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March 19, 2007

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DOCKET
06-AFC-4

DATE MAR 19 2007

RECD. MAR 19 2007

Dr. James Reede
1516 Ninth Street
Sacramento, CA 95814-5512

RE: CBE Data Response, Set 1A
Vernon Power Project (06-AFC-4)

On behalf of the City of Vernon, please find attached 12 copies and one original of the CBE Data Responses, Set 1A, in response to CBE's Data Requests dated February 16, 2007. We are also filing copies of this Data Response electronically.

Please call me if you have any questions.

Sincerely,

CH2M HILL

A handwritten signature in blue ink that reads "John L. Carrier".

John L. Carrier, J.D.
Program Manager

c: Project File
Proof of Service List

**VERNON POWER PLANT
(06-AFC-4)**

CBE DATA RESPONSE, SET 1A

Submitted by
City of Vernon

March 19, 2007



2485 Natomas Park Drive, Suite 600
Sacramento, California 95833-2937

**VERNON POWER PLANT
(06-AFC-4)
CBE DATA RESPONSES, SET 1A**

Technical Area: Air Quality

Background

Staff's Data Request #3 expressed concern that the Priority Reserve and ERC programs "will not be able to specifically provide PM_{2.5} emission reductions," since virtually 100 percent of natural gas combustion particulate matter is PM_{2.5}. The applicant stated in response that an EGF must "obtain Priority Reserve offsets at a ratio of 1.2 to 1." The applicant also expressed its belief that "the fraction of stationary PM_{2.5} in PM₁₀ offsets from the Priority Reserve will be reflective of traditional and existing stationary source emissions," which the applicant estimated at 80 percent. CEC staff indicated at the Public Workshop that the fraction of stationary PM_{2.5} in Priority Reserve may not be reflective of total stationary source emissions, due to its reliance on small source shutdowns.

Data Request

1. Please provide documentation for the applicant's claim that one unit of PM₁₀ credits obtained from Priority Reserve will have been offset by 1.2 units of pollution reduction.

Response: The Applicant has never claimed that "one unit of PM₁₀ credits obtained from the Priority Reserve will have been offset by 1.2 units of pollution reduction." Rule 1309.1 requires that projects using offsets from the Priority Reserve offset emissions at a ratio of 1.2:1.0. Thus, for every pound of emissions associated with the VPP that the Applicant intends to offset with Priority Reserve offsets, the Applicant would obtain 1.2 pounds of offsets from the Priority Reserve.

2. Please provide documentation that the fraction of stationary PM_{2.5} in PM₁₀ offsets from the Priority Reserve is reflective of total stationary source emissions, specifically by presenting (in a table or other suitable format) an inventory of the PM₁₀ and PM_{2.5} in Priority Reserve.

Response: Please refer to the Applicant's objection to this data request submitted to the CEC on February 26, 2007. Without waiving its objection, Applicant provides the following response to the data request.

Please refer to the documentation previously provided by the Applicant in CEC Data Response 3 (Set 1A). The Applicant is not aware of any basis for the suggestion that the source of offsets contained in the District's New Source Review Bank, which is the source of offsets for the Priority Reserve, is primarily small source shutdowns. Furthermore, even if the source of Priority Reserve offsets was primarily small source shutdowns, there is no basis for the conclusion that the types of emission units (combustion sources of PM versus non-combustion sources) at such sources would be any different from

**VERNON POWER PLANT
(06-AFC-4)
CBE DATA RESPONSES, SET 1A**

the types of emission units located in the District generally. In fact, particulate emissions at smaller sources are probably more likely to result from combustion sources as opposed to non-combustion sources. Typical sources of particulate emissions at a small source would be boilers or heaters; whereas non-combustion sources of particulates, such as those resulting from material handling, are more likely to occur at larger sources such as cement plants or bulk loading terminals.

3. Please provide documentation supporting the 80 percent estimate.

Response: The Applicant hereby withdraws its request for additional time to respond to this data request submitted to the CEC on February 26, 2007, and provides the following response.

Please refer to the documentation previously provided by the Applicant in CEC Data Response 3 (Set 1A).

4. Please describe how applicant will avoid a net increase in PM_{2.5}, if 80 percent or less of Priority Reserve is composed of PM_{2.5}.

Response: The Applicant hereby withdraws its request for additional time to respond to this data request submitted to the CEC on February 26, 2007, and provides the following response.

Please refer to response to Applicant's to Data Response 2. Applicant it not aware of any basis for suggesting that offsets contained in the Priority Reserve are not representative of emissions in the District generally. Therefore, particulate offsets from the Priority Reserve would be expected to reflect particulate reductions that are approximately 80% PM_{2.5}. It is therefore not necessary to speculate about how the Applicant would avoid a net increase in emissions of PM_{2.5}.

5. Please investigate and report on the potential for local particulate matter emission reductions within a six-mile radius of the proposed plant.

Response: The Applicant hereby withdraws its request for additional time to respond to this data request submitted to the CEC on February 26, 2007, and provides the following response.

The Applicant is investigating the following measures:

- Installing diesel particulate matter filters on existing emergency internal combustion engines at the City of Vernon's existing power plant. Please note that Malburg Generating Station is a part of the City of Vernon's existing power plant.
- Installing diesel particulate matter filter on the VPP firewater pump.

**VERNON POWER PLANT
(06-AFC-4)
CBE DATA RESPONSES, SET 1A**

- Installing diesel particulate matter filters and other controls on the City's diesel fuel operated vehicles.
- Installing a solar power system at the Malburg Generating Station.
- Installing additional controls on diesel internal combustion (IC) engines proposed to be installed/or already installed in the vicinity of the VPP.
- Installing natural gas engines instead of diesel fuel engines that have been proposed for installation and/or have already been installed in the vicinity of the VPP.
- Use of electrical power instead of diesel fuel for parked diesel engine operated refrigerated trucks at warehouses in the City of Vernon.
- Retrofitting of school buses operating in the vicinity of the VPP.

Background

Information regarding local stationary sources of PM10 and PM2.5 is necessary for analyzing the cumulative impacts of the proposed project and for evaluating compliance with offset and alternatives requirements of the Clean Air Act. Neither the AFC nor data request responses have truly addressed the local cumulative annual emissions of any pollutants, or potential measures to reduce local pollution.

Data Request

6. Please provide (in a table or other suitable format) a list, with addresses, of all currently operating stationary combustion sources of PM10 within a six-mile radius of the proposed site which emit at least 1,000 pounds of PM10 per year. Please include the actual PM10 and PM2.5 emissions for the most recent year for which information is available.

Response: Please refer to the Applicant's objection to this data request submitted to the CEC on February 26, 2007. In addition, and without waiving Applicant's objection, please refer to the cumulative air quality impact analysis submitted by the Applicant in CEC Data Response, Set 1E.

- 7[a]. Please provide (in a table or other suitable format) a list, with addresses, of all currently operating stationary sources of PM10 from fugitive dust within a six mile radius of the proposed site which emit at least 1,000 pounds of PM10 per year. Please include the actual PM10 and PM2.5 emissions for the most recent year for which information is available.

Response: Please refer to the Applicant's objection to this data request submitted to the CEC on February 26, 2007. In addition, and without waiving Applicant's objection, please refer to the cumulative air quality impact analysis submitted by the Applicant in CEC Data Response, Set 1E.

**VERNON POWER PLANT
(06-AFC-4)
CBE DATA RESPONSES, SET 1A**

- 7[b]. Please provide in table form the estimated annual emissions of PM10, VOCs, CO, NOx, SO2, and HAPs for each facility located in whole or in part within the City of Vernon, including emissions from Malburg Generating Station.

Response: Please refer to the Applicant's objection to this data request submitted to the CEC on February 26, 2007. In addition, and without waiving Applicant's objection, please refer to the cumulative air quality impact analysis submitted by the Applicant in CEC Data Response, Set 1E.

8. Please identify possible ways the City of Vernon may reduce PM10, PM2.5, and other emissions within city limits to mitigate the increased pollution.

Response: Please refer to Applicant's to Data Response 5.

9. Please indicate how many locations of the VOC and CO credits procured from the open market, as identified in Data Adequacy Supplement B and elsewhere, fall within a six-mile radius of the proposed plant.

Response: Table AQ9-1 shows the approximate distance of the VOC and CO credit sources identified in Data Adequacy Supplement B, Table AQ-2.1B.

TABLE AQ-9
Specific Location Information for the ERCs Procured for the Vernon Power Plant

Pollutant	Revised Certificate Number	Revised ERC Quantity, lbs/day	Original Source of ERC	Approximate Distance from VPP, miles
CO	AQ005995	3	Union Chem – Division of Union Oil Co 2601 E. Imperial Hwy, Brea, CA 92621	21
VOC	AQ005992	50	Edgington Oil Co 2400 E. Artesia Blvd, Long Beach, CA 90805	9
VOC	AQ006108	213	Scope Products, Inc. 9112 Graham Ave., Los Angeles, CA 90002	4
	AQ005994	38		
	AQ005999	15		
VOC	AQ005993	73	Film Processing Corp. 3602 Crenshaw Blvd, Los Angeles, CA 90016	8

Source: Data Provided by the SCAQMD

10. Please provide information identifying the sources for PM credits in the Priority Reserve, and indicate the proportion of credits from facilities that operated within the six-mile radius of the proposed plant.

Response: Please refer to the Applicant's objection to this data request submitted to the CEC on February 26, 2007.

**VERNON POWER PLANT
(06-AFC-4)
CBE DATA RESPONSES, SET 1A**

11. Please state whether any PM credits from facilities located in, or owned by, the City of Vernon are available, or are otherwise not in use.

Response: Please refer to the Applicant's objection to portions of this data request submitted to the CEC on February 26, 2007.

The Applicant currently does not hold any PM credits.

12. For any PM credits held by Vernon located or owned facilities, please provide a description for such credits, including their source and amount.

Response: Please refer to the Applicant's objection to portions of this data request submitted to the CEC on February 26, 2007.

The Applicant currently does not hold any PM credits.

13. Please state the total amount of PM credits or options for credits currently held by the City of Vernon.

Response: The Applicant currently does not hold any PM credits.

14. Please provide a cumulative analysis of projected PM and other criteria pollutant emissions from proposed EGFs that were enabled by the September 2006 amendment to the Priority Reserve regime.

Response: Please refer to the Applicant's objection to this data request submitted to the CEC on February 26, 2007. In addition, and without waiving Applicant's objection, please refer to the cumulative air quality impact analysis submitted by the Applicant in CEC Data Response, Set 1E.

Background

The project is expected to generate up to 197 tons per year of ammonia emissions, derived from the use of aqueous ammonia in selective catalytic reduction of NOx. There exists a strong correlation between ion sum, including ammonium ion, and concentration of fine particulate matter.

Data Request

15. Please provide information on the contributive effect of ammonia emissions on PM10 and PM2.5, as well as the effect on their long-range transport.

Response: Please refer to the Applicant's objection to this data request submitted to the CEC on February 26, 2007. It is anticipated that a response will be provided by April 16, 2007.

**VERNON POWER PLANT
(06-AFC-4)
CBE DATA RESPONSES, SET 1A**

16. Please describe available methods and plans for controlling ammonia emissions to reduce its effects on PM concentration and transport.

Response: Please refer to the Applicant's objection to this data request submitted to the CEC on February 26, 2007. It is anticipated that a response will be provided by April 16, 2007.

Background

The applicant's response to Staff's Data Request #18 acknowledged that the cooling tower fans will not have a variable speed/flow controller.

Data Request

17. Please provide a comparison for a cooling tower fan with variable speed drives versus the current configuration. For each alternative, indicate their relative efficiency and performance.

Response: Please refer to the Applicant's objection to this data request submitted to the CEC on February 26, 2007. It is anticipated that a response will be provided by April 16, 2007.

18. Please provide a comparison of using a dry cooling system instead of a wet/dry cooling tower, including a comparison of potential emissions. Comparison of estimated costs should incorporate costs from the use of recycled wastewater system and costs to be incurred by other entities that are necessary to support the reclaimed water demand.

Response: Please refer to the Applicant's objection to this data request submitted to the CEC on February 26, 2007. It is anticipated that a response will be provided by April 16, 2007.

**VERNON POWER PLANT
(06-AFC-4)
CBE DATA RESPONSES, SET 1A**

Technical Area: Socioeconomics

Background

The discussion of Socioeconomics in Section 8.8 of the AFC is cursory. More information is needed in order to determine potential cumulative impacts, evaluate real alternatives and meet the legal requirements of the California Environmental Quality Act and the federal Clean Air Act.

Data Request

19. Please provide a list of all current businesses with facilities in Vernon that have moved from other parts of Los Angeles County, and identify the previous city of residence.

Response: Please refer to the Applicant's objection to this data request submitted to the CEC on February 26, 2007.

20. Please provide a list of businesses that are located on the border between Huntington Park (or other city) and Vernon, with their addresses and amount of tax revenue generated for the host city.

Response: Please refer to the Applicant's objection to this data request submitted to the CEC on February 26, 2007.

21. Please provide information on transportation systems usage, including: a) number of employees, b) number of daily vehicle trips for commute, c) mean distances/time from home to work, and d) number of daily truck trips.

Response: Please refer to the Applicant's objection to this data request submitted to the CEC on February 26, 2007.

22. Describe any City initiatives to increase use of more energy efficient travel, including but not limited to land use, employer incentives, parking policies, and public transportation programs.

Response: The City of Vernon is not currently engaged in any specific initiatives to increase use of more energy-efficient travel.

23. Please provide information in table form estimating the percentage of the project's electricity generation designated for use within City of Vernon in the short term and long term.

Response: Applicant expects in-City demand for power to be approximately 200 MW over the next 3 years. This represents approximately 25 percent of the output of the VPP. Local energy demand will increase depending on City development and local area requirements.

**VERNON POWER PLANT
(06-AFC-4)
CBE DATA RESPONSES, SET 1A**

24. Please provide documentation of all growth projections and impacts, resulting from or induced by the operation of Vernon power plant, that were made available to city officials. Please describe and quantify such projections and impacts whether or not such work has been done already.

Response: The requested information is provided in AFC Subsection 8.8. Also, please refer to Data Response 34.

Background

Section 8.8 presents table summaries for some socioeconomic factors while omitting others. Information from Appendix 8.8A on environmental justice has not been summarized in table form as those in the main section.

Data Request

25. Please provide information in table form on the age distribution and population density of the localities named in Section 8.8 (Bell, Huntington Park, Los Angeles City, Maywood, Vernon, Los Angeles County, California), and for the resident population within a six mile radius.

Response: Table SO25-1 presents the age distribution of the residents of Bell, Huntington Park, Los Angeles City, Maywood, Vernon, Los Angeles County, California, and the resident population within a 6- mile radius of the Vernon Power Plant. Table SO25-2 shows the age distribution of the residents for the same areas. Table SO25-3 shows the population density by square mile for these localities.

TABLE SO25-1
Age Distribution of Residents in a 6-Mile Radius LA County State of California and Local Municipalities

Age in Years	<5	5-17	18-21	22-29	30-39	40-49	50-64	65>	Total
6-mile Radius	146,754	363,177	110,327	217,939	237,472	176,249	143,827	109,238	1,504,984
Los Angeles County	728,242	1,931,560	551,692	1,192,203	1,608,405	1,379,813	1,200,453	926,970	9,519,338
Bell City, California	3,867	8,976	2,661	5,731	6,004	4,280	3,270	1,878	36,667
Huntington Park City	6,401	15,474	4,522	9,395	10,196	6,948	5,242	3,192	61,370
Los Angeles City	281,945	696,630	224,400	518,640	649,386	519,517	447,206	357,110	3,694,834
Maywood City	3,203	7,243	2,040	4,494	4,507	3,141	2,237	1,218	28,083
Vernon City	9	33	2	14	17	6	10	3	94

Source: U.S. Census 2000

**VERNON POWER PLANT
(06-AFC-4)
CBE DATA RESPONSES, SET 1A**

TABLE S025-2

Age Distribution of Residents in LA County State of California and Local Municipalities as a Percentage of the Total Population

	<5	5-17	18-21	22-29	30-39	40-49	50-64	65>	Total
6-mile Radius	9.8%	24.1%	7.3%	14.5%	15.85	11.7%	9.6%	7.3%	100%
California	7.2%	20.0%	5.7%	11.6%	16.4%	15.0%	13.4%	10.6%	100%
Los Angeles County	7.7%	20.3%	5.8%	12.5%	16.9%	14.5%	12.6%	9.7%	100%
Bell City	10.5%	24.5%	7.3%	15.6%	16.4%	11.7%	8.9%	5.1%	100%
Huntington Park City	10.4%	25.2%	7.4%	15.3%	16.6%	11.3%	8.5%	5.2%	100%
Los Angeles City	7.6%	18.9%	6.1%	14.0%	17.6%	14.1%	12.1%	9.7%	100%
Maywood City	11.4%	25.8%	7.3%	16.0%	16.0%	11.2%	8.0%	4.3%	100%
Vernon City	9.6%	35.1%	2.1%	14.9%	18.1%	6.4%	10.6%	3.2%	100%

Source: U.S. Census 2000

TABLE S025-3
Population Densities

Location	Population in 2000	Area (Square Miles)	Population Density (Person/Sq. mile)
6-mile Radius	1,504,984	113.1	13,306.67
California	33,871,648	157,776	214.68
Los Angeles County,	9,519,338	4986.8	1,908.91
Bell City	36,667	2.61	14,048.66
Huntington Park City	61,370	3.02	20,321.19
Los Angeles City	3,694,834	472.75	7,815.62
Maywood City	28,083	1.19	23,599.16
Vernon City	94	5.19	18.11

26. Please provide information in table form of the per capita income of residents for the same areas listed in #26.

Response: Table SO26-1 lists the average per capita incomes of the residents by locality (Bell, Huntington Park, Los Angeles City, Maywood, Vernon, Los Angeles County, California), and for the resident population within a 6-mile radius of the Vernon Power Plant.

**VERNON POWER PLANT
(06-AFC-4)
CBE DATA RESPONSES, SET 1A**

TABLE SO26-1.

Per Capita Income for Residents of LA County, State of California, Local Municipalities, and 6-mile Radius of the VPP

Area	Per Capita Income
California	\$22,711
Los Angeles County	\$20,683
Bell City	\$9,905
Huntington Park City	\$9,340
Los Angeles City	\$20,671
Maywood City	\$8,926
Vernon City	\$17,812
6-mile Radius of VPP	\$10,144

Source: US Census 2000

27. Please provide data on race and ethnicity of residents for the same areas listed in #26.

Response: Race and ethnicity data for the block groups within the 6-mile radius are provided in Volume 2 of the AFC, Appendix 8.8A-1. Table SO27-1 provides the race and ethnicity of residents of LA County, the municipalities and the State of California by showing the actual numbers from the 2000 Census. Table SO27-2 shows the race and ethnicity as a percentage of the population.

TABLE SO27-1

Race and Ethnicity of Residents in LA County, State of California and Local Municipalities

	TOTAL	White alone	Black or African- Ameri- can alone	Ameri- can Indian and Alaska Native alone	Asian alone	Native Hawaii an and Other Pacific Islande r alone	Some other race alone	Two or more races	Hispanic
California	33,871,648	20,122,959	2,219,190	312,215	3,682,975	113,858	5,725,844	1,694,607	10,969,132
Los Angeles County	9,519,338	4,622,759	916,907	68,471	1,134,263	27,221	2,262,925	486,792	4,243,487
Bell City	36,667	17,885	422	330	425	40	15,855	1,710	33,273
Huntington Park City	61,370	25,542	501	656	430	95	31,580	2,566	58,387
Los Angeles City	3,694,834	1,728,232	411,089	26,696	368,644	6,445	962,429	191,299	1,719,916
Maywood City	28,083	12,253	33	324	102	0	14,272	1,099	27,083
Vernon City	94	29	0	5	0	0	57	3	87

Source: U.S. Census 2000

**VERNON POWER PLANT
(06-AFC-4)
CBE DATA RESPONSES, SET 1A**

TABLE SO27-2 2

Race and Ethnicity of Residents in LA County, State of California and Local Municipalities as a Percentage of Total Population

	Total Population	White alone	Black or African Ameri- can alone	Ameri- can Indian and Alaska Native alone	Asian alone	Native Hawaiian and Other Pacific Islander alone	Some other race alone	Two or more races	Hispanic
California	33,871,648	59.4%	6.6%	0.9%	10.9%	0.3%	16.9%	5.0%	32.4%
Los Angeles County	9,519,338	48.6%	9.6%	0.7%	11.9%	0.3%	23.8%	5.1%	44.6%
Bell City,	36,667	48.8%	1.2%	0.9%	1.2%	0.1%	43.2%	4.7%	90.7%
Huntington Park City	61,370	41.6%	0.8%	1.1%	0.7%	0.2%	51.5%	4.2%	95.1%
Los Angeles City	3,694,834	46.8%	11.1%	0.7%	10.0%	0.2%	26.0%	5.2%	46.5%
Maywood City	28,083	43.6%	0.1%	1.2%	0.4%	0.0%	50.8%	3.9%	96.4%
Vernon City	94	30.9%	0.0%	5.3%	0.0%	0.0%	60.6%	3.2%	92.6%

Source U.S. Census 2000

28. Please provide information on high school(s) which students at the listed elementary and middle schools attend.

Response: Table SO28-1 lists the names and addresses of the high schools attended by students from the middle schools and elementary schools listed in AFC Section 8.8.3.5. The table also shows the enrollment of the high schools and the percentage of the students from each of the two middle schools attending the high schools.

**VERNON POWER PLANT
(06-AFC-4)
CBE DATA RESPONSES, SET 1A**

TABLE S028--
High Schools attended by Students from George Washington Carver Middle School and Henry T. Gage Middle School.

High School	Address	Enrollment 2004-2005	Enrollment 2005-2006	% Gage Middle School Students Attending	% Carver Middle School Students Attending
Huntington Park Senior High	6020 Miles Ave., Huntington Park, ,CA 90255	4571	4598	89	1
Bell High School	4328 Bell Ave., Bell ,CA 90201	4914	4737	8	0
South East High School	2650 Wisconsin Ave., South Gate ,CA 90280	NA	2246	3	0
Thomas Jefferson Senior High	1319 E. 41st Street, Los Angeles CA 90011	3815	2997	0	64
Santee Educational Complex	1921 Maple Ave., Los Angeles CA 90011	NA	3036	0	34
Theodore Roosevelt Senior High	456 S. Mathews St., Los Angeles CA 90033	5032	5126	0	1

NA = Not available.

Source: LAUSD Department of Facilities and Demographics and <http://data1.cde.ca.gov/dataquest/>

Background

The applicant states that the proposed power plant provides a socioeconomic benefit to the people near its location, but provides no specific examples of such benefits. With respect to employment relating to construction, the applicant indicates as little as 60% of the labor force would come from Los Angeles County, and fails to identify how much, if any, of the employment benefit will accrue to persons living near the proposed site.

Data Request

29. Please provide an estimate of development fees for schools or requirements the applicant will incur under Government Code 65997, and indicate any similar obligation the applicant may plan to undertake.

Response: California Code §65995(d) exempts “any facility that is owned and occupied by one or more agencies of federal, state, or local government.” Therefore, as stated in AFC Subsection 8.8.4.4.6, Impacts on Education, the City of Vernon is exempt from paying school impact fees to the Los Angeles Unified School District. Because impacts to schools as a result of the project are less than significant, no other mitigation is planned.

**VERNON POWER PLANT
(06-AFC-4)
CBE DATA RESPONSES, SET 1A**

30. Please indicate whether communities within the six-mile radius will receive discounted rates similar to those received by in-city industrial consumers.

Response: The City of Vernon is willing to discuss and to work with local area communities, where possible, on securing cost effective and competitively priced energy supplies.

31. Please provide information on contemplated development or expansion of public services mutual aid agreements with neighboring communities.

Response: The City does not anticipate entering into any additional mutual aid agreements with neighboring communities. Currently, the Vernon Fire Department participates in: i) the California Master Mutual Aid agreement; ii) an Automatic Mutual Aid agreement with Los Angeles County; iii) an Automatic Mutual Aid agreement with the City of Los Angeles for the Alameda Corridor; iv) a Mutual Aid agreement with the City of Long Beach; v) an Area E Mutual Aid agreement; and vi) a region 1, Area E Hazardous Materials response agreement. The Vernon Police Department has a Mutual Aid agreement with Los Angeles County for Area E. In addition, the Vernon Police Department participates in different Multi-agency task forces with outside agencies allowing the City to request additional personnel, resources and expertise. The City of Vernon Community Services and Water Department has a Public Works Mutual Aid agreement with Los Angeles County and a City Services agreement with Los Angeles County.

32. Please provide detailed information on any current or potential commitments to increase local hiring for average-wage union jobs for construction and operation of the project, either by Vernon or its contractors.

Response: Detailed information is currently not available. All hiring for the construction phase of the VPP project will be by the Engineering/Construction/Procurement (EPC) contractor. The City is already in discussions with Local Unions and the EPC contractor is expected to hire Local and Trade Union workers.

33. Please indicate any current or future partnerships with local organizations to provide training and job training for local residents during the two to three year period between the present and estimated date of operation.

Response: The City is already in discussions with Local Unions and the EPC contractor is expected to hire Local and Trade Union workers. Training for local workers between now and the start of construction will be provided by the unions.

**VERNON POWER PLANT
(06-AFC-4)
CBE DATA RESPONSES, SET 1A**

34. Please provide documentation supporting the estimate of \$75 per hour average wage, including prevailing wage distributions for all job classifications.

Response: The estimate of \$75 per hour average wage for construction workers in Section 8.8.4.3.4 of the application for certification was derived based on the estimated total payroll (approximately \$85 million) divided by the number of hours worked per year (approximately 2080 hours per worker) and multiplied by 532 person years. This section anticipated that additional funds from the payrolls for construction employees and purchases of materials and supplies during the 2-year construction period would have a slight temporary beneficial impact on the area. Table SO34-1 shows the negotiated wages including fringe benefits for craft workers based on recent information obtained from the Los Angeles/Orange Counties Building and Construction Trades Council and the Southwest Regional Council of Carpenters. Based on this updated wage information the IMPLAN model was rerun to recalculate indirect and induced economic impacts from construction.

TABLE SO34-1
Union-negotiated Wages by Craft

Trade	Thru Date	Taxable Wage	Fringes	Percent Fringes	Total
Boilermakers	8/5/2007	\$36.16	\$18.11	33.37%	\$54.27
Bricklayers	4/30/2007	\$32.70	\$10.01	23.44%	\$42.71
Carpenters	12/31/2007	\$33.61	\$9.14	21.38%	\$42.75
Electricians	5/27/2007	\$36.15	\$14.78	29.02%	\$50.93
Ironworkers	6/30/2007	\$33.06	\$16.86	33.77%	\$49.92
Laborers	6/30/2007	\$29.00	\$10.15	25.93%	\$39.15
Millwrights	12/31/2007	\$34.11	\$9.14	21.13%	\$43.25
Painters	12/31/2006	\$27.67	\$7.72	21.81%	\$35.39
Pipefitters	6/30/2007	\$32.61	\$14.72	31.10%	\$47.33
Operating Engineers	6/30/2007	\$34.54	\$15.35	30.77%	\$49.89

Source: Los Angeles/orange Counties Building and Construction trades Council and the Southwest Regional Council of Carpenters.

Indirect and Induced Economic Impacts from Construction

Construction activity would result in secondary economic impacts (indirect and induced impacts) within the City of Vernon and Los Angeles County. Secondary employment effects would include indirect and induced employment due to the purchase of goods and services by firms involved with construction, and induced employment due to construction workers

**VERNON POWER PLANT
(06-AFC-4)
CBE DATA RESPONSES, SET 1A**

spending their income within the county. In addition to these secondary employment impacts, there are indirect and induced income effects arising from construction. The project would create a temporary positive impact on the local economic base and fiscal resources. Employment for local and regional workers would provide additional area income as would local expenditures for construction materials and services. Increased local incomes and sales would also generate tax revenues for the local and regional areas.

Based on this updated wage information the IMPLAN model was rerun to recalculate indirect and induced economic impacts from construction. The wage rate assumed is a weighted average hourly rate of \$50 (actual average wage rate based on the crafts shown in the Table SO34-1 below is \$47.25). The estimated indirect and induced employment within Los Angeles County, using the revised wage rate, would be 157 and 159 jobs, respectively. These additional jobs result from the \$10 million in annual local construction expenditures as well as the \$11.62 million in spending by local construction workers. The \$11.62 million represents the disposable portion of the annual construction payroll (here assumed to be 70 percent of \$16.61 million). Assuming an average direct construction employment of 266, the employment multiplier associated with the construction phase of the project is approximately 2.2 (i.e., $[266 + 157 + 159]/266$). This project construction phase employment multiplier is based on a Type SAM model.

Indirect and induced income impacts were estimated at \$5,902,460 and \$6,510,120, respectively. Assuming a total annual local construction expenditure (payroll, materials and supplies) of \$26.61 million (\$16.61 million in payroll + \$10 million in materials and supplies), the project construction phase income multiplier based on a Type SAM model is approximately 1.5 (i.e., $[\$26,606,000 + \$5,902,460 + \$6,510,000]/\$26,606,000$).

Assuming that annual local construction expenditures are only \$5 million instead of \$10 million results in indirect and induced employment estimates within Los Angeles County of 79 and 139 jobs, respectively. Based on the same average construction employment of 266, the construction phase employment multiplier is approximately 1.8.

Indirect and induced income impacts based on the total annual construction expenditure of \$21.61 million (\$16.61 million in payroll + \$5 million in materials and supplies) were estimated at \$2,951,230 and \$5,721,640, respectively. Based on these estimates, the construction phase income multiplier was estimated at approximately 1.4.

**VERNON POWER PLANT
(06-AFC-4)
CBE DATA RESPONSES, SET 1A**

Technical Area: Alternatives

Background

The AFC discussed a No Project Alternative and Possible Alternative Sites identified within the City of Vernon. However, discussion of alternative projects is missing, and in-depth analysis of a full range of alternatives, is missing. In particular, there is no detailed analysis of any project alternative or technology alternative that would result in fewer project emissions.

Data Request

35. Please provide a table, including address and principal cross streets, showing all possible sites for the power plant that were, in the course of developing the Vernon project and preparing the AFC, brought to the attention of any person in a decision-making capacity for the project. For each site, please list all the reasons that site was removed from consideration.

Response: The alternatives analysis in Section 9 of the AFC describes and compares all of the potential sites that were brought to the attention of any person in a decision-making capacity. The information requested is provided in Table Alt35-1.

TABLE ALT35-1
Possible Power Plant Sites in the City of Vernon

Alternative Site	Principal Cross Streets	Reasons Site Removed from Consideration
Former Food Plant 5001 S. Soto Street	S. Soto Street E. 50 th Street	Parcel size is too small
Recycling Yard 2221 East 55 th Street	E. 55 Street S. Santa Fe Ave. S. Alameda St.	Parcel size is too small
City Storage Yard 2800 S. Soto Street	S. Soto Street E. 26 th Street	Parcel size is too small
Watkins Property 4500 Bandini Blvd	Bandini Blvd. S. Atlantic Blvd.	Odd shape of site Potentially greater noise impacts, since site is closer to subdivision Would require remote construction parking and laydown area(s) Rail access is slightly farther Requires longer recycled water line Higher paleontological sensitivity

**VERNON POWER PLANT
(06-AFC-4)
CBE DATA RESPONSES, SET 1A**

36. Please provide documentation establishing the need for a 13-acre minimum lot size for the project, when a smaller lot size was considered sufficient for the previous Vernon project application.

Response: Please refer to Figure 1.2-3 of the Application for Certification, which documents that a 13-acre minimum lot size is necessary to accommodate the footprint of this power plant. As indicated by this figure, it is not possible to accommodate all necessary project elements on a smaller site.

37. Please provide documentation establishing the need for a power plant significantly larger and more polluting than the projects of all other applicants, and that limited the applicant to only one site.

Response: Since the data request is directed at the availability of alternative sites, the Applicant assumes that by “significantly larger” the requestor is referring to the footprint of the site. In fact, the footprint of the VPP is comparable to that of other projects proposed for Southern California, including those with lower output. For example, the sites for the AES Highgrove, EME Walnut Creek and EME Sun Valley projects are 10.1, 11.48 and 20 acres, respectively.

The Applicant disagrees with the assertion that the VPP will be more polluting than other projects proposed in Southern California. The VPP will be a fast-start high-efficiency, combined-cycle facility. In fact, the VPP will have the lowest pollutant emission rates (per megawatt of power generated) than any other currently proposed project in Southern California.

38. Please provide documentation regarding emissions from different configurations that were proposed in the course of developing the Vernon project.

Response: The Applicant reviewed other project configurations; all of which were based on combined-cycle combustion turbine technology. This technology was selected due to the very high thermal efficiencies and the low air emissions. As all the configurations were based on the same technology, the air emissions for the different configurations would be the same on a pound per unit heat input basis as the VPP.

39. Please provide information on project alternatives given the criteria of meeting primarily or solely local generation needs.

Response: Meeting local generation needs is only one of several criteria pursuant to which the current VPP design was developed. The proposed Project configuration and technology provides for clean, economic and efficient operational flexibility to meet the City, local and state needs. Detailed information on project alternatives of the VPP with the above attributes is provided in Section 9 of the AFC.

**VERNON POWER PLANT
(06-AFC-4)
CBE DATA RESPONSES, SET 1A**

Background

AB 1890 mandates that every publicly owned electric utility (POU) establish a Public Benefit surcharge (2.85% of gross revenues), to be spent on projects related to conservation, renewable resource, research & development, or low income assistance. According to a 2005 report from the Southern California Public Power Authority (SCPPA), the City of Vernon collected over \$11.6 million in Public Benefit surcharges, but had spent less than \$5 million over the same time span.

Data Request

40. Please provide in table form a summary of updated revenue and expenditures collected through the Public Benefit surcharge, and how revenue was spent on programs for a) demand-side management and efficiency, b) renewable energy, c) research & development, and d) low-income assistance.

Response: Please refer to the Applicant's objection to this data request submitted to the CEC on February 26, 2007.

41. Please provide separately, in table form, a list of all AB 1890 programs along with their description and expenditures initiated since fiscal year 2003.

Response: Please refer to the Applicant's objection to this data request submitted to the CEC on February 26, 2007.

42. Please provide documentation detailing the use of \$6.7 million in unspent public benefit funds.

Response: Please refer to the Applicant's objection to this data request submitted to the CEC on February 26, 2007.

Background

The City of Vernon has set a Renewable Portfolio Standard target of 5% for 2009 and 20% for 2017. Currently the Malburg Generation Station produces 134 MW of energy. The Vernon Power Plant is projected to produce 914 MW when it is operational.

Data Request

43. Please confirm the respective RPS targets and dates.

Response: Please refer to the Applicant's objection to this data request submitted to the CEC on February 26, 2007.

44. Please provide documentation of the applicant's plans and strategies to increase Vernon's renewable energy portfolio to meet its legal target in 2009, 2010 (estimated year of project operation), and 2017.

Response: Please refer to the Applicant's objection to this data request submitted to the CEC on February 26, 2007.

**VERNON POWER PLANT
(06-AFC-4)
CBE DATA RESPONSES, SET 1A**

45. Please provide information on Vernon's current renewable energy portfolio.
Response: Please refer to the Applicant's objection to this data request submitted to the CEC on February 26, 2007.
46. Please describe implementation of any solar energy programs or infrastructure both for existing and future buildings in Vernon.
Response: Please refer to the Applicant's objection to this data request submitted to the CEC on February 26, 2007.
47. Please describe any city fiscal or regulatory policies designed to encourage consumer conservation, including the portion of power sales revenues allocated to conservation programs.
Response: Please refer to the Applicant's objection to this data request submitted to the CEC on February 26, 2007.
48. Please provide an analysis of electricity conservation strategies as an alternative to local generation capacity, given the near-future RPS targets and the currently unspent public benefit surplus.
Response: Please refer to the Applicant's objection to this data request submitted to the CEC on February 26, 2007.

Background

The City of Vernon previously initiated a state-sponsored "Conservation 20/20" program which provided electric customers with 5% credit for at least a 10% reduction in electricity usage. Many utilities currently run a version of this program.

Data Request

49. Please provide information on any conservation incentive program currently run by Vernon.
Response: Please refer to the Applicant's objection to this data request submitted to the CEC on February 26, 2007.
50. Please confirm whether the 5% credit was, or is, an energy credit compared to a monetary discount.
Response: Please refer to the Applicant's objection to this data request submitted to the CEC on February 26, 2007.

Background

During the tour following the Initial Hearing, a Vernon city official pointed out a gas separation facility as an exemplary industrial customer needing cheap local power generation. He noted the facility used 30 MW of electricity each year.

**VERNON POWER PLANT
(06-AFC-4)
CBE DATA RESPONSES, SET 1A**

Data Request

51. Please confirm that Marathon Tri-Gas uses 30 MW at its Vernon facility.

Response: Please refer to the Applicant's objection to this data request submitted to the CEC on February 26, 2007.

52. Please identify the thirty largest consumers in Vernon in terms of energy consumption.

Response: Please refer to the Applicant's objection to this data request submitted to the CEC on February 26, 2007.

53. Please provide information comparing the rates of Vernon customers with customers of IOUs and other POU's.

Response: Please refer to the Applicant's objection to this data request submitted to the CEC on February 26, 2007.

**VERNON POWER PLANT
(06-AFC-4)
CBE DATA RESPONSES, SET 1A**

Technical Area: Public Health

Background

The area near the proposed project is densely populated and has a large number of both children and elderly residents. The AFC does not identify the full range of "sensitive receptors" that should be considered in this analysis.

Data Request

54. Please provide a list of all sensitive receptors within a six-mile radius from the proposed site with names and addresses, including but not limited to all K-12 schools, day care centers, nursing or convalescent homes, hospitals, public parks and outdoor recreation facilities, housing units designated for persons over 55, and public housing projects.

Response: A description of the sensitive receptors is presented in AFC Subsection 8.6. According to this subsection, there are no sensitive receptors (such as schools, daycare facilities, convalescent centers, or hospitals) in the immediate vicinity of the project site. The nearest sensitive receptor is a senior high school located approximately 1,800 feet south of the project site. There are a few residences in the vicinity of the site. Appendix 8.6A contains the location, name, and coordinates for the sensitive receptors within a 6-mile radius of the project site. A map of the sensitive receptors from that appendix is provided in AFC Figure 8.6-1. Figures 8.6-2a to 2d provides a map of churches and parks within 3 miles of the project site. Further description of sensitive receptors within a 6-mile radius of the project site is presented in Hazardous Materials, AFC Subsection 8.12.

55. Please provide a list, with names and addresses, of all schools currently planned to be built by 2011 within a six-mile radius of the proposed site.

Response: Table DPH55-1 lists the schools in LAUSD planned for construction within the 6-mile radius of the VPP site through 2011 (based on the 2007 Strategic Execution Plan shown on the web site at <http://www.laschools.org/sep>). The table shows the address of the school, the local district, the status and planned completion date.

TABLE PH55-1
Planned Schools within the 6 mile Radius of Vernon Power Plant

Planned School Site	Location	District	Status	Planned Completion
Central Region Gratts Early Education Center	474 S. Hartford LA 90017	4	planned	2009
East LA Area New High School #1	1200 Plaza del Sol LA 90033	5	under construction	2009

**VERNON POWER PLANT
(06-AFC-4)
CBE DATA RESPONSES, SET 1A**

TABLE PH55-1
Planned Schools within the 6 mile Radius of Vernon Power Plant

Planned School Site	Location	District	Status	Planned Completion
Central Region Elementary School #19 and Early Education Center	S. of Rockwood St and Record Ave. LA 90063	5	planned	2010
East LA High School # 2	SE corner Brannick Ave. and Hammel St LA 90063	5	planned	2010
Central Region Early Education Center # 2	500 S Humphreys Ave. LA 90022	5	planned	2011
4th Street New Primary Center	469 Amalia Ave. LA 90022	5	completed	2006
Central LA New Learning Center # 1	3400 Wilshire Blvd. LA 90010	4	planned	2010
Central LA HS # 11	1200 W Cotton St. LA 90012	4	under construction	2008
Central LA High School # 12	1215 W. Miramar St. LA 90026	4	planned	2009
Central LA Area New High School # 10	260 S. Bixel St. LA 90017	4	completed	2006
Gratts New Primary Center	474 S. Hartford LA 90017	4	planned	2009
Central LA Area New Middle School # 1(John H Liechty)	650 S. Union Ave. LA 98006	4	under construction	2007
Central Region Middle School # 7	1420 E. Adams Blvd. LA 90011	5	planned	2011
Central Region Elementary School # 17	900 E. 33 rd St. LA 90011	5	planned	2010
Central Region Elementary School # 18	260 E. 31st St. LA 9001	5	planned	2010
Central LA New Middle School # 4	3500 S. Hill St. LA 90007	5	completed	2006
Manual Arts Primary Center #2(Dr. James Edward Jones)	1017 W. 47th St. LA 90037	7	under construction	2008
Central Region Elementary School# 16	120 E. 57th St. LA 90011	5	planned	2010
Central Region Early Education Center # 1	120 E. 57th St. LA 90011	5	planned	2010
South Region High School # 2	6100 S. Central Ave. LA 90001	7	planned	2011

**VERNON POWER PLANT
(06-AFC-4)
CBE DATA RESPONSES, SET 1A**

TABLE PH55-1
Planned Schools within the 6 mile Radius of Vernon Power Plant

Planned School Site	Location	District	Status	Planned Completion
South Region Elementary School # 2	1125 E. 74th St. LA 90001	7	planned	2010
South Region Elementary School # 1	8919 S. Main St. LA 90003	7	planned	2010
South Region High School # 7	6361 Cottage St. Huntington Park 90255	6	planned	2011
South Region Middle School # 2	3620 Gage Ave. Bell 90201	6	planned	2010
Huntington Park New ES # 7	6055 Corona Ave. Huntington Park 90255	6	completed	2006
South Region Elementary School # 3	4449 Live Oak St. Cudahy 90201	6	planned	2010
South Region Early Education Center # 1	4449 Live Oak St. Cudahy 90201	6	planned	2010
South Region Early Education Center # 2	4500 Firestone Blvd. South Gate 90280	6	planned	2010
South Region Elementary School # 4	4500 Firestone Blvd. South Gate 90280	6	planned	2010

Source: Strategic Execution Plan 2007 and <http://www.laschools.org/sep/>

Background

The AFC provides the MEIR and MEIW estimated added lifetime cancer risk from the project's own emissions, as well as the hazard index from the project's non-carcinogenic substances. Further information is required for an adequate analysis of cumulative impacts on public health.

Data Request

56. Please provide for all identified receptor locations the existing lifetime cancer risk, in table form.

Response: Risk-based maps have been developed by the South Coast Air Quality Management District (SCAQMD), Cumulative Impacts Working Group (SCAQMD, 2004). While these maps, which are based on the results of the MATES-II study, do not represent actual health outcomes associated with potential exposure to toxic air pollutants, they provide an indication of the differences in estimated risks at different locations within the South Coast Air Basin. These maps indicate that the census tracts containing these communities are associated with estimated lifetime cancer risks of greater

**VERNON POWER PLANT
(06-AFC-4)
CBE DATA RESPONSES, SET 1A**

than 1,500 in one million from all sources (mobile and stationary sources) of toxic air pollutants. The results of the MATES-II study indicate that motor vehicles and other mobile sources of air pollution are the predominant source of cancer-causing toxic air pollutants in the Basin, and that the largest contributor to total cancer risk is from diesel particulate emissions.

As described in AFC Subsection 8.6, the public health impact analysis estimated health risks from emissions from the proposed facility for the Maximum Exposed Individual (MEI). The MEI refers to an individual resident (MEIR) or worker (MEIW) that is located at the point where the highest concentrations of modeled chemical substances associated with facility emissions are predicted to occur. Cancer risk and non-cancer health hazard indices were estimated for both the MEIR and the MEIW based on the modeled ambient concentrations of substances of potential concern. The analysis in AFC Appendix 8.6C shows the area with a modeled residential (70-year exposure) potential maximum added lifetime cancer risk of greater than one in a million extends no more than 150 feet past the property line and does not include any potential sensitive or residential receptors. The MEIR potential excess life time cancer risk (where an actual receptor could be located) was estimated to be 0.568 in a million, and the MEIW lifetime cancer risk was estimated to be 0.493 in a million (compared with 1,500 in one million from all sources). Estimated cancer risks associated with facility emissions would be lower than these risks at all other receptor locations. As discussed in AFC Subsection 8.6, excess lifetime cancer risks less than 10×10^{-6} (10 in a million) are unlikely to represent public health impacts that require additional air pollution control applied to facility emissions. Since this analysis was based on risks to the MEIR or MEIW receptor, cancer risks are unlikely to represent a significant cumulative public health impacts for all other receptors.

57. Please provide for all identified receptor locations the existing non-cancer hazard index, in table form.

Response: The MATES II study did not provide calculations of noncancer hazard indices. This information is available on a county-wide level from the USEPA's National Air Toxics Assessment (NATA) (<http://www.epa.gov/ttn/atw/nata/maprisk.html>). The EPA's NATA assessment indicates that the cumulative noncancer hazard index in Los Angeles County, based on 1996 emissions data (the most current assessment available) ranges from 4.9 to 27. USEPA strongly cautions that these modeling results should not be used to draw conclusions about local exposure concentrations or risk. The results are most meaningful when viewed at the State or national level; for smaller areas, the modeling becomes less certain. In addition, these results represent conditions in 1996 rather than current conditions and only include exposures from outdoor sources of air toxics.

**VERNON POWER PLANT
(06-AFC-4)
CBE DATA RESPONSES, SET 1A**

Please see Data Response 56 for discussion of the noncancer risks associated with project emissions. The maximum hazard index for acute non-carcinogenic substances is 0.0544. The hazard index for chronic non-carcinogenic substances is 0.0222 for the residential MEI and also 0.0222 for the commercial/industrial MEI. These levels fall below a hazard index threshold of one. Noncancer hazard indices below one are unlikely to represent public health impacts that require additional air pollution control applied to facility emissions. As described in Data Response 56, the noncancer hazard indices at all other receptors would be lower than the levels estimated in this analysis, and therefore, are unlikely to represent a cumulative public health impacts for all other receptors.

58. Please provide, in table, form a list of other Priority Reserve-enabled EGF projects with their MEIR and MEIW estimated added lifetime cancer risk, added hazard index, existing lifetime cancer risk, and existing hazard index.

Response: Please refer to the Applicant's objection to this data request submitted to the CEC on February 26, 2007.

59. Please provide documentation supporting the application of a fixed hazard index to a population with higher than average existing hazard index.

Response: Please refer to the Applicant's objection to this data request submitted to the CEC on February 26, 2007. Without waiving its objection, the Applicant provides the following response to this data request.

It should be noted that the maximum acute and chronic hazard indices from the proposed power plant are, respectively, about 20 and 45 times lower than the significance threshold of 1.0. These hazard indices are based on overly conservative air toxic emission estimates that reflect an operating level which could not be achieved by the project.¹

¹ Air toxic were estimated based on the turbines operated at the highest fuel consumption rate for every hour of year, without consideration for preventative or emergency maintenance requirements.

**VERNON POWER PLANT
(06-AFC-4)
CBE DATA RESPONSES, SET 1A**

Technical Area: Traffic and Transportation

Background

Section 8.10.2.2 of the AFC describes the project as “requiring shippers of hazardous materials to use the shortest route feasible to and from the project site”. Regarding transport of hazardous materials, California Vehicle Code § 31303(b) requires that “transportation shall be on state or interstate highways which offer the least overall transit time whenever practicable. CVC § 31303(c) further states that shippers “shall avoid, whenever practicable, congested thoroughfares, places where crowds are assembled, and residence districts as defined in Section 515.”

Data Request

60. Please confirm the common understanding of CVC § 31303(b) as referring to least overall transit time on state or interstate highways.

Response: The truck routes proposed in the Traffic and Transportation section 8.10.3.2 conform to CVC paragraph 31303(b). As stated in paragraph 8.10.2.2, “transportation shall be on state or interstate highways which offer the least overall transit time,” whenever practicable.

61. Please indicate that the project will conform to CVC § 31303(c) in avoiding the transport of hazardous materials through residential areas (except for state and interstate highways), congested thoroughfares, and places where people congregate, where possible.

Response: The truck routes as proposed use either state, interstate highways or portions of streets in industrial areas. These routes comply with CVC paragraph 31303(c).

Background

The AFC lays out the state vehicle code provisions and the existence of a local process, in lieu of local ordinances, regarding the [use] of oversized vehicles on local roads. However, it does not list the criteria for the local process, including that for obtaining a temporary Hauling Permit.

Data Request

62. Please provide a list of municipalities with authority to change weight limits that are located on potential transportation routes related to the construction, installation, operation, or repair of the project.

Response: Caltrans has jurisdiction on the freeways. Oversized vehicles would use the freeways (I-5, I-10, I-110, and I-710) before traveling on local streets. Truck trips are likely to occur on surface streets in the cities of

**VERNON POWER PLANT
(06-AFC-4)
CBE DATA RESPONSES, SET 1A**

Maywood, Bell, Huntington Park, Vernon, and Los Angeles; and in the County of Los Angeles.

Note that CVC section 35704 “exempts vehicles used by a public utility or its licensed contractors from the weight and size limits during construction, installation, or repair of a public utility,” any change of weight limits made by municipalities would apply to the operations phase only.

63. Please provide information, in table form, of the size and weight limits in those municipalities.

Response: Table TT63-1 provides the information requested with the exception of the City of Bell. At this time, we have not received a response to our inquiry from the City of Bell.

TABLE TT63-1
Size and Weight Limit Restrictions of Nearby Cities

Jurisdiction	Size/Weight Limit
Los Angeles County	The weight and vehicle restrictions provided for in Chapter 15.48 “Weight Limits” shall not apply to vehicles owned by or under contract to a public utility, public entity or a licensed contractor while necessary in use in the construction, installation or repair of a public utility or public improvement. <i>Source: Los Angeles County Code</i> http://ordlink.com/codes/lacounty/index.htm
Los Angeles	The provisions of the section 80.36.1 “Restricted use of certain streets” shall not apply to vehicles owned by or under contract to a public utility while necessary in use in the construction, installation or repair of such public utility. <i>Source: American Legal Publishing Online Library – City of Los Angeles Municipal Code</i>
Bell	No response received from query to City of Bell staff and the data does not appear to be available via the internet.
Huntington Park	No weight restriction on designated streets in section 4-7.904 “Commercial vehicles permitted: Streets designated” of the Municipal Code (see Attachment TT63-1A). Besides those streets, the limit for commercial vehicles is 3 tons or 6,000 pounds. <i>Source: City of Huntington Park Website</i> http://www.huntingtonpark.org/
Maywood	No weight restriction on designated truck routes (Alamo, Slauson, Atlantic, Randolph); 6,000-pound limit in residential areas. <i>Source: Officer Viega, City of Maywood Police Department.</i>
Vernon	H 20 Loading Per Caltrans Standards (see Attachment TT63-1B). <i>Source: City Of Vernon Building and Planning Division</i>

**VERNON POWER PLANT
(06-AFC-4)
CBE DATA RESPONSES, SET 1A**

**Attachment TT63-1A
Excerpt from Huntington Park Municipal Code**

4-7.904 Commercial vehicles permitted: Streets designated.

In accordance with the provisions of Section 4-7.903 of this article, the following streets and portions of streets are hereby declared to be streets the use of which is permitted by any commercial vehicle or by any vehicle exceeding a maximum gross weight limit of three (3) tons:

- (1) Alameda Street;
- (2) Albany Street;
- (3) Belgrave Avenue from Alameda Street to Santa Fe Avenue;
- (4) Benedict Way;
- (5) Bickett Street from Slauson Avenue to the north City limits;
- (6) California Avenue;
- (7) Clarendon Avenue from Regent Street to Cottage Street;
- (8) Cottage Street from Clarendon Avenue to Randolph Street;
- (9) Florence Avenue;
- (10) Gage Avenue;
- (11) Laura Avenue;
- (12) Malabar Street from Slauson Avenue to the north City limits;
- (13) Maywood Avenue;
- (14) Pacific Boulevard from Slauson Avenue to the north City limits;
- (15) Randolph Street from the west City limits to Maywood Avenue;
- (16) Regent Street from Gage Ave. to Clarendon Ave. and from Randolph St. to Slauson Ave.;
- (17) Salt Lake Avenue;
- (18) Santa Ana Street from Salt Lake Avenue to Otis Street (east);
- (19) Santa Fe Avenue;
- (20) Slauson Avenue;
- (21) Soto Street;
- (22) State Street from the south City limits to Florence Ave. and from Gage Ave. to the north City limits;
- (23) Walnut Street from California Avenue to Salt Lake Avenue;
- (24) 52nd Street from Malabar Street to the east City limits;
- (25) 53rd Street from Malabar Street to the east City limits;
- (26) 54th Street from Malabar Street to the east City limits;
- (27) 55th Street from Malabar Street to the east City limits;
- (28) 56th Street from Malabar Street to the east City limits;
- (29) 57th Street from Malabar Street to Pacific Boulevard;
- (30) 58th Street from Malabar Street to Pacific Boulevard;
- (31) The alley between Santa Fe Avenue and Middleton Street from Gage Avenue to Clarendon Avenue for northbound traffic only;
- (32) Clarendon Avenue between Santa Fe Avenue and the first alley east of Santa Fe Avenue for westbound traffic only; and
- (33) Belgrave Avenue between State Street and a point 520 feet westerly from the center line of State Street.

(§ 92, Ord. 912, as amended by Ord. 1142, § 2, Ord. 1474, § 1 (b), Ord. 169-NS, eff. May 16, 1977, § 1, Ord. 199-NS, eff. May 17, 1978, § 1, Ord. 209-NS, eff. September 20, 1978, and § 2 (54), Ord. 624-NS, eff. Dec. 15, 1999)

**VERNON POWER PLANT
(06-AFC-4)
CBE DATA RESPONSES, SET 1A**

**Attachment TT63-1B
Caltrans Highway Loads**



BRIDGE DESIGN SPECIFICATIONS • FEBRUARY 2004

3.7 HIGHWAY LOADS

3.7.1 Standard Truck and Lane Loads*

3.7.1.1 The highway live loadings on the roadways of bridges or incidental structures shall consist of standard trucks or lane loads that are equivalent to truck trains. Three systems of loading are provided. The H loadings and the HS loadings—the HS loadings being heavier than the corresponding H loadings and P loads based on permit vehicles for regulation of overloads.

3.7.1.2 Each lane load shall consist of a uniform load per linear foot of traffic lane combined with a single concentrated load (or two concentrated loads in the case of continuous spans—see Article 3.11.3), so placed on the span as to produce maximum stress. The concentrated load and uniform load shall be considered as uniformly distributed over a 10 foot width on a line normal to the centerline of the lane.

3.7.1.3 For the computation of moments and shears, different concentrated loads shall be used as indicated in Figure 3.7.6B. The lighter concentrated loads shall be used when the stresses are primarily bending stresses, and the heavier concentrated loads shall be used when the stresses are primarily shearing stresses.

3.7.2 Classes of Loading

There are four standard classes of highway loading: H 20, H 15, HS 20, and HS 15. Loading H 15 is 75 percent of loading H 20. Loading HS 15 is 75 percent of Loading HS 20. If loadings other than those designated are desired, they shall be obtained by proportionately changing the weights shown for both the standard truck and the corresponding lane loads.

*Note: The system of lane loads defined here (and illustrated in Figure 3.7.6B) was developed in order to give a simpler method of calculating moments and shears than that based on wheel loads of the truck.

Appendix B shows the truck train loadings of the 1935 Specifications of AASHTO and the corresponding lane loadings.

In 1944, the HS series of trucks was developed. These approximate the effect of the corresponding 1935 truck preceded and followed by a train of trucks weighing three-fourths as much as the basic truck.

3.7.3 Designation of Loadings

The policy of affixing the year to loadings to identify them was instituted with the publication of the 1944 edition in the following manner:

H 15 Loading, 1944 Edition shall be designated	H 15-44
H 20 Loading, 1944 Edition shall be designated	H 20-44
H 15-S 12 Loading, 1944 Edition shall be designated	HS 15-44
H 20-S 16 Loading, 1944 Edition shall be designated	HS 20-44

The affix shall remain unchanged until such time as the loading specification is revised. The same policy for identification shall be applied, for future reference, to loadings previously adopted by the American Association of State Highway and Transportation Officials.

3.7.4 Minimum Loading

Bridges shall be designed for HS 20-44 loading or an Alternate Military Loading of two axles four feet apart with each axle weighing 24,000 pounds, whichever produces the greatest stress.

Transverse Reinforced Slabs shall be designed with a single 32k axle.

3.7.5 H Loading

The H loadings consist of a two-axle truck or the corresponding lane loading as illustrated in Figures 3.7.6A and 3.7.6B. The H loadings are designated H followed by a number indicating the gross weight in tons of the standard truck.

3.7.6 HS Loading

The HS loadings consist of a tractor truck with semi-trailer or the corresponding lane load as illustrated in Figures 3.7.7A and 3.7.6B. The HS loadings are designated by the letters HS followed by a number indicating the gross weight in tons of the tractor truck. The variable axle spacing has been introduced in order that the spacing of axles may approximate more closely the tractor trailers now in use. The variable spacing also provides a more

VERNON POWER PLANT (06-AFC-4) CBE DATA RESPONSES, SET 1A



BRIDGE DESIGN SPECIFICATIONS • FEBRUARY 2004

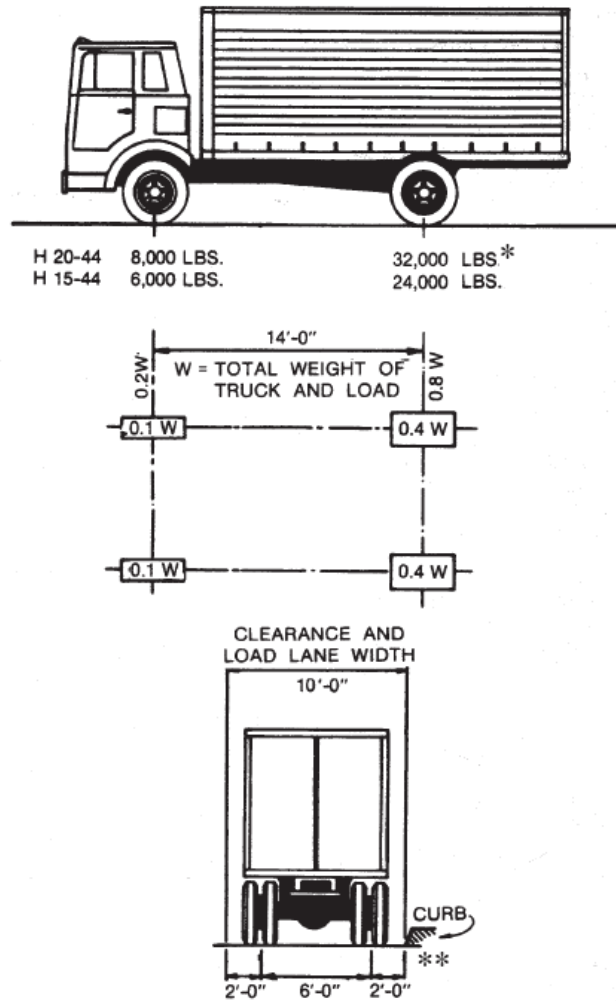


FIGURE 3.7.6A Standard H Trucks

* In the design of timber floors and orthotropic steel decks (excluding transverse beams) for H 20 loading, one axle load of 24,000 pounds or two axle loads of 16,000 pounds each spaced 4 feet apart may be used, whichever produces the greater stress, instead of the 32,000-pound axle shown.

** For slab design, the center line of wheels shall be assumed to be 1 foot from face of curb. (See Article 3.24.2)

**VERNON POWER PLANT
(06-AFC-4)
CBE DATA RESPONSES, SET 1A**

64. Please provide size and weight of large vehicles, whose use is anticipated in the construction, installation, operation, or repair of the project, that exceed the state limit or may exceed local limits of other municipalities.

Response: There are a number of oversized and overweight loads ("heavy haul") that are required during construction of the power plant. No significant heavy haul trucks are anticipated to be needed during operations; there may be an occasional need to replace a component (e.g., turbine rotor), but this frequency should average less than once per year.

There is a rail spur at the site. Therefore, it is anticipated that the majority of the heavy loads would arrive by rail with off-loading occurring adjacent to the site. Once a transformer, generator, combustion turbine, or steam turbine is off-loaded it must be moved to its location onsite with a 120-wheel hydraulic self leveling carrier that is not street designed (because during a move on public streets, the entire roadway would have to be shutdown). The same would happen in reverse if a combustion turbine rotor or transformer were sent offsite for repair; although, a combustion turbine rotor may be able to be moved through public streets by heavy haul truck if the first few rows of compressor blades were pulled.

If heavy haul trucks are used on public streets during construction, the EPC Contractor will develop a traffic plan and obtain all permits necessary from the municipalities affected. If heavy haul trucks are used on public streets during operations, the project owner will obtain all necessary permits from the affected municipalities.

Typical oversized, overweight loads would include:

- Generators
- Turbine rotors
- HRSG modules
- HRSG low pressure drum
- Steam Turbine Generator casings and rotors
- Step up transformers
- Construction crane sections

No information on the equipment weights or dimensions is available at this time, but it is reasonable to assume that some of these would require oversized and overweight loads. For construction, the EPC Contractor will provide all required information on the permit application.

65. Please indicate the frequency of enforcement violations regarding the size and weight of vehicles within the City.

Response: Please refer to the Applicant's objection to this data request submitted to the CEC on February 26, 2007.

**VERNON POWER PLANT
(06-AFC-4)
CBE DATA RESPONSES, SET 1A**

66. Please provide information on the temporary Hauling Permit, including its duration, the frequency of issue, and the frequency of denying such a permit.

Response: Please refer to the Applicant's objection to this data request submitted to the CEC on February 26, 2007.

Background

Vernon and its contractors have stated on numerous occasions that city industry employs 44,000 people. The current project would increase local generating capacity, and up to 25% of project output would be diverted to local industry. The applicant states "significant" is that which results in traffic that is substantial relative to the amount of existing traffic and capacity of the surrounding roadway network. The AFC addresses construction and implementation impacts, but does not adequately address the nature and extent of increased traffic resulting from new local power generation.

Data Request

67. Please estimate the amount of traffic currently flowing into Vernon daily.

Response: The Applicant hereby withdraws its objection to this data request submitted to the CEC on February 26, 2007, and provides the following response.

The Applicant estimates that 245,000 vehicles flow into the City daily, excluding vehicles traveling on the I-710 freeway. A large percentage of the traffic passes through Vernon with out making a stop.

68. Please confirm the estimate that up to 25% of project output that would be diverted to Vernon industry.

Response: Please refer to Applicant's Data Response 23.

69. Please provide estimates on the amount of new traffic – car trips and truck trips - that would be induced by or indirectly result from increased energy capacity. Please estimate also the resulting traffic distribution.

Response: The increased electrical capacity will be used to serve demands within the City of Vernon and Southern California. Some current electrical needs within the City are currently served by outside sources. However, individual decisions about taking trips in and around the City of Vernon are not driven by the sources or availability of electricity. As long as electricity sources are available, decisions about personal and work trips will be made independent of the source of energy. In other words, the availability of new sources of electricity in the City of Vernon will not affect the number or types of trips, since those trips will still be made whether or not electricity is provided inside or outside of the City.

**VERNON POWER PLANT
(06-AFC-4)
CBE DATA RESPONSES, SET 1A**

The project has the potential to affect the price of electricity, which may indirectly have an effect on trip-making if the availability of electricity affects the number and location of businesses, which result in jobs. However, there are other constraints that also affect the number and types of jobs that are located in Vernon. It would be pure speculation as to what changes may occur in the job market (increases or reductions) based on availability and cost of electricity. Consequently, there is no reasonable expectation that there would be any discernible impact on the amount of traffic.

70. Please describe any plans to mitigate such impacts. Please provide accounts of scenarios and plans relating to the foreseeable increase in traffic that were brought to the attention of any individual with decision-making capacity on this project.

Response: Please refer to Applicant's to Data Response 69. No impacts are anticipated, so no mitigation is necessary.

**VERNON POWER PLANT
(06-AFC-4)
CBE DATA RESPONSES, SET 1A**

Technical Area: Hazardous Materials

Background

In addition to its contributions to air pollution, ammonia is also a hazardous material with inherent risk in transport and storage. 8.12.4.2 states that during operation the project will require the delivery of aqueous ammonia no more often than once every five days. However, according to § 8.10.4.3.2, aqueous ammonia (19 percent) will be delivered to the project site by tanker truck about every 2 to 3 days (for a single truck) or once a week (for a double truck). Federal law deems 20 percent concentration of aqueous ammonia to be a hazard.

Data Request

71. Please indicate the amount of aqueous ammonia required for one year of operation.

Response: The amount of ammonia introduced into the system will vary depending upon the NO_x reduction requirements, but will be approximately a 1:1 molar ratio of ammonia to NO_x. The expected maximum use of aqueous ammonia will be 264 lb/hr for each SCR system, for a total of 102.5 gal/hr for all three SCR systems. At the maximum annual operation of the CTGs for 8,760 hours, the maximum annual aqueous ammonia use by all the three SCR systems will be approximately 900,000 gallons. This is a very conservative quantity since the VPP will not operate at full load all year. At an average capacity factor of 80 percent, the annual consumption of aqueous ammonia will be 720,000 gallons.

72. Please provide information indicating whether frequency of delivery will be 70 deliveries per year or 120-180 deliveries per year, and indicate the type of tankers and composition of yearly tanker fleet required for this frequency.

Response: If all deliveries were made by a double-tanker truck there would be about 70 deliveries or less (depending on plant capacity factor) per year. If all deliveries were by a single-tanker truck there would be about 140 deliveries per year. The City intends to maintain flexibility on the type of ammonia delivery vehicle. However, it is noted that all tanker truck vehicles transporting ammonia will be required to meet or exceed the specifications of DOT Code MC-307.

73. Please evaluate the comparative safety risks involved with single truck and double truck tanker.

Response: Both types of trucks will be driven by licensed, professional drivers. These drivers are trained and experienced on the type of trucks that they are using. Drivers of double-tanker trucks require specific skills and experience but there is not any expectation of a safety difference between these types of trucks. As stated in Data Response 72, both single- and double-

**VERNON POWER PLANT
(06-AFC-4)
CBE DATA RESPONSES, SET 1A**

tanker trucks will meet the requirements of DOT Code MC-307; which will minimize the possibility of a tank rupture during a shipping accident. Accident data are maintained on a per accident basis - number of accidents in a given period. Truck accidents are identified, but not by type of truck.

74. Please perform an analysis of off-site consequences for a worst-case accidental release from truck transport.

Response: The potential for public exposure to ammonia during a transportation accident depends on the accident location and the ammonia vapor evaporation rate from the aqueous ammonia pool. The key factors affecting the probability of an accidental release during transport are the delivery driver's skill, the delivery vehicle design specifications, and accident rates along similar roads.

The Applicant is relying on the extensive regulatory program that applies to shipment of hazardous materials on California highways to ensure public safety and health during the transportation. These regulatory programs have been developed to address the key factors affecting the potential release of hazardous materials during transport. See AFC section 8.12 for additional information on regulations governing the transportation of hazardous materials.

Aqueous ammonia will be delivered to the proposed facility in U.S. DOT certified vehicles with design capacity of 6,500 gallons, and designed to U.S. DOT Code MC-306 or MC-307 specifications. These specifications ensure the delivery vehicles are for hauling of caustic materials such as aqueous ammonia.

The Applicant estimated the probability of an accident using methods from the *Handbook of Chemical Hazard Analysis Procedures* published by the USEPA. The total number of miles per year traveled to deliver ammonia to the site was estimated to be 6,240 miles². The annual miles per year estimate conservatively assumes that the potential accident risk is equal over the entire delivery route; whereas, the probability of an accident occurring on divided highways/freeways is significantly lower. The probability of a bulk transportation accident occurring that would result in a 100 percent loss of cargo is 6.6×10^{-4} /year. This probability is for a generic bulk transportation accident. Ammonia-specific transportation release frequency is available in *Lees Loss Prevention in the Process Industries*. The estimated frequency for a major ammonia road transportation release is 1 in 2,000 tanker years (Lees Loss Prevention 1996, Appendix 14/23). Assuming a tanker with an average speed of 45 miles per hour, the tanker will be delivering ammonia for approximately 139 hours or 1.6×10^{-2} year. The net probability for an

² Conservatively assumes four ammonia deliveries per week with a one-way trip distance of 30 miles.

**VERNON POWER PLANT
(06-AFC-4)
CBE DATA RESPONSES, SET 1A**

ammonia transportation accident while delivering ammonia to the VPP site is 7.9×10^{-6} /year.

Several factors need to be considered when determining the potential risk from the use transportation of hazardous materials. These factors include the probability of occurrence, population densities along the transportation route, meteorological conditions, and the transport vehicle design. As described above, the probability of a transportation accident while delivering ammonia are very low, even when considering the conservative nature of the analysis. Therefore, it is concluded that the potential public health risk associated with the delivery of aqueous ammonia to the VPP is less than significant.

75. Please provide a comparison for ammonia from the use of urea feedstock to generate ammonia on site versus the current proposed transport and storage of aqueous ammonia. For each alternative, please describe the process and equipment necessary, operational and disposal issues, a brief preliminary environmental assessment, energy use, advantages and disadvantages, and capital and maintenance costs.

Response: The VPP will use an aqueous ammonia system for injection of ammonia into the SCR for NO_x control. The aqueous ammonia solution will be stored onsite in two stationary aboveground tanks as described in AFC Subsection 8.12. Pumps will be used to dispense ammonia solution to the emission control equipment at a maximum flow rate of about 264 lb/hr for each HRSG. The use of aqueous ammonia will require the vaporization of the ammonia solution. Aqueous ammonia will be vaporized before injection of the ammonia into the flue gas system. Ammonia will be diluted with air and injected into the gas stream through ammonia injection grid that will be tuned to disperse the ammonia across the flue in proportion to the exhaust flow.

An alternate to aqueous ammonia is the generation of ammonia onsite from a solid urea feedstock. Urea is available in solid form as prills or granulated material. Ammonia is generated from urea by a hydrolysis reaction that yields a vapor phase mixture of ammonia, carbon dioxide and steam. Urea systems typically include the urea unloading equipment, storage silos, dissolving tanks using deionized water, feed tanks, feed pumps, solution heaters and hydrolyzing reactors. All urea conversion systems are consumers of steam, electric power and deionized water.

Aqueous ammonia is used in a wide variety of industries and has few, if any, unresolved process problems. Urea to ammonia conversion is a relatively new technology. Issues that are being addressed in current system designs include:

**VERNON POWER PLANT
(06-AFC-4)
CBE DATA RESPONSES, SET 1A**

- Deposit build up in pipes and tanks due to the presence of formaldehyde and urea additives
- Potential corrosion in relief valves due to process operating conditions.
- Long-term impact of urea additives on SCR catalyst life
- Urea solids tendency to agglomerate making it difficult to handle

Urea conversion systems have a higher capital cost but lower feedstock cost as compared to aqueous ammonia systems. Experience has shown that as the ammonia consumption increases, urea-based systems become the economic choice, while for lower consumption rates, aqueous ammonia is the preferred choice.

Urea systems are being increasingly used on large coal fired power plants. However, the VPP and most combined-cycle plants have significantly lower ammonia consumption. Aqueous ammonia is the preferred technical and economic alternative for VPP. Neither aqueous ammonia nor urea systems create significant environmental impacts.

76. Please identify other potential methods to mitigate local impacts from the transportation of aqueous ammonia.

Response: Potential mitigation measures to reduce the already insignificant potential for ammonia deliver impacts are to use the shortest approved transportation delivery route, use ammonia suppliers that comply with federal regulations governing the transportation of hazardous materials and are licensed to haul hazardous materials by the California Highway Patrol, and use of appropriately designed vehicles to transport ammonia.

**VERNON POWER PLANT
(06-AFC-4)
CBE DATA RESPONSES, SET 1A**

Technical Area: Water Resources

Background

Reclaimed water will be used and reused for the cooling tower. Since several tons of PM₁₀ will be emitted from the cooling tower, the composition of cooling tower water is relevant in evaluation impacts of cooling tower emissions.

Data Request

77. Please provide a table showing the chemical composition of cooling tower water and the concentration of each chemical listed.

Response: The chemical composition of cooling tower water and the concentration of each chemical is provided in two sections of the AFC. Information relevant to the analysis of potential impacts to water resources is provided in Table 8.14-5, and information relevant to the analysis of potential air quality impacts is presented in Table 8.1B6c and Table 8.1B.7b (Appendix 8.1B). Although there is some overlap, constituents selected for inclusion in the AFC were based on the specific resources of concern – water quality and air quality.

78. Please provide documentation showing what proportion of cooling water PM₁₀ and PM_{2.5} emissions are the result of dissolved solids in reclaimed water proposed for the project in its current configuration.

Response: The air quality analysis performed by the Applicant assumed that total dissolved solids in the reclaimed water contributed 100 percent of the PM₁₀ and PM_{2.5} emissions from the cooling tower.

79. Please describe processes by which reclaimed water/wastewater can be cleaned in order to reduce emissions of criteria pollutants and air toxics.

Response: In accordance with Title 22 of the California Code of Regulations, reclaimed water is produced by treating wastewater to a very high level that eliminates most pollutants in order to protect human health and the environment. Treatment technologies used to “polish” reclaimed water at the source include filtration through beds of anthracite coal, sand, and gravel. The resulting reclaimed water is very clean – constituent concentrations are described in the AFC in Table 8.14-5 and Table 8.1B6c and 8.1B7b (Appendix 8.1B). At the plant site, the need for further treatment is determined by the analysis of potential environmental effects. In terms of criteria pollutants and air toxics, the analysis of potential effects is contained in Subsection 8.1 of the AFC. As described in this subsection, the Applicant is required to install emission controls that meet the “best available control technology” requirements of the applicable local, state, and federal regulations. The cooling tower incorporates “best available control technology” by using high

**VERNON POWER PLANT
(06-AFC-4)
CBE DATA RESPONSES, SET 1A**

efficiency drift eliminators to significantly reduce the amount of criteria and air toxic emissions. Therefore, no additional treatment is needed to protect public health. In addition, the Applicant performed a human health risk analysis that shows the use of recycled water in the cooling tower would not result in a significant public health impact. The installation of additional technology to create ultra-pure water for the cooling tower, such as reverse osmosis and electro-deionization processes, is not required or warranted.

Background

In response to Staff's Data Request #43, the applicant summarized the reduced impacts on source water and elimination of wastewater from a zero liquid discharge system. It also mentioned potential environmental impacts with gas firing in the spray dryer.

Data Request

80. Please quantify the annual savings of source water from a zero liquid discharge system.

Response: The Applicant hereby withdraws its request for additional time to respond to this data request submitted to the CEC on February 26, 2007, and provides the following response.

As discussed in CEC Data Response 43 (Set 1A), a power plant designed for zero-liquid discharge would use approximately 18 percent less source water than the present VPP design. This is because clean reject water from the ZLD system would be cycled back into the cooling system. On an annual basis, this would amount to a reduced demand of approximately 1,128 acre-feet of recycled water.

81. Please quantify the annual savings of wastewater discharge.

Response: If the VPP project included a ZLD system, discharge to the LACSD sewer system would be reduced to near 0 mgd. Approximately 0.11 million gallons per year of domestic (non-cooling) wastewater would still be discharged and not sent to the ZLD system. Additional information about the ZLD system, including cost factors, is discussed in CEC Data Response 43 (Set 1A).

82. Please describe the environmental impacts of cooling tower wastewater discharge into United States waters.

Response: The environmental impacts of discharging cooling water are described in Subsection 8.14.6.4 of the AFC. In summary, there is no wastewater discharge to "Waters of the U.S." All wastewater (consisting primarily of cooling water) is discharged into the sanitary sewer system operated by the Sanitation Districts of Los Angeles County (LACSD). LACSD

**VERNON POWER PLANT
(06-AFC-4)
CBE DATA RESPONSES, SET 1A**

manages all industrial discharges in accordance with its Wastewater Ordinance, including a rigorous permit process to ensure compliance with its narrative and numeric discharge criteria. As shown in AFC Table 8.14-5, the anticipated wastewater discharge from VPP will comply with LACSD standards.

The LACSD standards are designed to ensure that influent wastewater does not disrupt the treatment processes at its wastewater treatment plants and does not jeopardize compliance with LACSD's discharge permits, which are strictly regulated by the Los Angeles RWQCB. A ZLD system would eliminate the VPP contribution to the LACSD system, but would result in no noticeable difference in LACSD's overall wastewater flow (the anticipated VPP discharge of 1.1 mgd [402 mgy/365] is 0.2 percent of the average LACSD flow of 510 mgd) and would result in additional landfill impacts from the disposal of salt waste.

83. Please confirm that the steam alternative described in applicant's response would eliminate the potential impacts of gas firing in the spray dryer.

Response: Yes, the discharge of combustion products to the atmosphere would be eliminated if the gas-fired spray drier was not used. The other environmental effects described in CEC Data Response 43 (Set 1A) would still occur, and the use of steam adds complexity and reduces power plant output.

Background

The facility will require the construction of a new 18 to 21-inch-diameter sewer line that will be 2,400 feet in length. It will also require a new pipeline connecting to its recycled water line.

Data Request

84. Please state whether the applicant needs to enter into any franchise agreements for the construction of the proposed sewer line or the reclaimed water pipeline.

Response: The proposed sewer pipeline in Alcoa Avenue will be owned and operated by the City of Vernon – no franchise agreements are necessary for the construction of the sewer line. Outside the Vernon city limits, the recycled water pipeline will be owned and operated by the Central Basin Municipal Water District. According to the Central Basin Municipal Water District, the pipeline will be placed in public rights-of-way and or easements. No franchise agreements are necessary.

**VERNON POWER PLANT
(06-AFC-4)
CBE DATA RESPONSES, SET 1A**

85. Please describe the agreement for the transport of blowdown and wastewater through LACSD.

Response: Wastewater from the VPP facility will be discharged into a reconstructed City of Vernon sewer line in Alcoa Avenue, which eventually will discharge into an LACSD sewer line. As described in AFC Subsection 8.14.2.3.1, an industrial wastewater permit will be obtained from LACSD, along with necessary sewerage capacity units. No further agreements are necessary from LACSD.

**VERNON POWER PLANT
(06-AFC-4)
CBE DATA RESPONSES, SET 1A**

Technical Area: Land Use

Background

The project is sited on a 13.7-acre lot, but the city has executed a purchase agreement for the entire 27-acre parcel. The response to Staff's Data Request 48 indicates the general plan designation is similar to most of Vernon, and does not mention potential uses aside from parking and laydown during construction.

Data Request

86. Please identify potential uses of the remaining 13.3 acres that have been considered, after it is no longer needed for temporary project use.

Response: The City of Vernon has not made any decision regarding the use of the remaining 13.3 acres of land after it is no longer needed for the VPP project.

87. Please indicate whether the remaining acreage is being contemplated for energy generation, or uses associated with energy generation.

Response: Please see Data Response 86.