Here

Acres to be Paved: 6.56

Off-Road Equipment:

- 4 Cement and Mortar Mixers (10 hp) operating at a 0.56 load factor for 6 hours per day
- 1 Pavers (100 hp) operating at a 0.62 load factor for 7 hours per day
- 2 Paving Equipment (104 hp) operating at a 0.53 load factor for 6 hours per day
- 1 Rollers (95 hp) operating at a 0.56 load factor for 7 hours per day

Phase: Building Construction 10/1/2008 - 12/31/2009 - Default Building Construction Description

Off-Road Equipment:

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- 1 Cranes (399 hp) operating at a 0.43 load factor for 6 hours per day
 - 2 Forklifts (145 hp) operating at a 0.3 load factor for 6 hours per day
 - 1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day
 - 3 Welders (45 hp) operating at a 0.45 load factor for 8 hours per day
- Phase: Architectural Coating 8/1/2009 - 2/28/2010 - Default Architectural Coating Description
 Rule: Residential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250
 Rule: Residential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250
 Rule: Nonresidential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250
 Rule: Nonresidential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Construction Mitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Summer Pounds Per Day, Mitigated

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
Time Slice 6/2/2008-7/31/2008 Active Days: 52	4.68	37.84	20.93	0.00	29.88	2.03	31.91	6.24	1.87	8.11	3,203.10
Mass Grading 06/01/2008-07/31/2008	4.68	37.84	20.93	0.00	29.88	2.03	31.91	6.24	1.87	8.11	3,203.10
Mass Grading Dust	0.00	0.00	0.00	0.00	29.87	0.00	29.87	6.24	0.00	6.24	0.00
Mass Grading Off Road Diesel	4.62	37.73	18.93	0.00	0.00	2.03	2.03	0.00	1.87	1.87	3,007.48
Mass Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading Worker Trips	0.06	0.11	2.00	0.00	0.01	0.00	0.01	0.00	0.00	0.01	195.63

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Time Slice 8/1/2008-9/30/2008 Active Days: 52	4.68	<u>37.84</u>	20.93	0.00	<u>29.88</u>	<u>2.03</u>	<u>31.91</u>	<u>6.24</u>	<u>1.87</u>	<u>8.11</u>	3,203.10
Fine Grading 08/01/2008- 09/30/2008	4.68	37.84	20.93	0.00	29.88	2.03	31.91	6.24	1.87	8.11	3,203.10
Fine Grading Dust	0.00	0.00	0.00	0.00	29.87	0.00	29.87	6.24	0.00	6.24	0.00
Fine Grading Off Road Diesel	4.62	37.73	18.93	0.00	0.00	2.03	2.03	0.00	1.87	1.87	3,007.48
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.06	0.11	2.00	0.00	0.01	0.00	0.01	0.00	0.00	0.01	195.63
Time Slice 10/1/2008-12/31/2008 Active Days: 79	<u>5.02</u>	<u>21.34</u>	<u>71.09</u>	<u>0.06</u>	<u>0.31</u>	<u>0.48</u>	<u>0.79</u>	<u>0.11</u>	<u>0.43</u>	<u>0.54</u>	<u>7,905.63</u>
Building 10/01/2008-12/31/2009	5.02	21.34	71.09	0.06	0.31	0.48	0.79	0.11	0.43	0.54	7,905.63
Building Off Road Diesel	2.99	13.14	9.16	0.00	0.00	0.16	0.16	0.00	0.15	0.15	1,352.25
Building Vendor Trips	0.35	4.89	3.54	0.01	0.03	0.19	0.22	0.01	0.18	0.19	829.79
Building Worker Trips	1.67	3.31	58.39	0.06	0.28	0.13	0.41	0.10	0.11	0.21	5,723.59
Time Slice 11/1/2009-7/31/2009 Active Days: 182	4.68	19.98	65.77	0.06	0.31	0.46	0.77	0.11	0.41	0.53	7,908.68
Building 10/01/2008-12/31/2009	4.68	19.98	65.77	0.06	0.31	0.46	0.77	0.11	0.41	0.53	7,908.68
Building Off Road Diesel	2.84	12.42	8.91	0.00	0.00	0.15	0.15	0.00	0.14	0.14	1,352.25
Building Vendor Trips	0.33	4.57	3.29	0.01	0.03	0.17	0.20	0.01	0.16	0.17	829.80
Building Worker Trips	1.51	2.99	53.57	0.06	0.28	0.13	0.42	0.10	0.11	0.22	5,726.63

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Time Slice 8/1/2009-12/31/2009 Active Days: 131	48.77	20.04	66.93	0.06	0.32	0.46	0.78	0.12	0.42	0.53	8,032.27
Building 10/01/2008-12/31/2009	4.68	19.98	65.77	0.06	0.31	0.46	0.77	0.11	0.41	0.53	7,908.68
Building Off Road Diesel	2.84	12.42	8.91	0.00	0.00	0.15	0.15	0.00	0.14	0.14	1,352.25
Building Vendor Trips	0.33	4.57	3.29	0.01	0.03	0.17	0.20	0.01	0.16	0.17	829.80
Building Worker Trips	1.51	2.99	53.57	0.06	0.28	0.13	0.42	0.10	0.11	0.22	5,726.63
Coating 08/01/2009-02/28/2010	44.09	0.06	1.16	0.00	0.01	0.00	0.01	0.00	0.00	0.00	123.59
Architectural Coating	44.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.03	0.06	1.16	0.00	0.01	0.00	0.01	0.00	0.00	0.00	123.59
Time Slice 1/1/2010-2/27/2010 Active Days: 50	16.84	0.06	1.06	0.00	0.01	0.00	0.01	0.00	0.00	0.00	123.66
Coating 08/01/2009-02/28/2010	16.84	0.06	1.06	0.00	0.01	0.00	0.01	0.00	0.00	0.00	123.66
Architectural Coating	16.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.03	0.06	1.06	0.00	0.01	0.00	0.01	0.00	0.00	0.00	123.66
Time Slice 3/1/2010-5/31/2010 Active Days: 79	2.81	13.41	11.16	0.00	0.02	0.22	0.24	0.01	0.20	0.21	1,534.26
Asphalt 03/01/2010-05/31/2010	2.81	13.41	11.16	0.00	0.02	0.22	0.24	0.01	0.20	0.21	1,534.26
Paving Off-Gas	0.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	2.48	12.64	8.27	0.00	0.00	0.19	0.19	0.00	0.18	0.18	1,131.92
Paving On Road Diesel	0.04	0.63	0.21	0.00	0.00	0.02	0.03	0.00	0.02	0.02	88.99
Paving Worker Trips	0.07	0.15	2.68	0.00	0.02	0.01	0.02	0.01	0.01	0.01	313.35

Construction Related Mitigation Measures

The following mitigation measures apply to Phase: Fine Grading 8/1/2008 - 9/30/2008 - Default Paving Description

For Soil Stabilizing Measures, the Apply soil stabilizers to inactive areas mitigation reduces emissions by:

PM10: 84% PM25: 84%

For Soil Stabilizing Measures, the Water exposed surfaces 2x daily watering mitigation reduces emissions by:

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PM10: 55% PM25: 55%

For Soil Stabilizing Measures, the Equipment loading/unloading mitigation reduces emissions by:

PM10: 69% PM25: 69%

The following mitigation measures apply to Phase: Mass Grading 6/1/2008 - 7/31/2008 - Default Fine Site Grading Description

For Soil Stabilizing Measures, the Apply soil stabilizers to inactive areas mitigation reduces emissions by:

PM10: 84% PM25: 84%

For Soil Stabilizing Measures, the Water exposed surfaces 2x daily watering mitigation reduces emissions by:

PM10: 55% PM25: 55%

For Soil Stabilizing Measures, the Equipment loading/unloading mitigation reduces emissions by:

PM10: 69% PM25: 69%

The following mitigation measures apply to Phase: Paving 3/1/2010 - 5/31/2010 - Type Your Description Here

For Cement and Mortar Mixers, the Diesel Particulate Filter (DPF) 1st Tier mitigation reduces emissions by:

PM10: 85% PM25: 85%

For Cement and Mortar Mixers, the Diesel Oxidation Catalyst 15% mitigation reduces emissions by:

NOX: 15%

For Pavers, the Diesel Particulate Filter (DPF) 1st Tier mitigation reduces emissions by:

PM10: 85% PM25: 85%

For Pavers, the Diesel Oxidation Catalyst 15% mitigation reduces emissions by:

NOX: 15%

For Paving Equipment, the Diesel Particulate Filter (DPF) 1st Tier mitigation reduces emissions by:

PM10: 85% PM25: 85%

For Paving Equipment, the Diesel Oxidation Catalyst 15% mitigation reduces emissions by:

NOX: 15%

For Rollers, the Diesel Particulate Filter (DPF) 1st Tier mitigation reduces emissions by:

PM10: 85% PM25: 85%

For Rollers, the Diesel Oxidation Catalyst 15% mitigation reduces emissions by:

NOX: 15%

The following mitigation measures apply to Phase: Building Construction 10/1/2008 - 12/31/2009 - Default Building Construction Description

For Cranes, the Diesel Particulate Filter (DPF) 1st Tier mitigation reduces emissions by:

PM10: 85% PM25: 85%

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For Cranes, the Diesel Oxidation Catalyst 15% mitigation reduces emissions by:

NOX: 15%

For Forklifts, the Diesel Particulate Filter (DPF) 1st Tier mitigation reduces emissions by:

PM10: 85% PM25: 85%

For Forklifts, the Diesel Oxidation Catalyst 15% mitigation reduces emissions by:

NOX: 15%

For Tractors/Loaders/Backhoes, the Diesel Particulate Filter (DPF) 1st Tier mitigation reduces emissions by:

PM10: 85% PM25: 85%

For Tractors/Loaders/Backhoes, the Diesel Oxidation Catalyst 15% mitigation reduces emissions by:

NOX: 15%

For Welders, the Diesel Particulate Filter (DPF) 1st Tier mitigation reduces emissions by:

PM10: 85% PM25: 85%

For Welders, the Diesel Oxidation Catalyst 15% mitigation reduces emissions by:

NOX: 15%

The following mitigation measures apply to Phase: Architectural Coating 8/1/2009 - 2/28/2010 - Default Architectural Coating Description

For Nonresidential Architectural Coating Measures, the Nonresidential Exterior: Use Low VOC Coatings mitigation reduces emissions by:

ROG: 10%

For Nonresidential Architectural Coating Measures, the Nonresidential Interior: Use Low VOC Coatings mitigation reduces emissions by:

ROG: 10%

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0.50	6.84	5.75	0.00	0.01	0.01	8,211.52
Hearth - No Summer Emissions							
Landscape	0.39	0.06	4.81	0.00	0.01	0.01	8.24
Consumer Products	0.00						
Architectural Coatings	3.34						
TOTALS (lbs/day, unmitigated)	4.23	6.90	10.56	0.00	0.02	0.02	8,219.76

Area Source Mitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Summer Pounds Per Day, Mitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0.50	6.84	5.75	0.00	0.01	0.01	8,211.52
Hearth - No Summer Emissions							
Landscape	0.39	0.06	4.81	0.00	0.01	0.01	8.24
Consumer Products	0.00						
Architectural Coatings	3.34						
TOTALS (lbs/day, mitigated)	4.23	6.90	10.56	0.00	0.02	0.02	8,219.76

Area Source Mitigation Measures Selected

Mitigation Description Percent Reduction

Area Source Changes to Defaults

Percentage of residences with wood stoves changed from 35% to 0%

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

Percentage of residences with natural gas fireplaces changed from 55% to 100%

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

<u>Source</u>	ROG	NOX	CO	SO2	PM10	PM25	CO2
Hotel	11.94	8.39	71.41	0.07	11.39	2.21	6,745.21
Performing Arts Center	11.61	13.41	113.74	0.10	18.13	3.52	10,734.70
Casino	21.32	26.29	223.83	0.21	35.70	6.94	21,142.01
TOTALS (lbs/day, unmitigated)	44.87	48.09	408.98	0.38	65.22	12.67	38,621.92

Operational Mitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Summer Pounds Per Day, Mitigated

<u>Source</u>	ROG	NOX	CO	SO2	PM10	PM25	CO2
Hotel	11.78	8.18	69.67	0.06	11.11	2.16	6,581.07
Performing Arts Center	11.36	13.09	110.98	0.10	17.69	3.44	10,473.49
Casino	20.82	25.65	218.38	0.20	34.84	6.77	20,627.55
TOTALS (lbs/day, mitigated)	43.96	46.92	399.03	0.36	63.64	12.37	37,682.11

Operational Mitigation Options Selected

Residential Mitigation Measures

Nonresidential Mitigation Measures

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Nonresidential Mitigation Measures

Non-Residential Local-Serving Retail Mitigation

Percent Reduction in Trips is 2%

Inputs Selected:

The Presence of Local-Serving Retail checkbox was selected.

Non-Residential Transit Service Mitigation

Percent Reduction in Trips is 0.43%

Inputs Selected:

The Number of Daily Weekday Buses Stopping Within 1/4 Mile of Site is 6

The Number of Daily Rail or Bus Rapid Transit Stops Within 1/2 Mile of Site is 6

The Number of Dedicated Daily Shuttle Trips is 4

Operational Settings:

Includes correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2011 Temperature (F): 85 Season: Summer

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Hotel		2.06	rooms	650.00	1,339.00	6,593.93
Performing Arts Center		15.77	1000 sq ft	140.00	2,207.80	10,495.19

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Casino	39.43	1000 sq ft	106.44	4,196.93	20,667.84	
				7,743.73	37,756.96	

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	39.9	1.0	98.7	0.3
Light Truck < 3750 lbs	14.1	2.1	90.1	7.8
Light Truck 3751-5750 lbs	22.4	0.4	99.2	0.4
Med Truck 5751-8500 lbs	11.0	0.9	99.1	0.0
Lite-Heavy Truck 8501-10,000 lbs	2.6	0.0	73.1	26.9
Lite-Heavy Truck 10,001-14,000 lbs	0.9	0.0	44.4	55.6
Med-Heavy Truck 14,001-33,000 lbs	0.9	0.0	22.2	77.8
Heavy-Heavy Truck 33,001-60,000 lbs	1.2	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.0	0.0	0.0	0.0
Motorcycle	5.5	61.8	38.2	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	1.3	0.0	84.6	15.4

Travel Conditions

Residential	Commercial
Home-Work 10.8	Home-Work 7.9
Home-Shop 7.3	Non-Work 7.1
Home-Other 7.5	Commute 16.8
Home-Work 10.8	Customer 7.9

Urban Trip Length (miles)

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
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	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
Hotel				5.0	2.5	92.5
Performing Arts Center				2.0	1.0	97.0
Casino				5.0	2.5	92.5

Operational Changes to Defaults

The urban/rural selection has been changed from Urban to Rural

Commercial-based commute urban trip length changed from 9.5 miles to 16.8 miles

Commercial-based non-work urban trip length changed from 7.35 miles to 7.1 miles

Commercial-based customer urban trip length changed from 7.35 miles to 7.9 miles

**Table 1
Thunder Valley Rancheria Hotel and Casino Expansion Estimated GHG Emission**

Mobile Source					
	Emission Factor (CH₄/N₂O) g/mile	Miles Traveled miles/day	CH₄ Emissions	N₂O Emissions	CO₂e
Proposed Project	0.05/0.05	10,495	4	4	9
Area Source					
	Emission Factor (Kg of CH₄/N₂O) MMBtu	Estimated MMBtu Usage¹ MMBtu/month	CH₄ Emissions	N₂O Emissions	CO₂e
Proposed Project	0.0059/0.0001	20,000	15.60	0.03	16
Indirect Electrical					
	Emission Factor (CO₂/CH₄/N₂O) lb/kW-h	Estimated KW-h Usage kW-h/year	CO₂/CH₄ Emissions	N₂O Emissions	CO₂e
Proposed Project	804.54/0.0067/0.0037	36,000	14,81/0.12	0.07	14,482
Greenhouse Gas					
	Total CO₂e				
	tons per year				
Proposed Project	14,506				

¹ Estimated using 45 therms per day usage, 45 therms = 4.5 MMBTU.

² Estimated using 3000 kilowatts-hours/month of power used and PG&E carbon footprint calculator. Source: AES, 2007.

Summary Report for Annual Emissions (Tons/Year)

File Name: C:\Documents and Settings\lequinn\Application Data\Urbemis\Version9a\Projects\Thunder Valley Casino Expansion\Thunder Valley Casino Expansion Cumulative.urb9

Project Name: Thunder Valley Expansion Cumulative

Project Location: Placer County APCD

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

Off-Road Vehicle Emissions Based on: OFFROAD2007

AREA SOURCE EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (tons/year, unmitigated)	0.74	1.26	1.48	0.00	0.00	0.00	1,499.34

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (tons/year, unmitigated)	4.44	3.48	35.32	0.07	11.84	2.25	6,712.67
TOTALS (tons/year, mitigated)	4.36	3.39	34.46	0.07	11.55	2.19	6,549.33
Percent Reduction	1.80	2.59	2.43	0.00	2.45	2.67	2.43

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (tons/year, unmitigated)	5.18	4.74	36.80	0.07	11.84	2.25	8,212.01

Both Area and Operational Mitigation must be turned on to get a combined mitigated total.

Combined Summer Emissions Reports (Pounds/Day)

File Name: C:\Documents and Settings\equinn\Application Data\Urbemis\Version9a\Projects\Thunder Valley Casino Expansion\Thunder Valley Casino Expansion Cumulative.urb9

Project Name: Thunder Valley Expansion Cumulative

Project Location: Placer County APCD

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

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	4.23	6.90	10.56	0.00	0.02	0.02	8,219.76

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	24.43	16.53	184.47	0.37	64.82	12.33	38,467.40
TOTALS (lbs/day, mitigated)	23.95	16.13	179.98	0.36	63.25	12.02	37,531.36
Percent Reduction	1.96	2.42	2.43	2.70	2.42	2.51	2.43

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	28.66	23.43	195.03	0.37	64.84	12.35	46,687.16

Both Area and Operational Mitigation must be turned on to get a combined mitigated total.

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

<u>Source</u>	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
Natural Gas	0.50	6.84	5.75	0.00	0.01	0.01	8,211.52
Hearth - No Summer Emissions							
Landscape	0.39	0.06	4.81	0.00	0.01	0.01	8.24
Consumer Products	0.00						
Architectural Coatings	3.34						
TOTALS (lbs/day, unmitigated)	4.23	6.90	10.56	0.00	0.02	0.02	8,219.76

Area Source Mitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Summer Pounds Per Day, Mitigated

<u>Source</u>	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
Natural Gas	0.50	6.84	5.75	0.00	0.01	0.01	8,211.52
Hearth - No Summer Emissions							
Landscape	0.39	0.06	4.81	0.00	0.01	0.01	8.24
Consumer Products	0.00						
Architectural Coatings	3.34						
TOTALS (lbs/day, mitigated)	4.23	6.90	10.56	0.00	0.02	0.02	8,219.76

Area Source Changes to Defaults

Percentage of residences with wood stoves changed from 35% to 0%

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

Percentage of residences with natural gas fireplaces changed from 55% to 100%

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

<u>Source</u>	ROG	NOX	CO	SO2	PM10	PM25	CO2
Hotel	6.79	2.88	32.21	0.07	11.32	2.15	6,718.28
Performing Arts Center	6.26	4.61	51.30	0.10	18.02	3.43	10,691.50
Casino	11.38	9.04	100.96	0.20	35.48	6.75	21,057.62
TOTALS (lbs/day, unmitigated)	24.43	16.53	184.47	0.37	64.82	12.33	38,467.40

Operational Mitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Summer Pounds Per Day, Mitigated

<u>Source</u>	ROG	NOX	CO	SO2	PM10	PM25	CO2
Hotel	6.70	2.81	31.43	0.06	11.05	2.10	6,554.80
Performing Arts Center	6.13	4.50	50.05	0.10	17.58	3.34	10,431.34
Casino	11.12	8.82	98.50	0.20	34.62	6.58	20,545.22
TOTALS (lbs/day, mitigated)	23.95	16.13	179.98	0.36	63.25	12.02	37,531.36

Operational Settings:

Includes correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2025 Temperature (F): 85 Season: Summer

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Hotel		2.06	rooms	650.00	1,339.00	6,593.93

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Performing Arts Center	15.77	1000 sq ft	140.00	2,207.80	10,495.19	
Casino	39.43	1000 sq ft	106.44	4,196.93	20,667.84	
				7,743.73	37,756.96	

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	40.3	0.0	100.0	0.0
Light Truck < 3750 lbs	13.9	0.0	97.8	2.2
Light Truck 3751-5750 lbs	22.4	0.0	100.0	0.0
Med Truck 5751-8500 lbs	11.0	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	2.6	0.0	76.9	23.1
Lite-Heavy Truck 10,001-14,000 lbs	0.9	0.0	55.6	44.4
Med-Heavy Truck 14,001-33,000 lbs	0.9	0.0	22.2	77.8
Heavy-Heavy Truck 33,001-60,000 lbs	1.0	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.0	0.0	0.0	0.0
Motorcycle	5.5	34.5	65.5	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	1.3	0.0	84.6	15.4

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	16.8	7.1	7.9
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	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
Hotel				5.0	2.5	92.5
Performing Arts Center				2.0	1.0	97.0
Casino				5.0	2.5	92.5