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DOCKET
08-AFC-11
DATE June 24 2009
RECD. June 24 2009

June 24, 2009

Mr. Rod Jones
Project Manager
California Energy Commission
1516 Ninth Street
Sacramento, CA 95814-5512

Subject: CPV Vaca Station (08-AFC-11)
Response to CEC Staff Data Request 29, Cumulative Air Quality Impact Analysis

Dear Mr. Jones:

Attached please find one original and 12 copies of CPV Vaca Station, LLC's responses to California Energy Commission Staff Data Request 29, Cumulative Air Quality Impact Analsyis for the Application for Certification for the CPV Vaca Station Project (08-AFC-11).

If you have any questions about this matter, please contact me at (916) 286-0278 or Sarah Madams at (916) 286-0249.

Sincerely,

CH2M HILL

Douglas M. Davy, Ph.D.
AFC Project Manager

Attachment

cc: A. Welch (CPV)
S. Madams

Application for Certification

Response to CEC Staff Data Request 29, Cumulative Air Quality Impact Analysis

CPV Vaca Station

Submitted by

CPV Vacaville, LLC

Submitted to

California Energy Commission

With Technical Assistance by

CH2MHILL

June 2009

ES122007003SAC

Supplemental Filing

Response to CEC Staff Data Request #29

In support of the

Application for Certification

for

CPV Vaca Station

Vacaville, California

(08-AFC-11)

Submitted to the:

California Energy Commission

Submitted by:

CPV Vacaville, LLC

With Technical Assistance by:

Sacramento, California

June 2009

Contents

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Introduction

Attached are CPV Vacaville, LLC's (CPVV's) responses to California Energy Commission (CEC) Staff data requests number 29 for the CPV Vaca Station (CPVVS) project (08-AFC-11). The CEC Staff served the data requests on March 5, 2009, as part of the discovery process for the CPVVS project.

The responses are grouped by individual discipline or topic area. Within each discipline area, the responses are presented in the same order as CEC Staff presented them and are keyed to the Data Request numbers (1 through 53). New or revised graphics or tables are numbered in reference to the Data Request number. For example, the first table used in response to Data Request 15 would be numbered Table DR15-1. The first figure used in response to Data Request 28 would be Figure DR28-1, and so on.

Additional tables, figures, or documents submitted in response to a data request (supporting data, stand-alone documents such as plans, folding graphics, etc.) are found at the end of a discipline-specific section and are not sequentially page-numbered consistently with the remainder of the document, though they may have their own internal page numbering system.

Air Quality (29)

Cumulative Impact Analysis

29. Please provide the list of cumulative sources to be considered and the cumulative analysis for ambient air quality impacts.

Response: Cumulative air quality impacts from the CPV Vaca Station (CPVVS) and other reasonably foreseeable projects are both regional and localized in nature. Regional air quality impacts are possible for pollutants such as ozone, which is formed through a photochemical process that can take hours to occur. CO, NOx, and SOx impacts are generally localized in the area in which they are emitted. Fine particulate matter ($PM_{10}/PM_{2.5}$) can create local air quality problems in the vicinity of its emission source, but can also be a regional issue when formed in the atmosphere from NOx, ROC, and SOx.

This cumulative impacts analysis considers the potential for both regional and localized impacts due to emissions from proposed operation of CPVVS. Regional impacts were evaluated by comparing maximum daily and annual emissions from CPVVS with emissions of ozone precursors and $PM_{10}/PM_{2.5}$ (and their precursors) in Solano County and the YSAQMD. Localized impacts were evaluated by analyzing other local sources of pollutants, whose contributions were not included in the background air quality data, to determine whether these sources—in combination with CPVVS—would be expected to cause significant cumulative air quality impacts.

Regional Impacts

Regional impacts were evaluated by assessing CPVVS's contribution to regional emissions. Although the relative importance of NOx and ROC emissions in ozone formation differs from region to region and from day to day, state law requires reductions in emissions of both precursors to reduce overall ozone levels. The change in the sum of emissions of these pollutants, equally weighted, provides a rough estimate of the impact of CPVVS on regional ozone levels. Similarly, a comparison of the emissions of $PM_{10}/PM_{2.5}$ emissions (and their precursors) from CPVVS with regional $PM_{10}/PM_{2.5}$ emissions (and their precursors) provides an estimate of the impact of CPVVS on regional $PM_{10}/PM_{2.5}$ levels. Emission reductions associated with the CPVVS project were also considered. Under YSAQMD regulations, CPVVS will be required to provide offsets for increases in NOx, PM_{10}, and ROC emissions from the project. SOx offsets (mitigation) will be required under the California Environmental Quality Act (CEQA) as implemented through the CEC's AFC process. Regulatory offset requirements are calculated based on quarterly emissions, but the regional inventories are expressed in tons per day of emissions. Offsets were considered on both a daily and annual basis. PM_{10} offsets were assumed to comprise 100% $PM_{2.5}$.

Since the CPVVS is expected to begin operation in 2012, projected regional emissions of ozone precursors and $PM_{10}/PM_{2.5}$ (and their precursors) were also estimated for 2012.

Solano County and YSAQMD emissions projections for 2012 were estimated by averaging the projected emissions inventories for 2010 and 2015 obtained from the Air Resources Board's web-based emission inventory projection software, available at http://www.arb.ca.gov/app/emsinv/emssumcat.php. Table DR29-1 summarizes these comparisons for ozone precursors. Tables DR29-2 and DR29-3 summarize these comparisons for PM_{10} and $PM_{2.5}$ (and their precursors).

TABLE DR29-1
Regional Cumulative Impacts Analysis: Ozone Precursors

	Annual Emissions (tpy)		
	NOx	**ROC**	**Totals [1]**
Solano County			
Stationary Sources	2,865	3,303	6,169
Area-Wide Sources	365	2,154	2,519
Mobile Sources	11,808	5,220	17,027
Subtotal [1]	15,038	10,676	25,714
YSAQMD			
Stationary Sources	1,424	1,916	3,340
Area-Wide Sources	329	2,099	2,427
Mobile Sources	11,169	3,778	14,947
Subtotal [1]	12,921	7,793	20,714
CPVVS Project			
CPVVS Totals	158	51.9	210
% of Solano County Totals			**0.8%**
% of YSAQMD Totals			**1.0%**
CPVVS Offsets	**(215)**	**(131)**	**(346)**
Net CPVVS Totals	**(57)**	**(79)**	**(136)**
% of Solano County Totals			**-0.5%**
% of YSAQMD Totals			**-0.7%**

Notes:

1. Slight discrepancies in table summations are attributable to rounding.

TABLE DR29-2
Regional Cumulative Impacts Analysis: PM_{10} (and Precursors)

	Annual Emissions (tpy)				
	PM_{10}	**NOx**	**SOx**	**ROC**	**Totals [1]**
Solano County					
Stationary Sources	566	2,865	6,826	3,303	13,560
Area-Wide Sources	6,935	365	0	2,154	9,454
Mobile Sources	821	11,808	164	5,220	18,013
Subtotal [1]	8,322	15,038	6,990	10,676	41,026
YSAQMD					
Stationary Sources	931	1,424	183	1,916	4,453
Area-Wide Sources	12,045	329	37	2,099	14,509
Mobile Sources	730	11,169	73	3,778	15,750
Subtotal [1]	13,706	12,921	292	7,793	34,712
CPVVS Project					
CPVVS Totals	79.0	158	14.2	52	303
% of Solano County Totals					**0.7%**
% of YSAQMD Totals					**0.9%**
CPVVS Offsets	**(118)**	**(215)**	**(14.2)**	**(131)**	**(478)**
Net CPVVS Totals	**(39)**	**(57)**	**0.0**	**(79)**	**(175)**
% of Solano County Totals					**-0.4%**
% of YSAQMD Totals					**-0.5%**

Notes:

1. Slight discrepancies in table summations are attributable to rounding

TABLE DR29-3
Regional Cumulative Impacts Analysis: $PM_{2.5}$ (and Precursors)

	Annual Emissions (tpy)				
	$PM_{2.5}$	**NOx**	**SOx**	**ROC**	**Totals [1]**
Solano County					
Stationary Sources	475	2,865	6,826	3,303	13,469
Area-Wide Sources	1,588	365	0	2,154	4,106
Mobile Sources	657	11,808	164	5,220	17,849
Subtotal [1]	2,719	15,038	6,990	10,676	35,423
YSAQMD					
Stationary Sources	602	1,424	183	1,916	4,125
Area-Wide Sources	2,044	329	37	2,099	4,508
Mobile Sources	584	11,169	73	3,778	15,604
Subtotal [1]	3,230	12,921	292	7,793	24,236
CPVVS Project					
CPVVS Totals	74	158	14.2	52	303
% of Solano County Totals					**0.9%**
% of YSAQMD Totals					**1.2%**
CPVVS Offsets	**(107)**	**(215)**	**(14.2)**	**(131)**	**(468)**
Net CPVVS Totals	**(33)**	**(57)**	**0.0**	**(79)**	**(170)**
% of Solano County Totals					**-0.5%**
% of YSAQMD Totals					**-0.7%**

Notes:

1. Slight discrepancies in table summations are attributable to rounding

Localized Impacts

The cumulative impacts analysis incorporates the modeled impacts of other local projects into the air quality impact analysis (AQIA). To evaluate potential cumulative impacts of CPVVS in combination with other projects in the area, other projects within a radius of 10 km (6 miles) of CPVVS were considered. Existing projects, which have been in operation since at least 2006, are already reflected in the ambient air quality data that have been used to characterize background concentrations and therefore were not considered further. Consequently, only projects for which Authority to Construct permits have been issued and that began operation after January 1, 2007 (or have not yet begun operation), and projects for which air pollution permits to construct have not been issued (but that are reasonably foreseeable), were considered.

The Yolo-Solano AQMD and the Bay Area AQMD provided lists of all projects within six miles of the project for which Authority to Construct permits have been issued (or are currently being processed) but whose emissions are not reflected in ambient air quality databases (i.e., background concentrations). The list of projects identified by the Districts as meeting these criteria is presented in Table DR29-4.

TABLE DR29-4
Permit Applications for Projects Within 6 miles of the CPVVS Site, but Not Yet Operational in 2006

Company Name	Process Description	Issued Date	Location	Emission Limits (tons/year)				
				VOC	CO	NOX	SOX	PM10
Sacramento Valley VA National Cemetery	Gasoline Storage & Dispensing: Non-Retail	1/10/2007	5810 Midway Road, Dixon	0.01				
Kaiser Health Plan	Combustion sources	5/12/2008	1 Quality Drive, Vacaville	3.62	16.32	**13.14**	0.35	1.46
Leisure Town 76	Gasoline Storage & Dispensing: Retail	6/11/2007	817 Leisure Town Road, Vacaville	0.95				
Orange Drive ARCO AM. PM.	Gasoline Storage & Dispensing: Retail	4/24/2008	310 Orange Drive, Vacaville	3.52				
Northbay Physicians Surgery Center	Diesel fired emergency internal combustion engine	12/4/2007	1006 Nut Tree Road, Vacaville	0.01	0.12	0.41	Neg.	0.02
Peabody Service Station	Gasoline Storage & Dispensing: Retail	2/15/2008	501 Peabody Road, Vacaville	1.58				
Verizon Wireless	Diesel fired emergency internal combustion engine	6/20/2007	3900 Lagoon Valley Road, Vacaville	0.01	0.02	0.1	0.02	Neg.
Verizon Wireless	Diesel fired emergency internal combustion engine	7/25/2007	Peabody Road & Foxboro Parkway, Vacaville	0.01	0.02	0.1	Neg.	Neg.
Jepson Prairie Organics Compost Facility	Composting Operation	10/6/2007	6426 Hay Road, Vacaville	1,562.03				1.43
BP West Coast Products, LLC	Gasoline Storage & Dispensing: Retail	5/15/2008	2500 Nut Tree Road, Vacaville	3.22				
Northbay Hospital Group Vaca Valley Hospital	Boiler: Natural Gas, Fuel Oil	3/14/2008	1000 Nut Tree Road, Vacaville	0.05	0.58	0.32	0.12	0.07
Quik Stop Markets, Inc.	Gasoline Storage & Dispensing: Retail	1/25/2007	1091 Leisure Town Road, Vacaville	3.08				
AAA Autobody & Paint Shop	Coating Operation: Automotive	7/28/2005	5135 Ellsworth Road, Unit D, Vacaville	0.5				0.05
Mariani Packing Co.	Wastewater Treatment Plant	5/21/2007	500 Crocker Road, Vacaville	0.27	3.94	1.05	0.08	0.14
Martin's Metal Fabrication & Welding	Coating Operation: Metal Parts	6/15/2008	7260 Lewis Road, Vacaville	4.24	0	0	0	1.02
California Pipe Fabricators	Coating Operation: Metal Parts and Products	5/8/2008	7277 Chevron Way, Dixon	0.03	0.19	1.41	0.15	0.84
Capitol Oil Corporation	Natural Gas Dehydration System	2/21/2007	Section 26, Township 7N, Range 2E, Solano	Neg.				
Solano Irrigation District	Diesel fired emergency internal combustion engine	3/14/2008	7700 Pedrick Road, Dixon	0.03	0.13	1.09	Neg.	0.02
Venada National	Natural Gas Dehydration System	6/15/2007	Section 5, Township 6N, Range 2E, Solano	Neg.				
7-Eleven, Inc.	Gasoline Storage & Dispensing: Retail	In Process	1075 North First Street, Dixon					
Ramos Oil Company	Gasoline Storage & Dispensing: Retail	7/5/2007	1900 North 1st Street, Dixon	6.03				
Chevron U.S.A. Products Company, Inc.	Gasoline Storage & Dispensing: Retail	8/29/2007	1300 Stratford Avenue, Dixon	3.17				
Verizon Wireless	Diesel fired emergency internal combustion engine	7/25/2007	7450 Pitt School Road, Dixon	0.01	0.02	0.1	0.02	Neg.
Asha & Harish Inc.	Gasoline Storage & Dispensing: Retail	12/18/2007	2800 West A Street, Dixon	3.52				
Valero California Retail Company	Gasoline Storage & Dispensing: Retail	6/5/2007	1405 Ary Lane, Dixon	1.9				
Norcal Waste Systems Hay Road Landfill	Diesel fired emergency internal combustion engine	6/7/2007	6426 Hay Road, Vacaville	11.4	0.03	0.14	0.01	Neg.
Chevron Products Company	Gasoline Storage & Dispensing: Retail	8/29/2007	182 Nut Tree Road, Vacaville					1.82
Alamo 76, Inc.	Gasoline Storage & Dispensing: Retail	6/13/2007	970 Alamo Drive, Vacaville	3.19				
California Medical Facility	Diesel fired emergency internal combustion engine	5/6/2008	1600 California Medical Facility	0.03	0.13	1.09	Neg.	0.02
Prison Industry Authority	Coating Operation: Metal Parts	In Process	2100 Peabody Road, Building 401, Vacaville	1.48	0.55	0.66	Neg.	0.45

TABLE DR29-4
Permit Applications for Projects Within 6 miles of the CPVVS Site, but Not Yet Operational in 2006

Company Name	Process Description	Issued Date	Location	Emission Limits (tons/year)				
				VOC	CO	NOX	SOX	PM10
Service Cleaners	Dry Cleaners: Hydrocarbon	3/27/2007	2040 Nut Tree Road, Vacaville	0.35				
Vacaville Unified School District	Boiler	In Process	805 Orchard Avenue, Vacaville	Pending				
Orchard Supply Hardware	Diesel fired emergency internal combustion engine	6/11/2007	220 Peabody Road, Vacaville	0.01	0.03	0.15	0.01	Neg.
Simonton Windows	Coating Operation: Metal Parts	In Process	2019 East Monte Vista Avenue, Vacaville	Pending				
State Compensation Insurance Fund	Diesel fired emergency internal combustion engine	7/23/2007	4040 Horse Creek Drive, Vacaville	0.44	1.76	**6.39**	0	0.28
ALZA Corporation	Pharmaceutical processes	12/31/2007	700 Eubanks Drive, Vacaville	11.84	3.9	2.45	0.03	3.13
Automatic Bar Controls	Plastic bonding operation	4/14/2007	700 Eubanks Drive, Vacaville	1.17				
CalPeak Power - Vaca Dixon, LLC	Utility power generation	9/4/2007	5157 Quinn Road, Vacaville	5.1	26.78	**14.66**	5.02	**11.83**
Summerfield House Assisted Living	Boiler	5/11/2007	1111 Ulatis Drive, Vacaville	0.05	0.74	0.88	0.01	0.07
Vacaville RV Park	Diesel fired emergency internal combustion engine	2/14/2008	4985 Midway Road, Vacaville	Pending				
COSTCO Gasoline	Gasoline Storage & Dispensing: Retail	3/19/2008	1051 Hume Way, Vacaville	12.56				
L & M Complete Autobody & Painting	Coating Operation: Automotive	12/10/2007	5151 Quinn Road #0, Vacaville	0.21				0.02
Ishaq Trading Corporation	Gasoline Storage & Dispensing: Retail	6/1/2007	901 Mason Street, Vacaville	3.48				
Vaca Hills Chapel	Cremation System	In Process	524 Elmira Road, Vacaville	Pending				
7-Eleven, Inc.	Gasoline Storage & Dispensing: Retail	1/25/2007	2490 Nut Tree Road, Vacaville	1.27				
Ball Metal	Fire Pump	8/28/2007	2400 Huntington Drive, Fairfield	0	0.01	0.06	0	0
Travis AFB	GDF	3/20/2007	60th Air base Gr, 60th AMW, Travis AFB			1.21		0.01
CEMEX	Concrete Batch Plant	6/8/2007	4964 Peabody Road, Fairfield					**6.15**
City of Fairfield	Backup Diesel Generator	4/20/2007	Peabody Road, E Side No of Joseph G	0.01	0.01	0.04	0	0

The impacts associated with SOx and CO emissions were not evaluated because the existing compliance margin (i.e., the difference between background and the ambient air quality standard, or AAQS) is so great, relative to the likely cumulative impacts, that significant cumulative impacts are not possible. Similarly, there are no ambient standards for VOC. The contribution of VOC emissions to regional impacts was considered in the previous section.

The cumulative AQIA evaluated the local impacts of NOx, PM_{10}, and $PM_{2.5}$ emissions from other local projects plus CPVVS using the methodology employed in the AQIA for the project. All emissions from projects that had NOx, PM10, or PM2.5 emissions greater than 5 TPY were included in the analysis. Sources with emissions below this level were deemed to be too small to be likely to have a considerable impact in the area around the CPVVS project. As discussed below, the modeling results for the larger sources validated the decision to exclude smaller sources.

The following projects have emission increases in excess of 5 tpy of NOx, PM_{10}, or $PM_{2.5}$:

- CalPeak Power facility located at 5157 Quinn Road, Vacaville;
- Kaiser Health facility located at 1 Quality Drive in Vacaville;
- State Compensation Insurance Fund facility located at 4040 Horse Creek Drive in Vacaville; and
- CEMEX facility located at 4964 Peabody Road in Fairfield.

The AERMOD dispersion model was used to characterize localized impacts of NOx, PM_{10}, and $PM_{2.5}$ emissions from these projects in addition to CPVVS.

TABLE DR29-5
Projects Modeled in Cumulative Air Quality Impact Analysis

Company Name	Source Description	Emission Limits, Tons/Year		
		NOx	PM10	PM2.5
CalPeak Power - Vaca Dixon, LLC	Utility power generation	14.66	11.83	11.83
Kaiser Health Plan	Boiler	1.22	0.25	0.25
	Boiler	1.22	0.25	0.25
	Boiler	1.22	0.25	0.25
	Thermal Fluid Heaters	0.8	0.25	0.25
	Diesel fired emergency internal combustion engine	3.94	0.06	0.06
	Diesel fired emergency internal combustion engine	3.94	0.06	0.06
	Micro-Turbine System, NG, Cogen	0.8	0.34	0.34
State Compensation Insurance Fund	Boiler	0.11	0.03	0.03
	Boiler	0.11	0.03	0.03
	Boiler	0.11	0.03	0.03

TABLE DR29-5
Projects Modeled in Cumulative Air Quality Impact Analysis

Company Name	Source Description	Emission Limits, Tons/Year		
		NOx	PM10	PM2.5
	Boiler	0.11	0.03	0.03
	Boiler	0.15	0.05	0.05
	Diesel fired emergency internal combustion engine	0.7	0.01	0.01
	Diesel fired emergency internal combustion engine	2.55	0.05	0.05
	Diesel fired emergency internal combustion engine	2.55	0.05	0.05
CEMEX	Aggregate Storage		6.15	1.23

The cumulative impacts from these four other projects, plus CPVVS, are summarized in Table DR29-6. The cumulative AQIA indicates that emissions from the four other projects plus CPVVS would not cause an exceedence of the AAQSs for NO_2.

However, the modeling indicates that the cumulative impacts of the four other projects plus CPVVS would result in exceedances of the 24-hour and annual standards for both PM_{10} and $PM_{2.5}$.

The CEMEX project is responsible for virtually all of the modeled high PM impacts. PM emissions from the CEMEX project are principally fugitive emissions from materials handling and road dust. Emissions from the CEMEX project were estimated using emission factors taken from AP-42.

TABLE DR29-6
Maximum Cumulative Impacts

	Concentration (ug/m^3)				
Pollutant/ Avg. Period	Maximum Modeled Impact (CPVVS + 4 projects)	Background	Total	AAQS [3]	Compliant?
NO_2					
- 1 hour	251	84 [1]	335	339	Yes
- annual	1.9	16 [1]	17.9	57	Yes
PM_{10}					
- 24 hours	255	60 [2]	315	50	No
- annual	29.5	18.2 [2]	47.7	20	No
$PM_{2.5}$					
- 24 hours	51.0	30.6 [1]	81.6	35	No
- annual	5.9	8.8 [1]	14.7	12	No

Notes:

1. Background NO_2 and $PM_{2.5}$ data were obtained from the UC Davis monitoring station for 2005–2007.
2. Background PM_{10} data were obtained from the Vacaville monitoring station for 2005–2007.
3. Reflects the more stringent state or federal AAQS.

Isopleths illustrating the contribution of each project to the cumulative PM_{10} and $PM_{2.5}$ impacts are shown on Figures DR29-1 through DR29-4. The contribution of CPVVS to the maximum cumulative PM impacts is summarized in Table DR29-6 while the combined contribution of the other four projects at the location of the maximum PM impacts from the CPVVS is summarized in Table DR29-7. These figures and tables indicate that CPVVS contributes negligibly to the maximum cumulative PM impacts.

For example, Figure DR29-1 shows that the very high annual PM_{10} concentrations attributable to CEMEX are very close in to the CEMEX source. CEMEX impacts at the CPVVS property site have fallen to approximately 0.05 ug/cu m (see also Table DR29-6). On the other hand, the impacts from CPVVS do not extend towards the CEMEX plant at all (see also Table DR29-7). Each of the facilities is outside of the area impacted by the other, so that there is, effectively, no cumulative impact from the projects. Figure DR29-3 shows that the same is true for cumulative annual $PM_{2.5}$ impacts.

Figures DR29-2 and DR29-4 do not show as clear a separation of the impact areas for 24-hour impacts. However, Table DR29-7 shows that CEMEX does not affect the maximum 24-hour impact in the vicinity of the CPVVS. This is because, during the meteorological conditions that result in the highest CPVVS PM impacts, the wind is not blowing from CEMEX towards CPVVS, and CEMEX does not add to the PM concentrations near the project.

These modeling results support the exclusion of smaller sources from the analysis. The 4 projects that were modeled are responsible for 75% of the NOx emissions and two-thirds of the PM emissions from all of the projects, yet their combined impact on the air quality analysis for the CPVVS project was negligible. None of the excluded smaller sources was located close to CPVVS. The only project with elevated local air quality impacts, CEMEX, was also the only project with non-combustion emissions. All of the smaller projects that were not explicitly modeled can be expected to have impacts similar to, or less than, the larger combustion sources that were modeled.

Figure DR29-1
Cumulative Annual PM_{10} Impacts

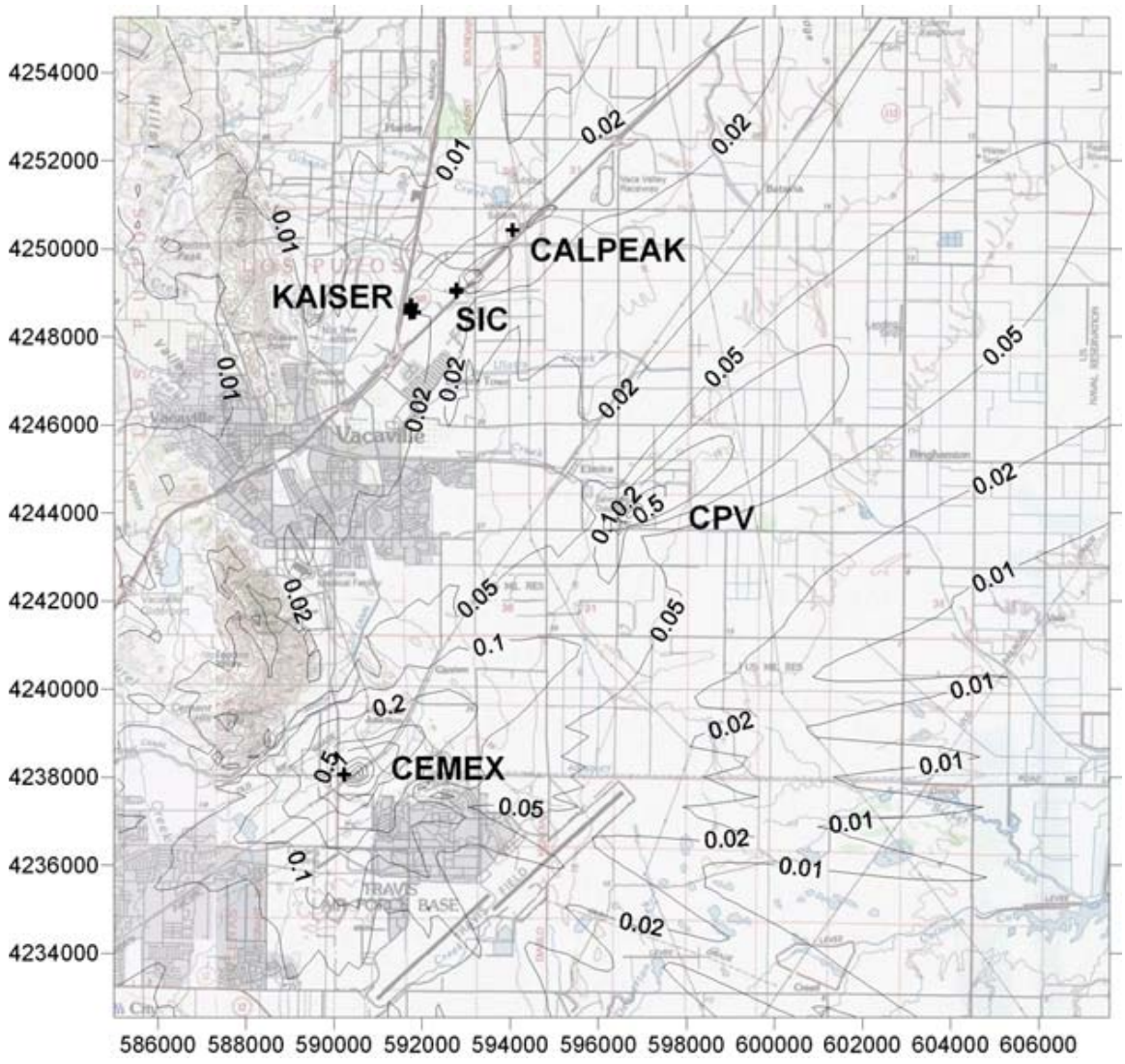

Figure DR29-2
Cumulative 24-Hour PM_{10} Impacts

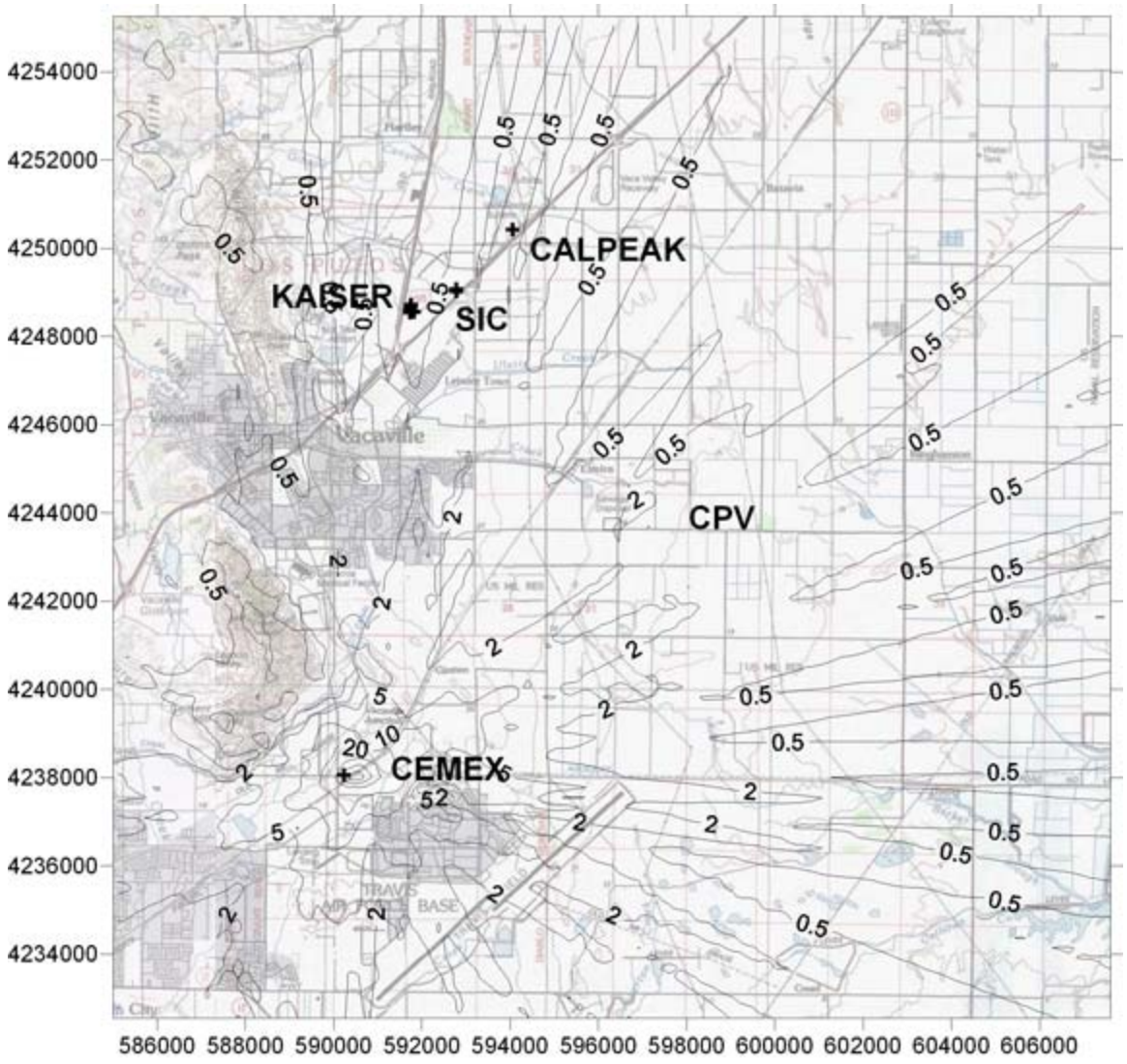

Figure DR29-3
Cumulative Annual $PM_{2.5}$ Impacts

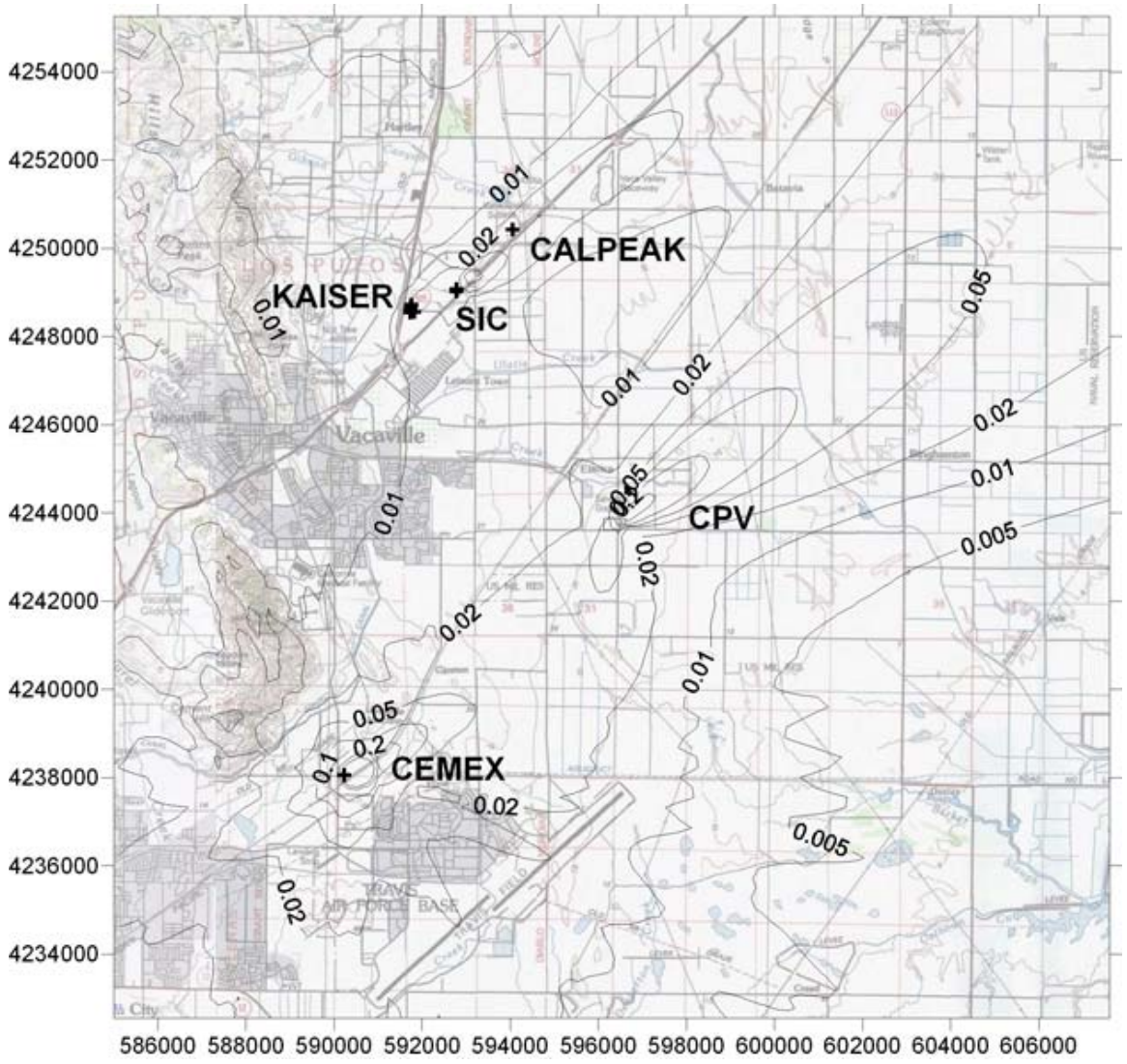

Figure DR29-4
Cumulative 24-Hour $PM_{2.5}$ Impacts

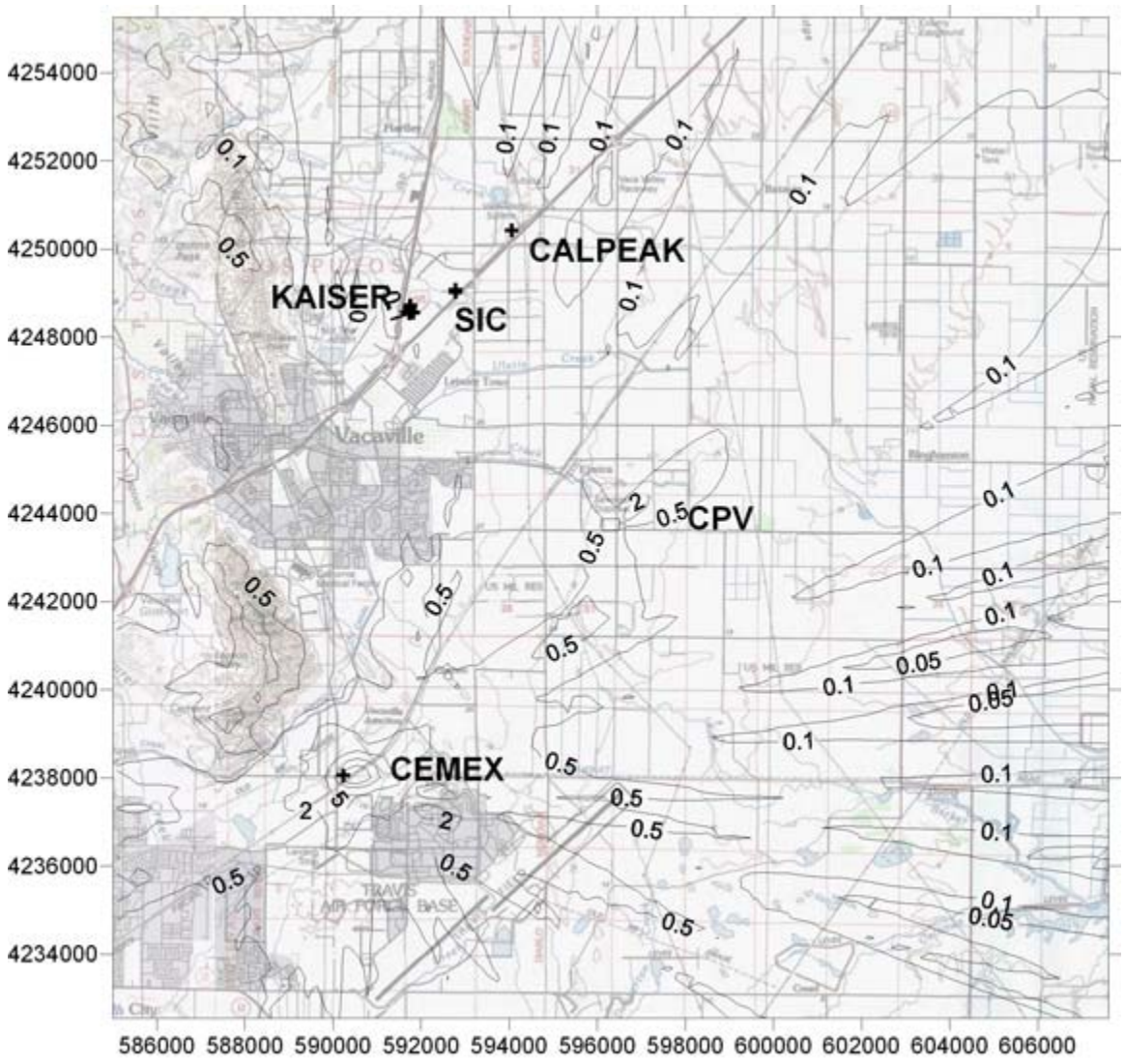

TABLE DR29-7
CPVVS Contribution to Maximum Cumulative PM Impacts

Pollutant / Averaging Period	Concentration (ug/m^3) CPVVS Impact [1]	Maximum Cumulative Impact
PM_{10}		
- 24 hours	$\leq$ 0.017	255
- annual	$\leq$ 0.008	29.5
$PM_{2.5}$		
- 24 hours	$\leq$ 0.15	51.0
- annual	$\leq$ 0.007	5.9

Notes:

1. At the same location, if not the same hour, as the maximum cumulative impact. The CPVVS contribution to the maximum cumulative impact will be less than or equal to the value shown.

TABLE DR29-8
Contribution of Four Other Sources at Location of Maximum CPVVS PM Impacts

Pollutant/ Averaging Period	Concentration (ug/m^3) Maximum CPVVS Impact [1]	Maximum Cumulative Impact [2]
PM_{10}		
- 24 hours	7.7	7.7
- annual	2.4	2.4
$PM_{2.5}$		
- 24 hours	6.7	6.7
- annual	1.9	1.9

Notes:

1. The CPVVS contribution to the cumulative impact at the location of the maximum impact from CPVVS alone will be less than or equal to the value shown.

2. At the same location, if not the same hour, as the maximum impact from CPVVS alone.

Summary

The cumulative impact of facilities existing prior to 2007 is represented by the ambient concentrations measured at the ambient monitoring stations. Four large sources that had not yet begun operating in 2007 but that were within 6 miles of CPVVS were identified. Dispersion modeling of the CPVVS project plus those four sources shows that the air quality impacts of CPVVS are the same regardless of whether these four large sources are considered; and the air quality impacts of those other projects are unaffected by the CPVVS project.

In other words, the projects are far enough apart that their areas of impact do not overlap sufficiently to create a new significant cumulative impact, or worsen significant impacts that any of the individual projects might have. The other projects do not increase the maximum concentrations around CPVVS. CPVVS does not increase the maximum concentrations around the other projects.