Appendix D

Air Quality Appendices

Parenthetical URBEMIS2001 Assumptions for All Building Phases: Vitner Square Shopping Center EIR Date 12/20/02

LAND USES

Amount	Project Land Use Type	Trip Rate	Unit Type	% Emp. Trips
6.2	Fast-Food Drive Through	496.12	1000 sq. ft	5
161.7	Lowe's Major Tenant	34.8	1000 sq. ft	2
120.84	Commercial/ Retail Shops	47.05	1000 sq. ft	2

AREA SOURCES

Fuel combustion:

(URBEMIS2001 default all phases)

Wood Stoves:

Off

Fireplaces:

Off

Landscape Maintenance Equipment:

Phase	Year of Completion	Summer Days
I	2004	180

Consumer Products:

(URBEMIS2001 default all phases)

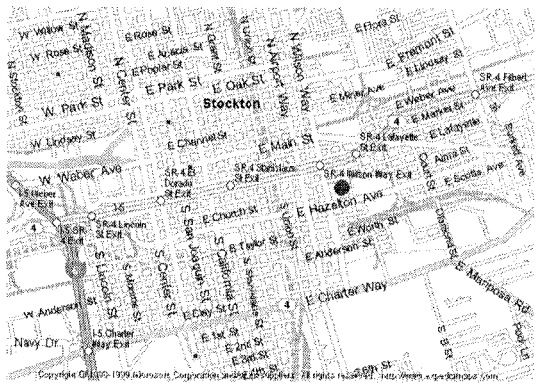
Mitigation:

None cited by Project Applicant (All Phases)

Site Information - Stockton-Hazelton

This page updated June 11, 2001.

from 12:00 through 12:59 PM Pacific Standard Time the ozone level was 10 PPB and the AQI was 3 [Good], outside temperature was 60 degrees F, and wind speed was 1 knots from the west



Site Information

AIRS Number	ARB Number	Site Start Date	Reporting Agency and Agency Code
060771002	39252		California Air Resources Board (001)

Site Address	County Location	Air Basin	Latitude	Longitude
1593 E Hazelton St, Stockton, California 95205	San Joaquin	San Joaquin Valley	37° 57' 6"	121° 16' 8"

Pollutants Monitored	CO, NO_2, O_3, PM_{10}, TEOM, $PM_{2.5}$, Toxics-Organics, Toxics-Metals, Toxics-Aldehydes, Cr^{6+}, Coefficient of Haze, Outdoor Temperature, Relative Humidity, Wind Direction, Horizontal Wind Speed

OPERATIONAL SOURCES

Anticipated Fleet Mix:

(URBEMIS2001 default all phases)

Year:

Phase	Year of Completion
I	2004 (Used URBEMIS2001 default)

Trip Characteristics:

(URBEMIS2001 Default all phases)

Temperature Data:

40 to 85 degrees Fahrenheit (All Phases)

Variable Starts:

(URBEMIS2001 default all phases)

Paved / Unpaved Roads:

100% paved (All Phases)

Pass By Trips:

On for all phases

Operational Mitigation Measures:

None cited by the Project Applicant (All Phases)

URBEMIS 2001 For Windows 6.2.2

File Name: C:\Program Files\URBEMIS 2001 For Windows\Projects2k\Vitner Squa
Project Name: Vitner Square
Project Location: San Joaquin Valley

SUMMARY REPORT
(Pounds/Day - Summer)

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	PM10	SO2
TOTALS(lbs/day,unmitigated)	0.39	1.96	2.53	0.01	0.00
TOTALS (lbs/day, mitigated)	0.39	1.96	2.53	0.01	0.00

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	PM10	SO2
TOTALS (ppd, unmitigated)	152.35	146.20	1,624.19	6.55	1.04
TOTALS (ppd, mitigated)	152.35	146.20	1,624.19	6.55	1.04

URBEMIS 2001 For Windows 6.2.2

File Name: C:\Program Files\URBEMIS 2001 For Windows\Projects2k\Vitner Squa
Project Name: Vitner Square
Project Location: San Joaquin Valley

SUMMARY REPORT
(Pounds/Day - Winter)

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	PM10	SO2
TOTALS(lbs/day,unmitigated)	0.14	1.94	0.78	0.00	0.00
TOTALS (lbs/day, mitigated)	0.14	1.94	0.78	0.00	0.00

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	PM10	SO2
TOTALS (ppd, unmitigated)	203.84	225.65	1,949.26	6.55	0.95
TOTALS (ppd, mitigated)	203.84	225.65	1,949.26	6.55	0.95

URBEMIS 2001 For Windows 6.2.2

File Name: C:\Program Files\URBEMIS 2001 For Windows\Projects2k\Vitner Squa
Project Name: Vitner Square
Project Location: San Joaquin Valley

SUMMARY REPORT
(Tons/Year)

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	PM10	SO2
TOTALS (tpy, unmitigated)	0.05	0.36	0.30	0.00	0.00
TOTALS (tpy, mitigated)	0.03	0.36	0.30	0.00	0.00

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	PM10	SO2
TOTALS (tpy, unmitigated)	30.94	31.52	316.19	1.20	0.18
TOTALS (tpy, mitigated)	30.94	31.52	316.19	1.20	0.18

URBEMIS 2001 For Windows 6.2.2

File Name: C:\Program Files\URBEMIS 2001 For Windows\Projects2k\Vitner Squa
Project Name: Vitner Square
Project Location: San Joaquin Valley

DETAIL REPORT
(Pounds/Day - Winter)

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

Source	ROG	NOx	CO	PM10	SO2
Natural Gas	0.14	1.94	0.78	0.00	-
Wood Stoves	0.00	0.00	0.00	0.00	0.00
Fireplaces	0.00	0.00	0.00	0.00	0.00
Landscaping - No winter emissions					
Consumer Prdcts	0.00	-	-	-	-
TOTALS(lbs/day,unmitigated)	0.14	1.94	0.78	0.00	0.00

UNMITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	PM10	SO2
Fast food rest. w/ drive	37.78	32.02	300.86	0.87	0.13
Lowe's Major Tenant	92.85	124.45	1,022.02	3.73	0.54
Coomercial/Retail Shops	73.20	69.18	626.37	1.94	0.28
TOTAL EMISSIONS (lbs/day)	203.84	225.65	1,949.26	6.55	0.95

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

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2004 Temperature (F): 40 Season: Winter

EMFAC Version: EMFAC2001 (10/2001)

Summary of Land Uses:

Unit Type	Trip Rate	Size	Total Trips
Fast food rest. w/ drive	496.12 trips / 1000 sq. ft	6.20	3,075.94
Lowe's Major Tenant	34.80 trips / 1000 sq. ft.	161.70	5,627.16
Coomercial/Retail Shops	47.05 trips / 1000 sq. ft.	120.84	5,685.52

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	61.40	4.70	94.50	0.80
Light Truck < 3,750 lbs	9.30	11.00	88.90	0.10
Light Truck 3,751- 5,750	16.70	1.80	97.60	0.60
Med Truck 5,751- 8,500	7.20	12.50	79.20	8.30
Lite-Heavy 8,501-10,000	1.10	18.20	72.70	9.10
Lite-Heavy 10,001-14,000	0.30	0.00	66.70	33.30
Med-Heavy 14,001-33,000	1.10	9.10	27.30	63.60
Heavy-Heavy 33,001-60,000	0.70	0.00	0.00	100.00
Line Haul > 60,000 lbs	0.00	0.00	0.00	100.00
Urban Bus	0.00	0.00	0.00	100.00
Motorcycle	1.40	90.90	9.10	0.00
School Bus	0.10	0.00	0.00	100.00
Motor Home	0.70	0.00	100.00	0.00

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	9.5	7.4	7.4
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)						
Fast food rest. w/ drive thru				5.0	2.5	92.5
Lowe's Major Tenant				2.0	1.0	97.0
Coomercial/Retail Shops				2.0	1.0	97.0

Changes made to the default values for Area

The landscape year changed from 2002 to 2004.
Changes made to the default values for Operations

The operational emission year changed from 2002 to 2004.
The operational winter selection item changed from 2 to 1.
The operational summer selection item changed from 7 to 6.

URBEMIS 2001 For Windows 6.2.2

File Name: C:\Program Files\URBEMIS 2001 For Windows\Projects2k\Vitner Squa
Project Name: Vitner Square
Project Location: San Joaquin Valley

DETAIL REPORT
(Pounds/Day - Summer)

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

Source	ROG	NOx	CO	PM10	SO2
Natural Gas	0.14	1.94	0.78	0.00	-
Wood Stoves - No summer emissions					
Fireplaces - No summer emissions					
Landscaping	0.25	0.02	1.75	0.01	0.00
Consumer Prdcts	0.00	-	-	-	-
TOTALS(lbs/day,unmitigated)	0.39	1.96	2.53	0.01	0.00

UNMITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	PM10	SO2
Fast food rest. w/ drive	26.74	20.98	236.23	0.87	0.14
Lowe's Major Tenant	71.52	80.11	884.80	3.73	0.59
Coomercial/Retail Shops	54.08	45.12	503.16	1.94	0.31
TOTAL EMISSIONS (lbs/day)	152.35	146.20	1,624.19	6.55	1.04

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

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2004 Temperature (F): 85 Season: Summer

EMFAC Version: EMFAC2001 (10/2001)

Summary of Land Uses:

Unit Type	Trip Rate	Size	Total Trips
Fast food rest. w/ drive	496.12 trips / 1000 sq. ft	6.20	3,075.94
Lowe's Major Tenant	34.80 trips / 1000 sq. ft.	161.70	5,627.16
Coomercial/Retail Shops	47.05 trips / 1000 sq. ft.	120.84	5,685.52

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	61.40	4.70	94.50	0.80
Light Truck < 3,750 lbs	9.30	11.00	88.90	0.10
Light Truck 3,751- 5,750	16.70	1.80	97.60	0.60
Med Truck 5,751- 8,500	7.20	12.50	79.20	8.30
Lite-Heavy 8,501-10,000	1.10	18.20	72.70	9.10
Lite-Heavy 10,001-14,000	0.30	0.00	66.70	33.30
Med-Heavy 14,001-33,000	1.10	9.10	27.30	63.60
Heavy-Heavy 33,001-60,000	0.70	0.00	0.00	100.00
Line Haul > 60,000 lbs	0.00	0.00	0.00	100.00
Urban Bus	0.00	0.00	0.00	100.00
Motorcycle	1.40	90.90	9.10	0.00
School Bus	0.10	0.00	0.00	100.00
Motor Home	0.70	0.00	100.00	0.00

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	9.5	7.4	7.4
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)

Fast food rest. w/ drive thru	5.0	2.5	92.5
Lowe's Major Tenant	2.0	1.0	97.0
Coomercial/Retail Shops	2.0	1.0	97.0

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Project Name: Vitner Square
Project Location: San Joaquin Valley

DETAIL REPORT
(Tons/Year)

AREA SOURCE EMISSION ESTIMATES

Source	ROG	NOx	CO	PM10	SO2
Natural Gas	0.03	0.35	0.14	0.00	-
Wood Stoves	0.00	0.00	0.00	0.00	0.00
Fireplaces	0.00	0.00	0.00	0.00	0.00
Landscaping	0.02	0.00	0.16	0.00	0.00
Consumer Prdcts	0.00	-	-	-	-
TOTALS (tpy, unmitigated)	0.05	0.36	0.30	0.00	0.00

UNMITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	PM10	SO2
Fast food rest. w/ drive	5.55	4.50	47.04	0.16	0.02
Lowe's Major Tenant	14.35	17.32	169.82	0.68	0.11
Coomercial/Retail Shops	11.03	9.70	99.32	0.35	0.05
TOTAL EMISSIONS (tons/year)	30.94	31.52	316.19	1.20	0.18

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

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2004 Temperature (F): 85 Season: Annual

EMFAC Version: EMFAC2001 (10/2001)

Summary of Land Uses:

Unit Type	Trip Rate	Size	Total Trips
Fast food rest. w/ drive	496.12 trips / 1000 sq. ft	6.20	3,075.94
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Lite-Heavy 10,001-14,000	0.30	0.00	66.70	33.30
Med-Heavy 14,001-33,000	1.10	9.10	27.30	63.60
Heavy-Heavy 33,001-60,000	0.70	0.00	0.00	100.00
Line Haul > 60,000 lbs	0.00	0.00	0.00	100.00
Urban Bus	0.00	0.00	0.00	100.00
Motorcycle	1.40	90.90	9.10	0.00
School Bus	0.10	0.00	0.00	100.00
Motor Home	0.70	0.00	100.00	0.00

Travel Conditions

	Residential			Commercial		
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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)						
Fast food rest. w/ drive thru				5.0	2.5	92.5
Lowe's Major Tenant				2.0	1.0	97.0
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