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California Regional Water Quality Control Board
San Francisco Bay Region

Linda S. Adams
Secretary for
Environmental Protection

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http://www.waterboards.ca.gov/sanfranciscobay

Arnold Schwarzenegger
Governor

December 20, 2006
File No. 2198.09 (BKW)

Jeri Zene Scott, Compliance Project Manager
Planning Division
California Energy Commission
1516 Ninth Street
Sacramento, CA 95814-5515

Re: Comments on the Request for Agency Participation in the Review of the Russell City Energy Company, LLC, Amendment Petition (01-AFC-7C)
SCH No.: 2005092093

Dear Ms Scott:

Regional Water Quality Control Board (Water Board) staff have reviewed the Request for Agency Participation in the Review of the Russell City Energy Company, LLC, Amendment Petition (01-AFC-7C). Water Board staff have the following comment on the Amendment Petition.

Comment 1.
Post Construction Stormwater Management.
Neither the original AFC nor the Amended AFC address compliance with the National Pollutant Discharge Elimination System (NPDES) permit for stormwater discharges from new development or significant redevelopment. The documents neglect the requirement to treat stormwater runoff from the developed project, in conformance with the February 2003, Alameda County Clean Water Program, NPDES Municipal Stormwater Permit (Order R2-2003-0021; NPDES Permit No. CAS0029831). Under the NPDES permit, post-construction stormwater best management practices (BMPs) are required to provide treatment that meets the maximum extent practicable (MEP) treatment standard in the Clean Water Act (CWA). To meet the MEP standard, treatment BMPs are to be constructed that incorporate, at a minimum, the following hydraulic sizing design criteria to treat stormwater runoff. As appropriate for each criterion, local rainfall data are to be used or appropriately analyzed for the design of BMPs.

Volume Hydraulic Design Basis: Treatment BMPs whose primary mode of action depends on volume capacity, such as detention/retention units or infiltration structures, shall be designed to treat stormwater runoff equal to:

1. the maximized stormwater quality capture volume for the area, based on historical rainfall records, determined using the formula and volume capture coefficients set forth in *Urban Runoff Quality Management, WEF Manual of Practice No. 23/ ASCE Manual of Practice*

No. 87, (1998), pages 175-178 (e.g., approximately the 85th percentile 24-hour storm runoff event); or

2. the volume of annual runoff required to achieve 80 percent or more capture, determined in accordance with the methodology set forth in Appendix D of the *California Stormwater Best Management Practices Handbook,* (1993), using local rainfall data.

Flow Hydraulic Design Basis: Treatment BMPs whose primary mode of action depends on flow capacity, such as swales, sand filters, or wetlands, shall be sized to treat:

1. 10% of the 50-year peak flow rate;

2. or the flow of runoff produced by a rain event equal to at least two times the 85th percentile hourly rainfall intensity for the applicable area, based on historical records of hourly rainfall depths; or

3. the flow of runoff resulting from a rain event equal to at least 0.2 inches per hour intensity.

Water Board staff strongly encourage the use of landscape-based stormwater treatment measures, such as biofilters and vegetated swales, to manage runoff from project sites. Since landscape-based stormwater treatment measures require that some of the site surface area be set aside for their construction, the proper sizing and placement of these features should be evaluated early in the design process to facilitate incorporation of the features into the site landscaping. Water Board staff discourage the use of inlet filter devices for stormwater management. Filtration systems require a maintenance program that is adequate to maintain the functional integrity of the systems and to ensure that improperly maintained filtration devices do not themselves become sources of stormwater contaminants or fail to function. Water Board staff have observed problems with the use of inlet filter inserts, since these devices require high levels of maintenance and are easily clogged by leaves or other commonly occurring debris, rendering them ineffective. Research conducted by the California Department of Transportation has demonstrated that inlet filters can be clogged by a single storm event. The study found that these devices required maintenance before and after storm events as small as 0.1 inch of rain.[1] In addition, trash, debris, and sediment in the catchment had a significant impact on the frequency of maintenance. Therefore, adequate maintenance of inlet filters to provide MEP water quality treatment would be prohibitively expensive and impractically time consuming.

Water Board staff recommend that the project proponents refer to *Start at the Source*, a design guidance manual for storm water quality protection, for a fuller discussion of the selection of stormwater management practices. This manual provides innovative procedures for designing

[1] Othmer, Friedman, Borroum and Currier, November 2001, *Performance Evaluation of Structural BMPs: Drain Inlet Inserts (Fossil Filter™ and StreamGuard™) and Oil/Water Separator*, Sacramento, Caltrans.

structures, parking lots, drainage systems, and landscaping to mitigate the impacts of stormwater runoff on receiving waters. This manual may be obtained from the Santa Clara Valley Urban Runoff Pollution Prevention Program's website (www.scvurppp.org) or by e-mailing a request to the e-mail address in the last paragraph of this letter. Additional innovative techniques for incorporating structural stormwater best management practices (BMPs) into urban design, such as infiltration planter boxes, can be found in Portland, Oregon's *2002 Stormwater Management Manual*, which can be obtained at www.cleanrivers-pdx.org/tech_resources/2002_swmm.htm.

If you have questions, please contact me at (510) 622- 5680 or by email at bwines@waterboards.ca.gov.

Sincerely,
[Original Signed by Brian Wines 12/20/2006]

Brian Wines
Water Resources Control Engineer
South/East Bay Section

cc: State Clearinghouse, P.O. Box 3044, Sacramento, CA 95812-3044

From: "Richard Latteri" <Rlatteri@energy.state.ca.us>
To: <BWines@waterboards.ca.gov>
Date: Fri, Dec 29, 2006 1:02 PM
Subject: Re: Fwd: Russel City Energy LLC (01-AFC-7C)

Brian,
I'm the person assessing the water and soil impacts of the Russell City Energy, LLC, Amendment Petition. Thank you for your comments; Ms. Jeri Scott, the RCEC Compliance Project Manager, forwarded your comment letter to me.

During my review of the amendment, I too noticed that there was no reference to the City of Hayward's MS4 permit (Order No. R2-2003-0021). I have requested additional information from Russell City Energy, LLC, on their plans to comply with City's municipal permit as this will be a requirement, along with their Construction/Industrial SWPPPs, in their amended license from the CEC.

I have suggested to Ms. Scott that an inter-agency meeting with Russell City Energy, LLC, be held in the City of Hayward to address all regional board and DHS requirements for the new plant. To this end, can you please provide me with the names and e-mail addresses of those individuals within the SFBRWQCB responsible for:
Reclamation requirements pursuant to SWC Section 13524 * Russell City Energy, LLC, proposes to use up to 3,600 AFY of tertiary treated recycled water for evaporative cooling. Cleanup and redevelopment of brownfield sites * Russell City Energy, LLC, proposes to construct the RCEC on a new site which is and has been used for commercial and industrial purposes. The board's policy and enforcement of SWC Section 100 for the reasonable use of high quality surface waters for power plant cooling * Russell City Energy, LLC, proposes to use potable water as the plant's backup cooling source. I would like to contact those individuals regarding the boards requirements and/or jurisdiction for the above mentioned policies, and their availability to meet with the City of Hayward, Russell City Energy, LLC, DHS, and the CEC so that all state and local environmental requirements can be identified and addressed.

Please provide me the name and e-mail addresses at your earliest convenience. Thanks again for your comments; I look forward to your response.

Richard Latteri
Water & Soil Resources Unit
California Energy Commission
916.651.8859
rlatteri@energy.state.ca.us

>>> Jeri Scott 9:42:12 AM 12/21/06 >>>

Richard,

I thought you may like to review these comments now so I am forwarding this e-mail to you. When I receive the signed document I will make sure you get a docketed copy of it for your file.

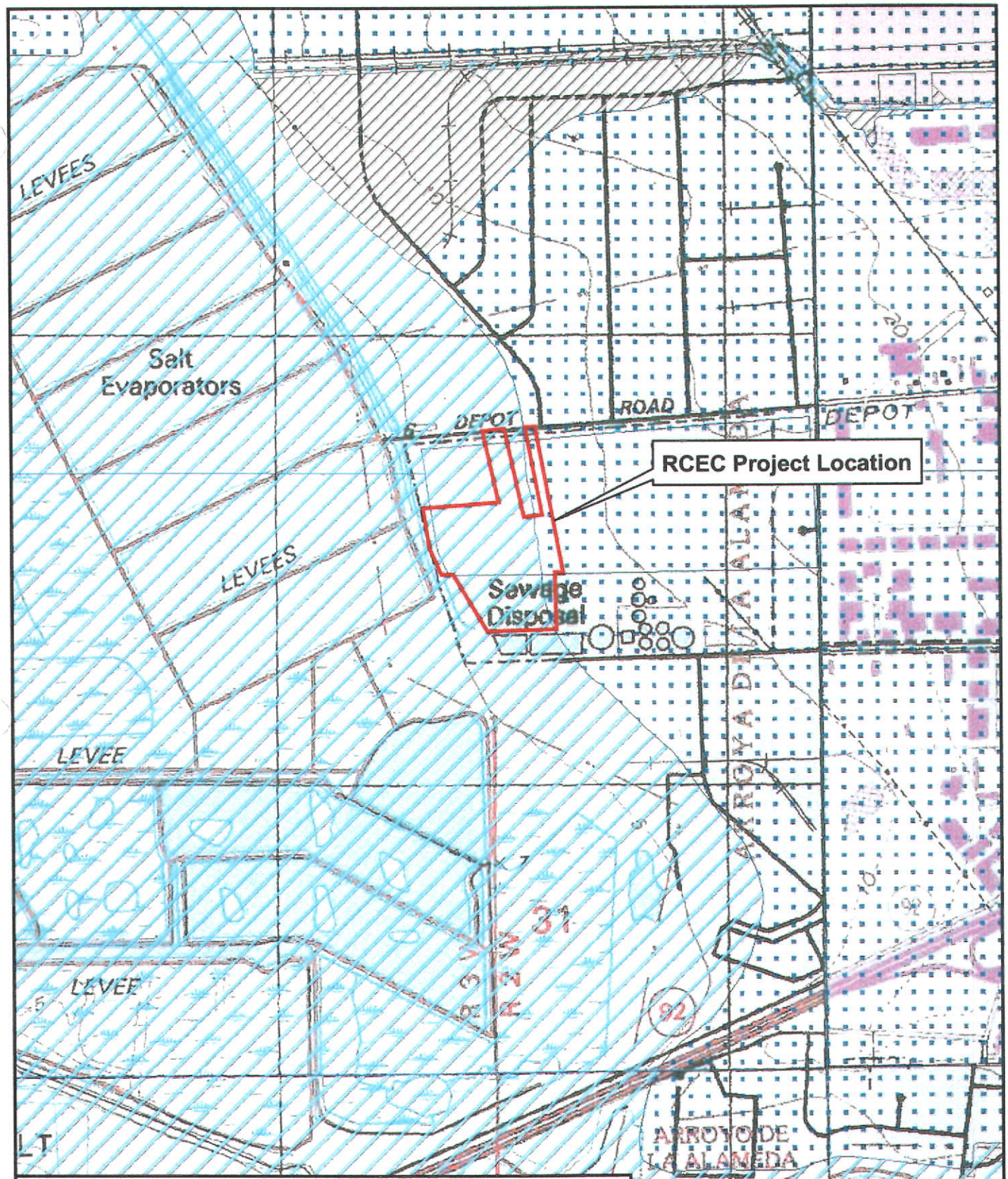
Jeri

>>> "Brian Wines" <BWines@waterboards.ca.gov> 12/20/06 5:36 PM >>>

Hi Jeri
I've attached an efile of my comment letter. Could you send me your fax number so I can fax the signed version over?

Thanks
Brian Wines
Water Resources Control Engineer
San Francisco Bay Regional Water Quality Control Board

CC: "Jeri Scott" <Jscott@energy.state.ca.us>, "Paul Richins" <Prichins@energy.state.ca.us>, "Roger Johnson" <Rjohnson@energy.state.ca.us>



LEGEND

- RCEC LOCATION

FEMA Zones

- Zone A - Subject to 100-year flood
- Zone X - Areas outside the 500-year flood plain
- Zone X500 - Areas between the limits of the 100-year and 500-year flood plain

0 250 500 1,000 Feet

SCALE IS APPROXIMATE

FIGURE 3.10-1
FEMA FLOOD ZONES

RCEC AMENDMENT #1
HAYWARD, CALIFORNIA

CH2MHILL

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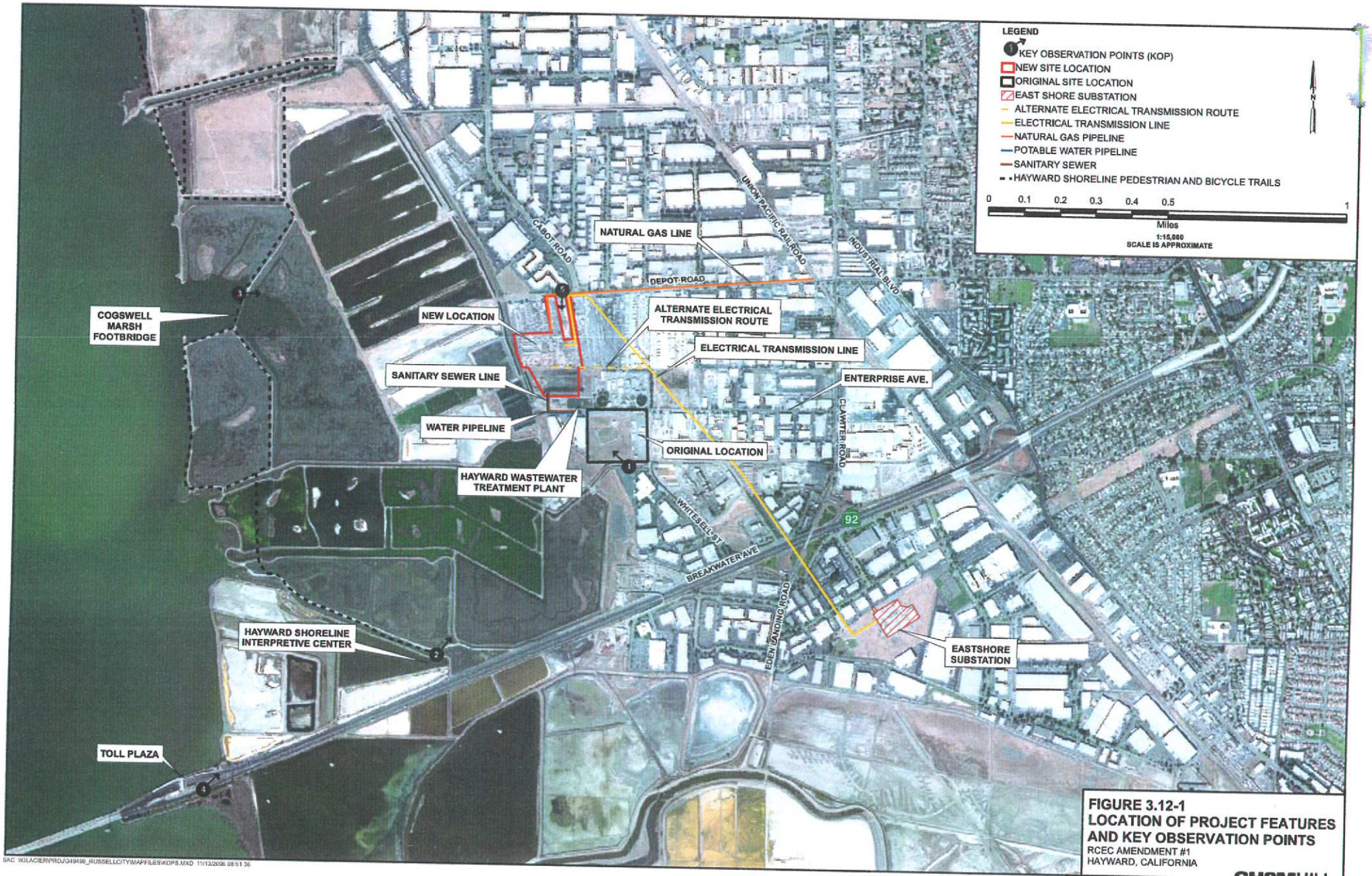
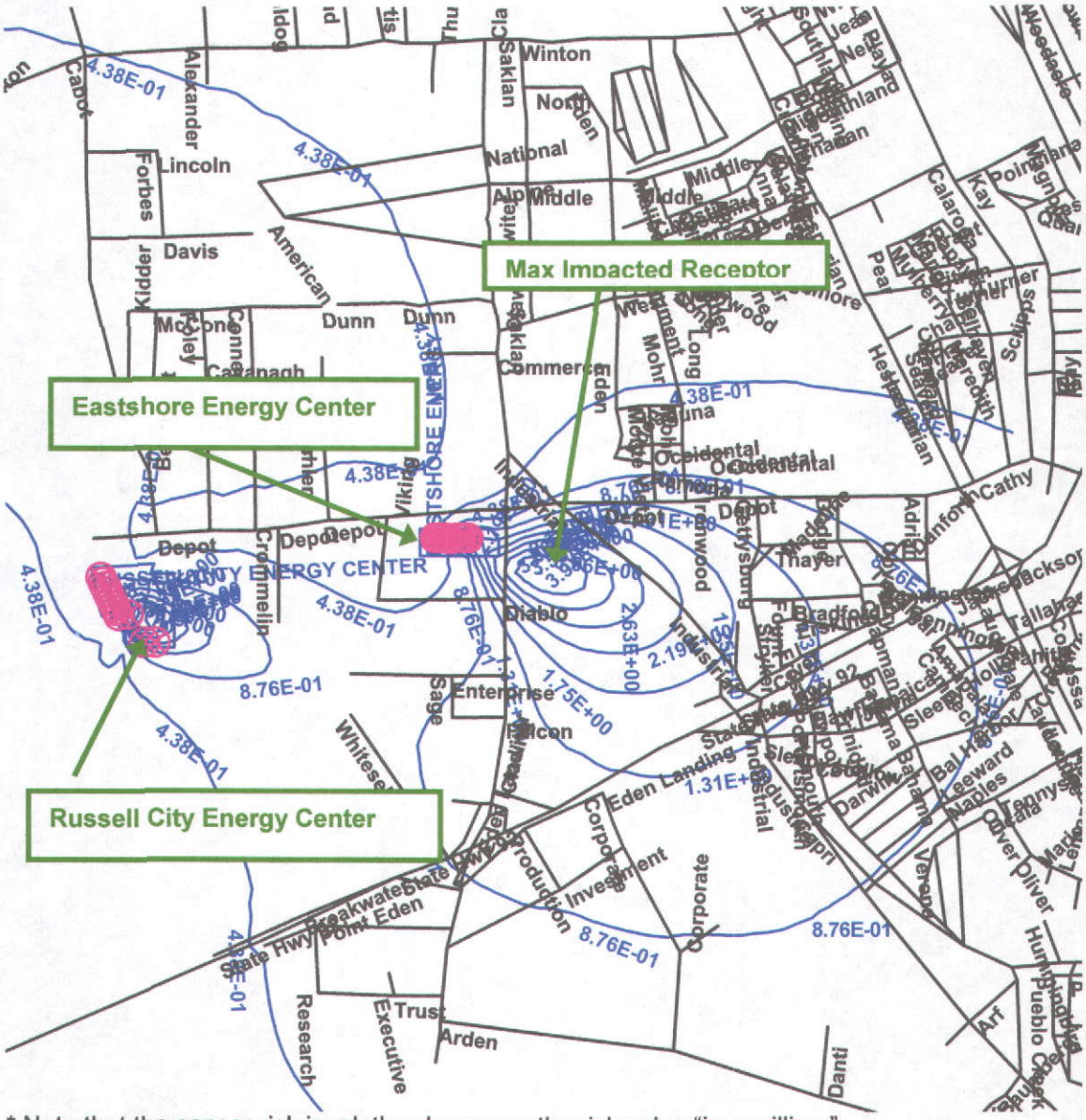


FIGURE 3.12-1
LOCATION OF PROJECT FEATURES AND KEY OBSERVATION POINTS
RCEC AMENDMENT #1
HAYWARD, CALIFORNIA

CH2MHILL

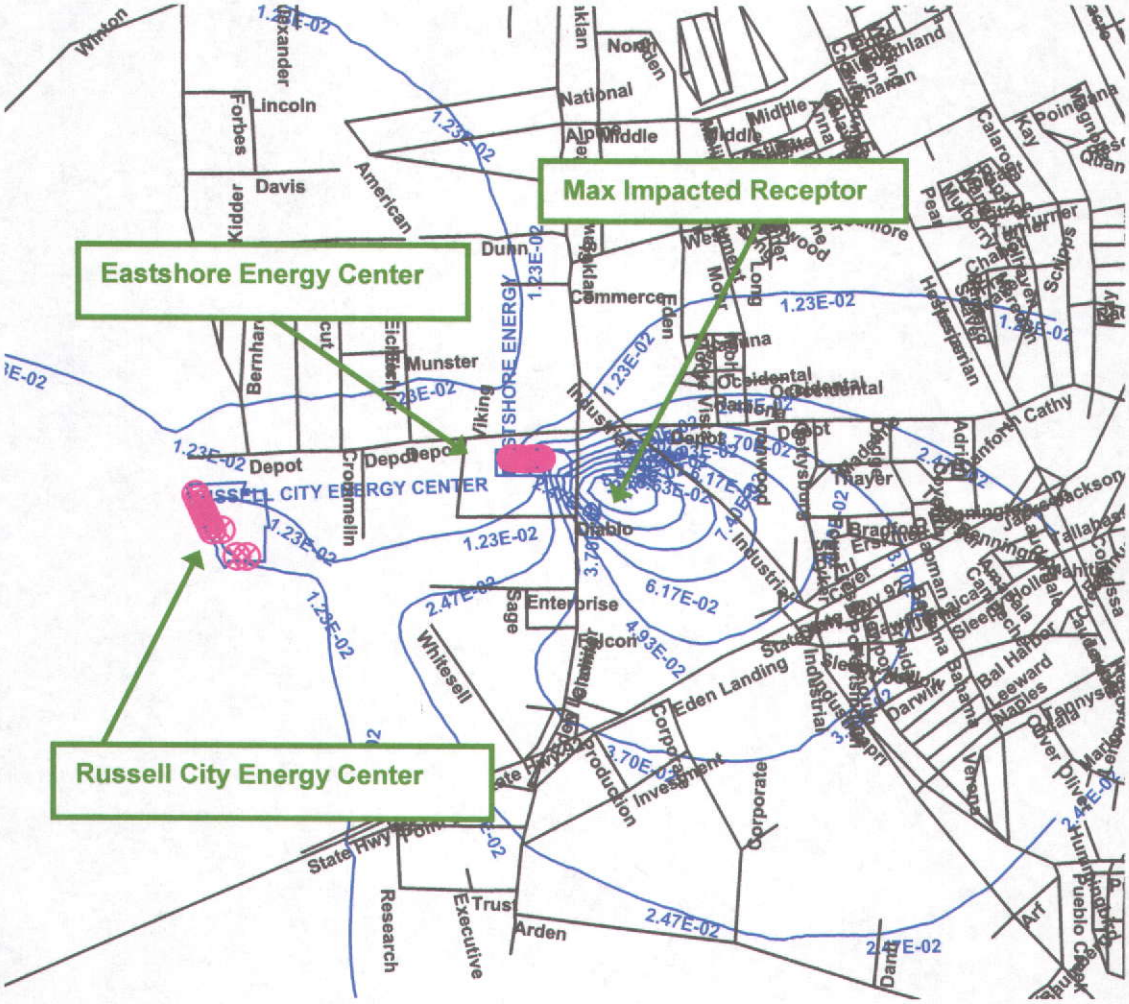
SAC: \\GLACIER\PROJ\349499_RUSSELLCITY\MAPFILES\KOPS.MXD 11/13/2006 08:51:36

PUBLIC HEALTH Figure 6
Cumulative cancer risk isopleths*

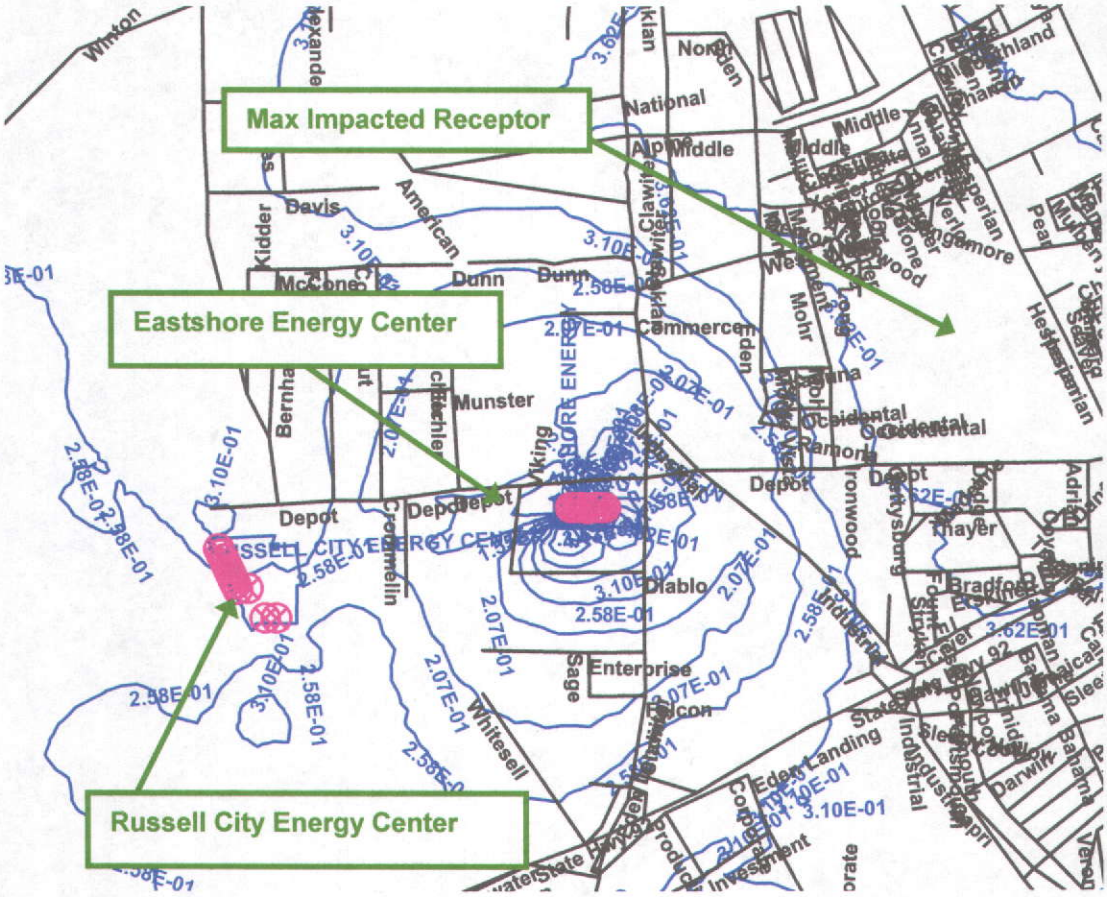


* Note that the cancer risk isopleths shown are the risk value "in a million."

PUBLIC HEALTH Figure 7
Cumulative chronic hazard isopleths



PUBLIC HEALTH Figure 8
Cumulative acute hazard isopleths



SUMMARY OF AIR QUALITY IMPACT ANALYSIS FOR THE RUSSELL CITY ENERGY CENTER

September 24, 2001

BACKGROUND

Calpine Corporation and Bechtel Enterprises Holdings, Inc. has submitted a permit application (# 2896) for a proposed 600 MW combined cycle power plant, the Russell City Energy Center (RCEC). The facility is to consist of two natural gas-fired turbines with supplementary fired heat recovery steam generators, one steam turbine and supplemental burners (duct burners), a 10-cell cooling tower, a natural gas fueled emergency generator and a diesel fire pump engine. The proposed project will result in an increase in air pollutant emissions of NO_2, CO, PM_{10} and SO_2 triggering regulatory requirements for an air quality impact analysis.

AIR QUALITY IMPACT ANALYSIS REQUIREMENTS

Requirements for air quality impact analysis are given in the District's New Source Review (NSR) Rule: Regulation 2, Rule 2.

The criteria pollutant annual worst case emission increases for the Project are listed in Table I, along with the corresponding significant emission rates for air quality impact analysis.

TABLE E-1
Comparison of proposed project's annual worst case emissions
to significant emission rates for air quality impact analysis

Pollutant	Proposed Project's Emissions (tons/year)	Significant Emission Rate (tons/year) (Reg-2-2-304 to 2-2-306)	EPA PSD Significant Emission Rates for major stationary sources (tons/year)
NO_2	134.6	100	40
CO	610.2	100	100
PM_{10}	86.3	100	15
SO_2	12.4	100	40

Table I indicates that the proposed project emissions exceed District significant emission levels for nitrogen oxides (NO_x), carbon monoxide (CO), and respirable particulate matter (PM_{10}). The source is classified as a major stationary source as defined under the Federal Clean Air Act. Therefore, the air quality impact must be investigated for all pollutants emitted in quantities larger than the EPA PSD significant emission rates (shown in the last column in Table I). Table I shows that the NO_2, CO and PM_{10} ambient impacts from the project must be modeled. The detailed requirements for an air quality

impact analysis for these pollutants are given in Sections 304, 305 and 306 of the District's NSR Rule and 40 CFR 51.166 of the Code of Federal Regulations.

The District's NSR Rule also contains requirements for certain additional impact analyses associated with air pollutant emissions. An applicant for a permit that requires an air quality impact analysis must also, according to Section 417 of the NSR Rule, provide an analysis of the impact of the source and source-related growth on visibility, soils and vegetation.

AIR QUALITY IMPACT ANALYSIS SUMMARY

The required contents of an air quality impact analysis are specified in Section 414 of Regulation 2 Rule 2. According to subsection 414.1, if the maximum air quality impacts of a new or modified stationary source do not exceed significance levels for air quality impacts, as defined in Section 2-2-233, no further analysis is required. (Consistent with EPA regulations, it is assumed that emission increases will not interfere with the attainment or maintenance of AAQS, or cause an exceedance of a PSD increment if the resulting maximum air quality impacts are less than specified significance levels). If the maximum impact for a particular pollutant is predicted to exceed the significance impact level, a full impact analysis is required involving estimation of background pollutant concentrations and, if applicable, a PSD increment consumption analysis. EPA also requires a Class I increment analysis of any PSD source which increases NO_2 or PM_{10} concentrations by 1 $\mu g/m^3$ or more (24-hour average) in a Class I area.

Air Quality Modeling Methodology

Maximum ambient concentrations of NO_2, CO and PM_{10} were estimated for various plume dispersion scenarios using established modeling procedures. The plume dispersion scenarios addressed include simple terrain impacts (for receptors located below stack height), complex terrain impacts (for receptors located at or above stack height), impacts due to building downwash, impacts due to inversion breakup fumigation, and impacts due to shoreline fumigation.

Emissions from the turbines and burners will be exhausted from two 145 foot exhaust stacks, the emergency generator will be exhausted from a 10 foot stack, and the fire pump will be exhausted from a 30 foot exhaust stack. Emissions from a 10-cell cooling tower will be released at a height of 64 feet. Table II contains the emission rates used in each of the modeling scenarios: turbine commissioning, turbine startup, maximum 1-hour, maximum 8-hour, maximum 24-hour, and maximum annual average. Commissioning is the original startup of the turbines and only occurs during the initial operation of the equipment after installation. Startup conditions were modeled with one turbine in startup mode, while the other turbine was in normal operation.

The EPA models SCREEN3 and ISCST3 were used in the air quality impacts analysis. A land use analysis showed that the rural dispersion coefficients were required for the analysis. The models were run using five years of meteorological data (1990 through 1994) collected approximately 6.6 km southeast of the project at the BAAQMD's Union City meteorological monitoring station. Because the exhaust stacks are less than Good Engineering Practice (GEP) stack height, ambient impacts due to building downwash were evaluated. Using 1990-1994 San Leandro ozone monitoring data, the Ozone

Limiting Method was employed to convert one-hour NO_x impacts into one-hour NO_2 impacts. (The San Leandro monitoring station is located 8.8 km north of the project) The Ambient Ratio Methodology (with a default NO_2/NO_x ratio of 0.75) was used for determining the annual-averaged NO_2 concentrations. Because complex terrain was located nearby, complex terrain impacts were considered. Inversion breakup fumigation and shoreline fumigation were evaluated using the SCREEN3 model.

TABLE E-2
Averaging period emission rates used in modeling analysis (g/s)

Pollutant Source	Max. (1-hour)	Commissioning[1] (1-hour)	Start-up[2] (1-hour)	Max. (8-hour)	Max. (24-hour)	Max. Annual Average
NO_2						
Turbine/Duct Burner 1	1.591	48.132	1.591	—	—	1.927
Turbine/Duct Burner 2	1.591	—	10.08			1.927
Emergency Generator	—	—	—			0.0051
Fire Pump	0.491	—	—			0.00168
Each Cooling Tower Cell (10 total)	—	—	—			
CO						
Turbine/Duct Burner 1	2.356	11.9	2.356	41.07[3]	—	—
Turbine/Duct Burner 2	2.356	—	113.65	41.07[3]		
Emergency Generator	0.380	—	—	0.0370		
Fire Pump	—	—	—	—		
Each Cooling Tower Cell (10 total)	—	—	—	—		
PM_{10}						
Turbine/Duct Burner 1	—	—	—	—	1.134	1.20
Turbine/Duct Burner 2					1.134	1.20
Emergency Generator					—	0.0000018
Fire Pump					0.000669	0.000055
Each Cooling Tower Cell (10 total))					0.00863	0.00863

[1]Commissioning is the original startup of a turbine and only occurs during the initial operation of the equipment after installation. Both turbines will not be commissioned at the same time. [2]Start-up is the beginning of any of the subsequent duty cycles to bring one turbine from idle status up to power production. [3]Maximum 8 hour CO emissions include start-up period emissions.

Air Quality Modeling Results

The maximum predicted ambient impacts of the various modeling procedures described above are summarized in Table III for the averaging periods for which AAQS and PSD increments have been set. Shown in Figure 1 are the locations of the maximum modeled impacts.

Also shown in Table III are the corresponding significant ambient impact levels listed in Section 233 of the District's NSR Rule. In accordance with Regulation 2-2-414 further analysis is required only for the

those pollutants for which the modeled impact is above the significant air quality impact level. Table III shows that the only impact requiring further analysis is the 1-hour NO_2 modeled impact.

TABLE E-3
Maximum predicted ambient impacts of proposed project ($\mu g/m^3$)
[maximums are in bold type]

Pollutant	Averaging Time	Commissioning Maximum Impact	Start-up (one hour)	Inversion Break-up Fumigation Impact	Shoreline Fumigation Impact	ISCST3 Modeled Impact	Significant Air Quality Impact Level
NO_2	1-hour	120.7	75.0	13.2	34.6	**216**	19
	annual	—	—	—	—	**0.36**	1.0
CO	1-hour	69.8	890	15.3	39.9	**1231**	2000
	8-hour	—	—	7.8	20.1	**254**	500
PM_{10}	24-hour	—	—	1.6	4.1	**4.1**	5
	annual	—	—	—	—	**0.22**	1

Background Air Quality Levels

Regulation 2-2-111 entitled "Exemption, PSD Monitoring," exempts an applicant from the requirement of monitoring background concentrations in the impact area (section 414.3) provided the impacts from the proposed project are less than specified levels. Table IV lists the applicable exemption standard and the maximum impact from the proposed facility. As shown, the modeled NO_2 impact is well below the preconstruction monitoring threshold.

TABLE E-4
PSD monitoring exemption level and maximum impact from the proposed project for NO_2 ($\mu g/m^3$)

Pollutant	Averaging Time	Exemption Level	Maximum Impact from Proposed Project
NO_2	annual	14	0.36

The District-operated Fremont-Chapel Way Monitoring Station, located 18.3 km southeast of the project, was chosen as representative of background NO_2 concentrations. Table V contains the concentrations measured at the site for the past 5 years (1996 through 2000).

TABLE E-5
Background NO_2 ($\mu g/m^3$) at Fremont-Chapel Way Monitoring Station for the past five years (maximum is in bold type)

	NO_2
Year	Highest 1-hour average
1996	165
1997	162
1998	184
1999	**211**
2000	152

FIGURE 1. Location of project maximum impacts.

Table VI below contains the comparison of the ambient standards with the proposed project impacts added to the maximum background concentrations. The California ambient NO_2 standard is not exceeded from the proposed project.

TABLE E-6
California and national ambient air quality standard and
ambient air quality level from the proposed project ($\mu g/m^3$)

Pollutant	Averaging Time	Maximum Background	Maximum combined project and existing facility impact	Maximum combined impact plus maximum background	California Standard	National Standard
NO_2	1-hour	211	216	427	470	---

CLASS I PSD INCREMENT ANALYSIS

EPA requires an increment analysis of any PSD source within 100 km of a Class I area which increases NO_2 or PM_{10} concentrations by 1 $\mu g/m^3$ or more (24-hour average) inside the Class I area. Point Reyes National Seashore is located roughly 62 km northwest of the project, and is the only Class I area within 100 km of the facility. Shown in Table VII are the results from an impact analysis using both Calpuff and ISCST3. The table shows that the maximum 24-hour NO_2 and PM_{10} impacts within the Point Reyes National Seashore are well below the 1 $\mu g/m^3$ significance level (see Table VII)

TABLE E-7
Class I 24-hour air quality impacts analysis for the Point Reyes National Seashore ($\mu g/m^3$)

Pollutant	Calpuff	ISCST3	Significance level	Significant
NO_2	0.30	0.28	1.0	no
PM_{10}	0.12	0.16	1.0	no

VISIBILITY, SOILS AND VEGETATION IMPACT ANALYSIS

Visibility impacts were assessed using both EPA's VISCREEN visibility screening model and the Calpuff model. Both analyses show that the proposed project will not cause any impairment of visibility at Point Reyes National Seashore, the closest Class I area.

The project maximum one-hour average NO_2, including background, is 427 $\mu g/m^3$. This concentration is below the California one-hour average NO_2 standard of 470 $\mu g/m^3$. Crop damage from NO_2 requires exposure to concentrations higher than 470 $\mu g/m^3$ for periods longer than one hour.

Maximum project NO_2, CO, SO_2 and PM_{10} concentrations would be less than all of the applicable national primary and secondary ambient air quality standards, which are designed to protect the public

welfare form any known or anticipated effects, including plant damage. Therefore, the facility's impact on soils and vegetation would be insignificant.

CONCLUSIONS

The results of the air quality impact analysis indicate that the proposed project would not interfere with the attainment or maintenance of applicable AAQS for NO_2, CO and PM_{10}. The analysis was based on EPA approved models and calculation procedures and was performed in accordance with Section 414 of the District's NSR Rule.

SUMMARY OF AIR QUALITY IMPACT ANALYSIS FOR THE RUSSELL CITY ENERGY CENTER

February 7, 2007

BACKGROUND

Russell City Energy Center LLC has submitted a permit application (# 15487) for a proposed 600 MW combined cycle power plant, the Russell City Energy Center (RCEC). The facility is to consist of two natural gas-fired turbines with supplementary fired heat recovery steam generators, one steam turbine and supplemental burners (duct burners), a 9-cell cooling tower, and a diesel fire pump engine. The proposed project will result in an increase in air pollutant emissions of NO_2, CO, PM_{10} and SO_2 triggering regulatory requirements for an air quality impact analysis.

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NO_x	134.6	100	40
CO	584.2	100	100
PM_{10}	86.8	100	15
SO_2	12.2	100	40

Table I indicates that the proposed project emissions exceed District significant emission levels for nitrogen oxides (NO_x), carbon monoxide (CO), and respirable particulate matter (PM_{10}). The source is classified as a major stationary source as defined under the Federal Clean Air Act. Therefore, the air quality impact must be investigated for all pollutants emitted in quantities larger than the EPA PSD significant emission rates (shown in the last column in Table I). Table I shows that the NO_2, CO and PM_{10} ambient impacts from the project must be modeled. The detailed requirements for an air quality impact analysis for these pollutants are given in Sections

304, 305 and 306 of the District's NSR Rule and 40 CFR 51.166 of the Code of Federal Regulations.

The District's NSR Rule also contains requirements for certain additional impact analyses associated with air pollutant emissions. An applicant for a permit that requires an air quality impact analysis must also, according to Section 417 of the NSR Rule, provide an analysis of the impact of the source and source-related growth on visibility, soils and vegetation.

AIR QUALITY IMPACT ANALYSIS SUMMARY

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Air Quality Modeling Methodology

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Emissions from the turbines and burners will be exhausted from two 145 foot exhaust stacks and the fire pump will be exhausted from a 15 foot exhaust stack. Emissions from a 9-cell cooling tower will be released at a height of 60 feet. Table II contains the emission rates used in each of the modeling scenarios: turbine commissioning, turbine startup, maximum 1-hour, maximum 8-hour, maximum 24-hour, and maximum annual average. Commissioning is the original startup of the turbines and only occurs during the initial operation of the equipment after installation. Startup conditions were modeled with one turbine in startup mode, while the other turbine was in normal operation.

The EPA models SCREEN3 and ISCST3 were used in the air quality impacts analysis. A land use analysis showed that the rural dispersion coefficients were required for the analysis. The models were run using five years of meteorological data (1990 through 1994) collected approximately 6.6 km southeast of the project at the BAAQMD's Union City meteorological monitoring station. Because the exhaust stacks are less than Good Engineering Practice (GEP) stack height, ambient impacts due to building downwash were evaluated. Using 1990-1994 San Leandro ozone monitoring data, the Ozone Limiting Method was employed to convert one-hour

NO_x impacts into one-hour NO_2 impacts. (The San Leandro monitoring station is located 8.8 km north of the project) The Ambient Ratio Methodology (with a default NO_2/NO_x ratio of 0.75) was used for determining the annual-averaged NO_2 concentrations. Because complex terrain was located nearby, complex terrain impacts were considered. Inversion breakup fumigation and shoreline fumigation were evaluated using the SCREEN3 model.

TABLE 2
Averaging period emission rates used in modeling analysis (g/s)

Pollutant Source	Max. (1-hour)	Commis-sioning[1] (1-hour)	Start-up[2] (1-hour)	Start-up[2] (8-hour)	Max. (8-hour)	Max. (24-hour)	Max. Annual Average
NO_x							
Turbine/Duct Burner 1	2.04	48.36	12.25	—	—	—	1.94
Turbine/Duct Burner 2	2.04	2.04	12.25	—	—	—	1.94
Fire Pump	0.36	—	—	—	—	—	0.00211
Each Cooling Tower Cell (9 total)	—	—	—	—	—	—	—
CO							
Turbine/Duct Burner 1	2.48	627.47	169.95	80.24	1.34	—	—
Turbine/Duct Burner 2	2.48	2.48	169.95	80.24	1.34	—	—
Fire Pump	0.0275	—	—	—	0.0034	—	—
Each Cooling Tower Cell (9 total)	—	—	—	—	—	—	—
PM_{10}							
Turbine/Duct Burner 1	—	—	—	—	—	1.134	1.07
Turbine/Duct Burner 2	—	—	—	—	—	1.134	1.07
Fire Pump	—	—	—	—	—	0.000417	0.0000594
Each Cooling Tower Cell (9 total))	—	—	—	—	—	0.0396	0.0387

[1]Commissioning is the original startup of a turbine and only occurs during the initial operation of the equipment after installation. Both turbines will not be commissioned at the same time. [2]Start-up is the beginning of any of the subsequent duty cycles to bring one turbine from idle status up to power production.

Air Quality Modeling Results

The maximum predicted ambient impacts of the various modeling procedures described above are summarized in Table III for the averaging periods for which AAQS and PSD increments have been set. Shown in Figure 1 are the locations of the maximum modeled impacts.

Also shown in Table III are the corresponding significant ambient impact levels listed in Section 233 of the District's NSR Rule. In accordance with Regulation 2-2-414 further analysis is required only for the those pollutants for which the modeled impact is above the significant air

quality impact level. Table III shows that the only impact requiring further analysis is the 1-hour NO_2 modeled impact.

TABLE 3
Maximum predicted ambient impacts of proposed project ($\mu g/m^3$)
[maximums are in bold type]

Pollutant	Averaging Time	Commissioning Maximum Impact	Start-up	Inversion Break-up Fumigation Impact	Shoreline Fumigation Impact	ISCST3 Modeled Impact	Significant Air Quality Impact Level
NO_2	1-hour	119.2	77	9.5	62.4	**226.8**	19
	annual	—	—	—	—	**0.14**	1.0
CO	1-hour	**1977**	1069	6.5	36.5	134.7	2000
	8-hour	**348**	178	—	—	5.7	500
PM_{10}	24-hour	—	—	2.9	**3.2**	2.94	5
	annual	—	—	—	—	**0.15**	1

Background Air Quality Levels

Regulation 2-2-111 entitled "Exemption, PSD Monitoring," exempts an applicant from the requirement of monitoring background concentrations in the impact area (section 414.3) provided the impacts from the proposed project are less than specified levels. Table IV lists the applicable exemption standard and the maximum impact from the proposed facility. As shown, the modeled NO2 impact is well below the preconstruction monitoring threshold.

TABLE 4
PSD monitoring exemption level and maximum impact from the proposed project for NO_2 ($\mu g/m^3$)

Pollutant	Averaging Time	Exemption Level	Maximum Impact from Proposed Project
NO_2	annual	14	0.14

The District-operated Fremont-Chapel Way Monitoring Station, located 18.3 km southeast of the project, was chosen as representative of background NO_2 concentrations. Table V contains the concentrations measured at the site for the past 5 years (1996 through 2000).

Table VI below contains the comparison of the ambient standards with the proposed project impacts added to the maximum background concentrations. The California ambient NO_2 standard is not exceeded from the proposed project.

TABLE 6
California and national ambient air quality standard and ambient air quality level from the proposed project ($\mu g/m^3$)

Pollutant	Averaging Time	Maximum Background	Maximum Impact from Proposed Project	Maximum combined impact plus maximum background	California Standard	National Standard
NO_2	1-hour	143	227	370	470	---

CLASS I PSD INCREMENT ANALYSIS

EPA requires an increment analysis of any PSD source within 100 km of a Class I area which increases NO_2 or PM_{10} concentrations by 1 $\mu g/m^3$ or more (24-hour average) inside the Class I area. Point Reyes National Seashore is located roughly 62 km northwest of the project, and is the only Class I area within 100 km of the facility. Shown in Table VII are the results from an impact analysis using ISCST3. The table shows that the maximum 24-hour NO_2 and PM_{10} impacts within the Point Reyes National Seashore are well below the 1 $\mu g/m^3$ significance level (see Table VII)

TABLE 7
Class I 24-hour air quality impacts analysis for the Point Reyes National Seashore ($\mu g/m^3$)

Pollutant	ISCST3	Significance level	Significant
NO_2	0.26	1.0	no
PM_{10}	0.21	1.0	no

VISIBILITY, SOILS AND VEGETATION IMPACT ANALYSIS

Visibility impacts were assessed using both EPA's VISCREEN visibility screening model and the Calpuff model. Both analyses show that the proposed project will not cause any impairment of visibility at Point Reyes National Seashore, the closest Class I area.

The project maximum one-hour average NO_2, including background, is 370 $\mu g/m^3$. This concentration is below the California one-hour average NO_2 standard of 470 $\mu g/m^3$. Crop

damage from NO_2 requires exposure to concentrations higher than 470 $\mu g/m^3$ for periods longer than one hour.

Maximum project NO_2, CO, SO_2 and PM_{10} concentrations would be less than all of the applicable national primary and secondary ambient air quality standards, which are designed to protect the public welfare form any known or anticipated effects, including plant damage. Therefore, the facility's impact on soils and vegetation would be insignificant.

CONCLUSIONS

The results of the air quality impact analysis indicate that the proposed project would not interfere with the attainment or maintenance of applicable AAQS for NO_2, CO and PM_{10}. The analysis was based on EPA approved models and calculation procedures and was performed in accordance with Section 414 of the District's NSR Rule.

Appendix F

BACT Cost-Effectiveness Data

ONSITE SYCOM Energy Corporation

Cost Analysis of NO_x Control Alternatives for Stationary Gas Turbines

Contract No. DE-FC02-97CHIO877

Prepared for:

U.S. Department of Energy
Environmental Programs
Chicago Operations Office
9800 South Cass Avenue
Chicago, IL 60439

Prepared by:

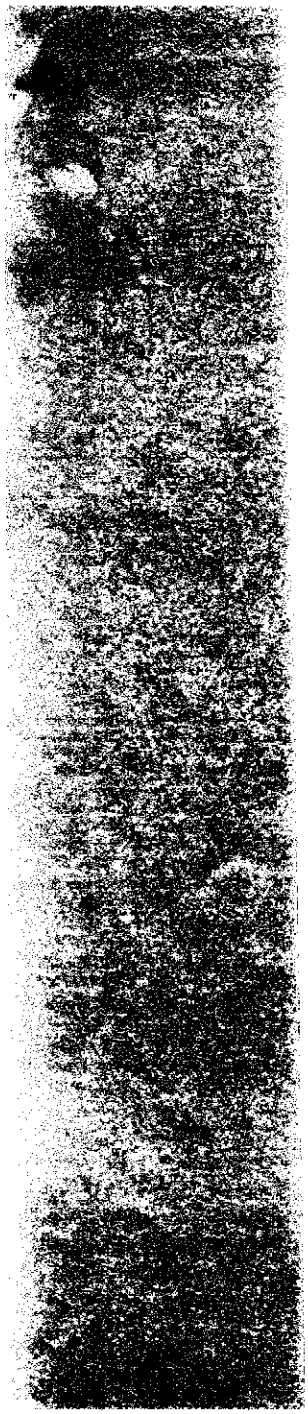
ONSITE SYCOM Energy Corporation
701 Palomar Airport Road,
Suite 200
Carlsbad, California 92009

October 15, 1999

TABLE A-5
1999 CONVENTIONAL SCR COST COMPARISON

			5 MW Class	25 MW Class	150 MW Class
Turbine Model			Solar Centaur 50	GE LM2500	GE Frame 7FA
Turbine Output			4.2 MW	23 MW	161 MW
Direct Capital Costs (DC):		Source			
Purchased Equip. Cost (PE):		MHIA			
Basic Equipment (A):		MHIA	$240,000	$680,000	$2,100,000
Ammonia injection skid and storage	0.00 x A	MHIA	included	included	included
Instrumentation	0.00 x A	OAQPS	included	included	included
Taxes and freight:	0.08 A x B	OAQPS	$19,015	$52,746	$189,530
PE Total:			$256,704	$712,066	$2,288,649
Direct Installation Costs (DI):*					
Foundation & supports:	0.08 x PE	OAQPS	$20,536	$56,965	$183,092
Handling and erection:	0.14 x PE	OAQPS	$35,939	$99,689	$320,411
Electrical:	0.04 x PE	OAQPS	$10,268	$28,483	$91,546
Piping:	0.02 x PE	OAQPS	$5,134	$14,241	$45,773
Insulation:	0.01 x PE	OAQPS	$2,567	$7,121	$22,886
Painting:	0.01 x PE	OAQPS	$2,567	$7,121	$22,886
DI Total:			$77,011	$213,620	$686,595
DC Total:			$333,716	$925,686	$2,975,244
Indirect Costs (IC):					
Engineering:	0.10 x PE	OAQPS	$25,670	$71,207	$100,000
Construction and field expenses:	0.05 x PE	OAQPS	$12,835	$35,603	$114,432
Contractor fees:	0.10 x PE	OAQPS	$25,670	$71,207	$228,865
Start-up:	0.02 x PE	OAQPS	$5,134	$14,241	$45,773
Performance testing:	0.01 x PE	OAQPS	$2,567	$7,121	$22,886
Contingencies:	0.03 x PE	OAQPS	$7,701	$21,362	$68,659
IC Total:			$79,578	$220,741	$580,616
Total Capital Investment (TCI = DC + IC):			$413,294	$1,146,427	$3,555,861
Direct Annual Costs (DAC):					
Operating Costs (O):	24 hrs/day, 7 days/week, 50 weeks/yr				
Operator:	0.5 hr/shift; 25 $/hr for operator pay	OAQPS	$13,125	$13,125	$13,125
Supervisor:	15% of operator	OAQPS	$1,969	$1,969	$1,969
Maintenance Costs (M):					
Labor:	0.5 hr/shift; 25 $/hr for labor pay	OAQPS	$13,125	$13,125	$13,125
Material:	100% of labor cost;	OAQPS	$13,125	$13,125	$13,125
Utility Costs:	0% thermal eff; 600 (F) operating temp				
Gas usage	0.0 (MMcf/yr); 1,000 (Btu/ft3) heat value				
Gas cost	3,000 ($/MMcf)	variable			
Perf. loss:	0.5%				
Electricity cost	0.06 ($/kwh) performance loss cost penalty	variable	$10,584	$57,960	$405,720
Catalyst replace:	assume 30 ft^3 catalyst per MW, $400/ft^3, 7 yr. life	MHIA	$10,352	$56,690	$396,833
Catalyst dispose:	$15/ft^3*30 ft^3/MW*MW*.2054 (7 yr amortized)	OAQPS	$388	$2,126	$14,881
Ammonia:	360 ($/ton) [tons NH_3 = tons NO_x * (17/46)]	variable	$3,510	$14,820	$108,257
NH_3 inject skid:	5 (kW) blower; 5 kw (NH_3H_2O pump)	MHIA	$5,040	$7,560	$27,720
Total DAC:			$71,219	$180,500	$994,755
Indirect Annual Costs (IAC):					
Overhead:	60% of O&M	OAQPS	$24,806	$24,806	$24,806
Administrative:	0.02 x TCI	OAQPS	$8,266	$22,929	$71,117
Insurance:	0.01 x TCI	OAQPS	$4,133	$11,464	$35,559
Property tax:	0.01 x TCI	OAQPS	$4,133	$11,464	$35,559
Capital recovery:	10% interest rate; 15 yrs - period; 0.13 x TCI	OAQPS	$52,976	$143,272	$415,329
Total IAC:			$94,314	$213,935	$582,370
Total Annual Cost (DAC + IAC):			$165,533	$394,435	$1,577,125
NO_x Emission Rate (tons/yr) at 42 ppm:			33.4	141.0	1030.0
NO_x Removed (tons/yr) at 9 ppm,	79% removal efficiency		26.4	111.4	813.7
Cost Effectiveness ($/ton):			**$6,274**	**$3,541**	**$1,938**
Electricity Cost Impact (¢/kwh):			**0.489**	**0.204**	**0.117**

*Assume modular SCR is inserted into existing HRSG spool piece



1998). This value is derived by a formula specified by CTDEP. The Project's maximum emission rate will be 10 ppm, or 43 percent of the allowable MASC limit.

The use of an SCR for NO_x control in combination with an oxidation catalyst for control of CO may increase particulate emissions in the form of ammonium bi-sulfates. Due to the insignificant amount of sulfur in natural gas fuel this impact will be extremely small. During oil-fired operation (the Project will be limited to 720 hours per year of oil-fired operation) the estimated amount of ammonium bi-sulfate emissions will increase particulate emissions by approximately 60 pounds per hour. This increase has only a minor effect on the maximum predicted air quality impacts from the Project, which are well within National Ambient Air Quality Standards.

An environmental benefit of SCR, when combined with a CO Oxidation Catalyst (Section 1.3), is a decrease in emissions of VOCs. Although the Project is not required to include VOCs in the PSD review as discussed in Section 1.1, the use of an SCR and CO Oxidation Catalyst will ensure that VOC emissions are minimal. The reduction in VOC emissions from SCR/CO Oxidation Catalyst is comparable to that from SCONO$_x$™.

ENERGY ANALYSIS

Use of SCR for NO_x control has an energy penalty due to the energy required to force combustion gases through the SCR reactor. There are other energy requirements associated with chemical transport and operation of equipment, pumps and motors but these are relatively small. Operation of the SCR for the Towantic Project is estimated to reduce electrical output by 1.46 MW or 11,510 MWh of electricity per year[1]. Not only is the electrical output reduced but the fuel use is increased by 135,800 MCF of gas per year.

1.2.4.1.3 ECONOMIC ANALYSIS

Table 3 presents the capital and annualized cost for the SCR control option downstream of a DLN combustor. The costs are itemized to include capital cost of equipment and operation costs for personnel, maintenance, replacement parts (primarily catalyst), energy penalties and ammonia. All costs are for two GE Frame 7FA gas turbine units, each including one HRSG, which includes the SCR unit.

[1] Based on annual capacity factor of 90%.

issues, poses a serious concern as to whether the Project could secure final construction approval from the Council.

As with the SCR/CO Oxidation Catalyst, SCONO$_x$™ will reduce VOC emissions along with NO$_x$ and CO. The Project is not required to include VOCs in the PSD review, as discussed in Section 1.1, however, SCONO$_x$™ does have the added benefit of decreasing VOC emissions. The reduction in VOC emissions from SCONO$_x$™ is comparable to that from SCR/CO Oxidation Catalyst.

1.2.4.2 .2 ENERGY ANALYSIS

Use of SCONO$_x$™ for NO$_x$ control has an energy penalty due to the energy required to force combustion gases through the SCONO$_x$™ reactor (pressure drop). Pressure drop through the SCONO$_x$™ unit is estimated at 5.25 inches by the manufacturer. This is compared to approximately 3.5 inches of pressure drop for a combined SCR and CO catalyst installed in a HRSG. The pressure drop of 5.25 inches reduces the total plant output by approximately 2.19 MW or 17,266 MWh per year. Not only is the electrical output reduced but the fuel use is increased by 202,200 MCF of gas per year.

Production of the steam used in the regeneration process also imposes a penalty in that the steam is not available to generate electricity. Based on the manufacturer's estimate of low-pressure steam requirements of 15,000 pounds per hour at 600°F and 20 psig, the steam turbine capability of the Project will be reduced by approximately 2.5 MW or 19,710 MWh per year.

The additional energy requirements of the SCONO$_x$™ system (relative to other NO$_x$ control technology) means that the incremental amount of energy will not be supplied by the Project to meet energy needs in the service area. Other power plants will make-up the difference (approximately 4.2 MW) and this will result in a proportional increase in air pollution emissions. These other power plants may emit at levels equal to or greater than the Project.

As with any mechanical system, there are energy requirements associated with the operation of equipment, pumps and motors but these are relatively small. Finally, the SCONO$_x$™ system consumes 200 pounds per hour of natural gas total for regeneration of the catalyst plus leakage. This results in an annual natural gas consumption of 41,800 MCF.

1.2.4.2.3 ECONOMIC ANALYSIS

Table 4 presents the capital and annualized cost for the SCONO$_x$™ control option downstream of a DLN combustor. The costs are itemized to include capital cost of equipment and operation costs for personnel, maintenance, replacement parts (primarily catalyst) and energy costs. These costs are based on general information provided during a meeting with representatives from ABB Environmental. ABB Environmental was not able to provide a specific cost quote for a SCONO$_x$™ system for a GE 7FA combustion turbine with a HRSG. The projected capital costs are based on a SCONO$_x$™ system designed for an ABB GT-24 unit adjusted for the GE 7FA. The SCONO$_x$™ system also reduces

BEFORE THE ENVIRONMENTAL APPEALS BOARD
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON DC

In the matter of Russell City Energy Center	))))	Appeal No. 08-01

DECLARATION OF ROB SIMPSON

I Rob Simpson do hereby declare as follows:

I reside in the city of Hayward where I am raising 3 children, 2 that I sired and 1 who was adopted in Africa as a baby. I serve on the Hayward Area Planning Association. I serve on the City of Hayward's Clean and Green Task Force. I have given nearly 30,000 trees away to the community largely to fight Global Warming. I held my mother as she died from cancer and my father as he died from respiratory failure. I have respiratory difficulty I have seen a map of Co impact from the Air District that marks the vicinity of my home being the maximum impact. I have tried to get information from the Air District and they have not been forthcoming with regards to Dates and permitting actions. I have a recording from the Attorney for the district on my voicemail Dated November 29, 2007 that states the following.

"uh Hi Rob Sandy Crocket at the Bay Area Air Quality Management District. Um Brian Bunger said he got a message from you ah He forwarded it to me, and asked me to get back to you since I'm the ah person handling it here, Um and on the issue of ah the time that you have to file an appeal to the Authority to construct. Um you know I'm not really in a good position to give you legal advice on what your rights are ah to appeal and when you need to do things by. Um I think that if you want a definitive answer on you know what your legal requirements are for filing an appeal here ah I think you need to get your own legal counsel uh I can tell you, you the the ah statutory reference some of them that apply here you could probably look it up for yourself and uh I think you want to be looking in Health and safety code section uh 42302.1 uh and around there you can find some legal authorities uh that may help you out. But as far as giving you definitive legal advice um I just can't do that um in the position that I am in. uh so I hope this clears things up some. I understand that it's not a definitive answer but

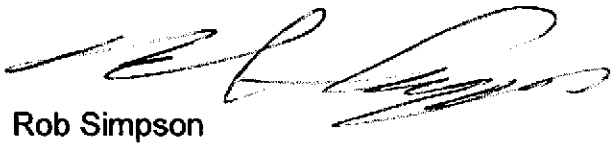
you have to understand that I am just not in a position to give you one uh if you have any questions give me a call back at 415-749-4732

I have attached a Community Greenhouse Gas Emissions in 2005 summary report with handwritten notes demonstrating Calpine's plan can emit over 2 times the cities greenhouse gas emissions.

I have spent close to 400 hours involved with these power plant plans.

I apologize to the EAB if my attached "OPPOSITION TO REQUEST FOR SUMMARY DISMISSAL" does not demonstrate the caliber of presentation that it is accustomed to but I believe that the points are clear.

I Hereby declare under the penalty of perjury under the laws of California that the forgoing is true and correct, and that this declaration was executed on February 9, 2008



Rob Simpson

Hayward

Community Greenhouse Gas Emissions in 2005

Summary Report

	Equiv CO_2 (tons)	Equiv CO_2 (%)	Energy (MBtu)
Residential	184,158	24.1	2,777,925,461
Commercial	278,079	36.4	3,933,435,755
Transportation	342,581	44.8	3,993,250,979
Waste	-40,288	-5.3	
Total	764,529	100.0	10,704,612,195

Russell City[1] 1,681,920 tons/year • 2.19 x H. total emissions

Eastshore[2] 230,000 tons/year • 30% of H. total emissions

[1] run at 80% capacity @ 800 lbs of emissions per Mega Watt

[2] 4,000 hours/year @ 1,000 lbs of emissions per Mega Watt

BOARD OF SUPERVISORS

GAIL STEELE
SUPERVISOR, SECOND DISTRICT

BEFORE THE ENVIRONMENTAL APPEALS BOARD
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C.

In the matter of Russell City Energy Center	))))	Appeal No. 08-01

DECLARATION OF GAIL STEELE

I, Gail Steele, hereby declare as follows:

I serve on the Alameda County Board of Supervisors, District 2. My jurisdiction includes the City of Hayward.

If I had received notice of the Bay Area Air Quality Management District's process, with regard to the Russell City Energy Center and the Eastshore Energy Center, I would have participated in the actions.

I would like proceedings to be reopened to provide required notice to the public and affected agencies, consider comments and conduct a public hearing.

I declare, under penalty of perjury, under the laws of the State of California, that the foregoing is true and correct, and this declaration was executed on February 6, 2008.

Gail Steele

Gail Steele

1221 OAK STREET - SUITE 536 - OAKLAND, CALIFORNIA 94612 - (510) 272-6692 - FAX (510) 271-5115
HAYWARD DISTRICT OFFICE - (510) 670-6277
www.acgov.org gail.steele@acgov.org

BEFORE THE ENVIRONMENTAL APPEALS BOARD

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON DC

In the matter of Russell City Energy Center	))))	Appeal No. 08-01

Declaration of Sherman Lewis

I Sherman Lewis do hereby declare as follows.

I reside in the City of Hayward. I am the President of the Hayward Area Planning Association (HAPA). HAPA has been a citizen group involved in environmental, land use, and transportation planning serving the Hayward area since 1978. Rob Simpson serves on the HAPA Board of Directors. He has been assigned the responsiblity of representing HAPA in power plant licensing processes in the area, based on policy discussed and approved by the HAPA Board. He has participated in that capacity as a representative of HAPA in the Russell City Energy Center And the Eastshore Energy Center. We have been represented by Jewell Hargleroad, our attorney. I also offered testimony on Russell City and testified on January 14, 2008, to the California Energy Commission on the Eastshore project. Attached is a true and correct copy of the letter dated September 25, 2007 that I submitted to the CEC objecting to the proposed decision on the Russell project.

We were not provided notice about the Bay Area Air Quality Management District's permitting action. If we had been given notice we would have certainly participated in the public comment period. Failure to provide notice has violated our right to participate. We ask that the Public comment period be re-opened with legal notice and that public hearing(s) be completed in this matter.

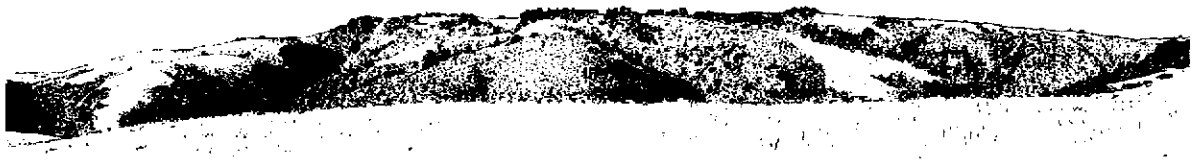
I hereby declare under the penalty of perjury under the laws of California that the forgoing is true and correct, and that this declaration was executed on February 8, 2008 in Hayward, California.

Sherman Lewis

Sherman Lewis

Feb. 8, 2008

Date



HAYWARD AREA PLANNING ASSOCIATION

September 25, 2007

California Energy Commission
Ms. Jackalyne Pfannestiel, Chair
by fax to Executive Office at 916-654-4420 and Paul Kramer, Hearing Office, 916-654-3897
by email pdf attachment to Jackalyne Pfannestiel <cgraber @ energy.state.ca.us>

Subject: Russell City Energy, Docket 01-AFC-7C for Sept. 26, 2007

Dear Energy Commission:

The Hayward Area Planning Association has serious concerns about the Russell City (Calpine) and East Shore (Tierra) power plants proposed for the Hayward shorelands. These are huge plants in their size and electrical capacity.

While natural gas peaker plants like East Shore are preferable to oil, coal, or new hydro, we believe there are alternatives preferable to natural gas and the severe peaking of electrical demand on hot summer afternoons and on cold winter evenings.

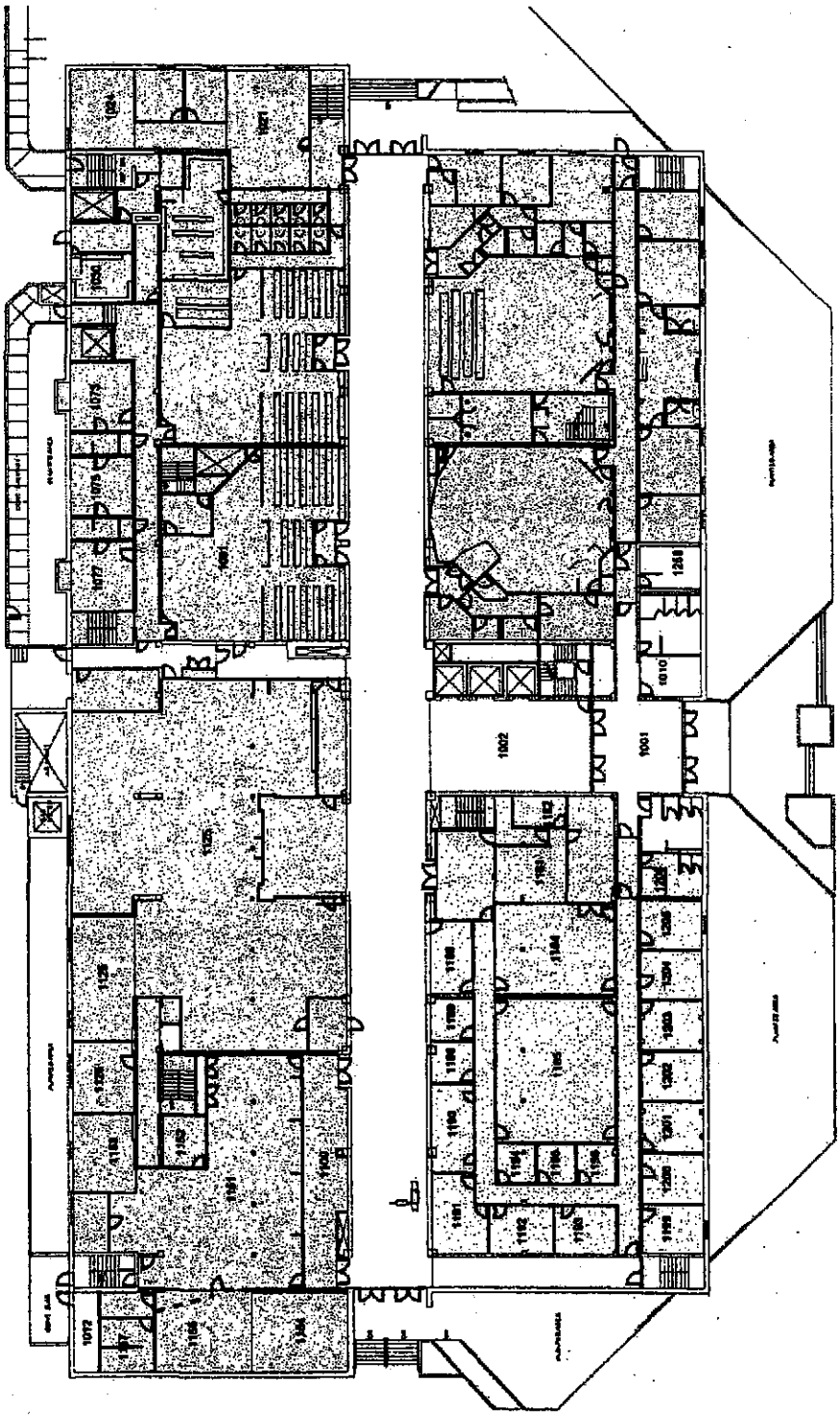
We support not building these two plants. We support, at a minimum, delaying action until substantive and procedural problems are adequately considered by the public, environmental groups, the City of Hayward, Alameda County, the California Energy Commission, and the Bay Area Air Quality Management District. There has not yet been a chance for public consideration of the details of these plants as currently proposed.

The problems are air pollution, misplaced mitigation, hazards to aviation, visual blight, urban heat island effects, use of fossil fuels, and the exclusion of Alameda County from the planning process.

- These plants will cause severe increases in air pollution--particulates, NOx, CO, ROG, SOx, ammonia, other toxic air contaminants. Hayward has no air quality monitoring stations. The Bay trail and the recently purchased salt ponds are nearby. Air pollution will affect recreational users and the Clapper Rail, Snowy Plover, Salt Marsh Harvest Mouse, Least Tern, and other wildlife found within a few miles of the power plants. If the pollution exists, the impacts exist, and should not be superficially dismissed as insignificant by people who don't care about air quality.

- Mitigation measures are inadequate and misplaced, allowing air in and around Hayward to be degraded while pollution credits are used to benefit other areas.

Bldg #-Drawing Name-Floor:	13130-HHOJ-1st Flr.	USF:	34,479
Building Name:	Hayward Hall of Justice	Print Date:	4/30/2007
Street Address:	24405 Amador Street	City:	Hayward



301100 - Court

410111 - BMD

230100 - DA

290311 - Sheriff

- A plume of hot gases and exhaust rising up to 1,000 feet from proposed exhaust smokestacks 70 feet (Tierra) to 145 feet (Russell) high will pose a hazard to aviation using the Hayward Municipal Airport and, thus, to the public below.

- These proposed exhaust smokestacks, large industrial buildings with cooling towers, and new transmission towers and lines will cause visual blight close to a natural area.

- These plants are not out in some rural area; they are part of the densely populated East Bay plain. Burning natural gas increases local area heat from generating the power and then using it for air conditioning, both of which increase urban heat island temperatures and lead to demand for even more air conditioning--by those who can afford it.

- Burning natural gas produces more greenhouse gases. California and the nation need to decrease use of all fossil fuels and increase the use of alternatives more consistent with sustainability. Air circulation may sometimes reduce the local heat island effect, but the impact on global warming remains the same.

- So far there has been no application to Alameda County for a plant to be built in part in the county.

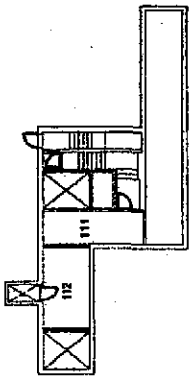
These plants, if needed at all, should be built where power demand is increasing the most, in Santa Clara and San Mateo counties. They should not be built in places with less increase in demand. Let those most in need bear the external costs. In fact, if the external costs were internalized, these plants would not be proposed in the first place.

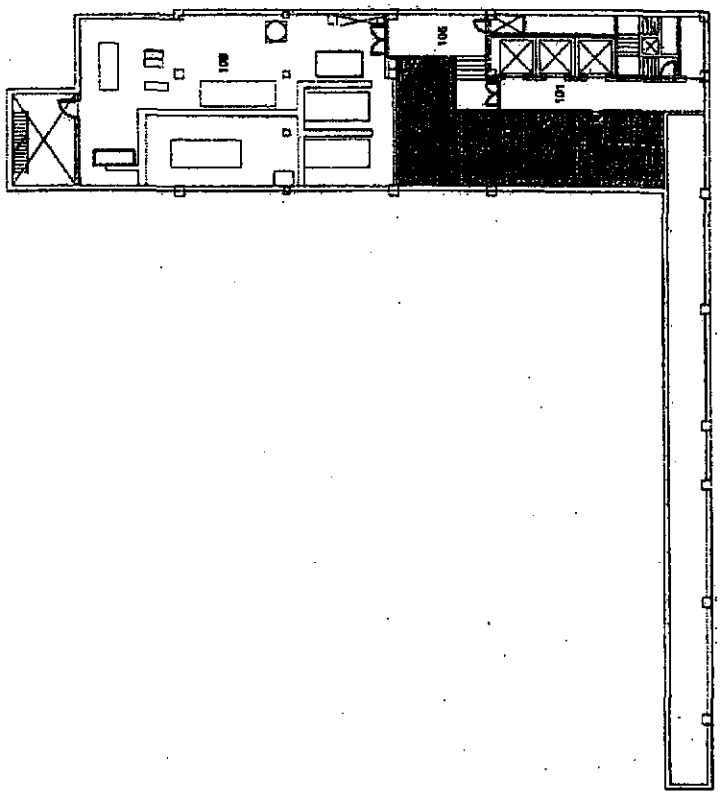
There is, however, a better alternative. Electrical needs can be better met with time-of-day pricing, insulation of buildings, fluorescent light bulbs, solar thermal, solar photovoltaic panels, wind energy, energy-efficient industrial motors and household appliances, transit-oriented development, waste cooking oil, and a multitude of additional cost-effective energy conservation strategies. These alternatives reduce fossil fuel use, peak demand, and the need for electricity in general.

Circumstances have changed substantially since these plants were proposed in the midst of an artificial energy crisis. AB 32 is now law. Also, on October 21, 2006, the Governor signed a bill for "a million solar roofs," increasing the effectiveness of PUC policies already in place. Solar roofs alone can supply 3,000 megawatts in California, far more than the 600 megawatts from the Russell City Plant. The Bay Area will get a substantial part of the 3,000 megawatts, and, combined with pricing incentives, sustainable sources, and conservation, alternatives can meet the need for electricity.

The problem is timing. The energy is not really needed now or we would be having brownouts. In the long run alternatives will work. So the problem is how soon the alternatives can be effective relative to the power plants. We know the power plants can be built in a predictable time frame, while opinions vary about alternatives. We believe that stopping the power plants is essential to develop the political will and prices needed to develop the alternative.

Bldg #-Drawing Name-Floor:	13130-HHOJ-Basement	USF:	1,067
Building Name:	Hayward Hall of Justice	Print Date:	4/30/2007
Street Address:	24405 Amador Street	City:	Hayward





301100 - Court

410111 - BMD

230100 - DA

290311 - Sheriff

We believe there are no technological problems whatsoever with making the alternatives work. There is, similarly, no excuse for building coal or diesel plants.

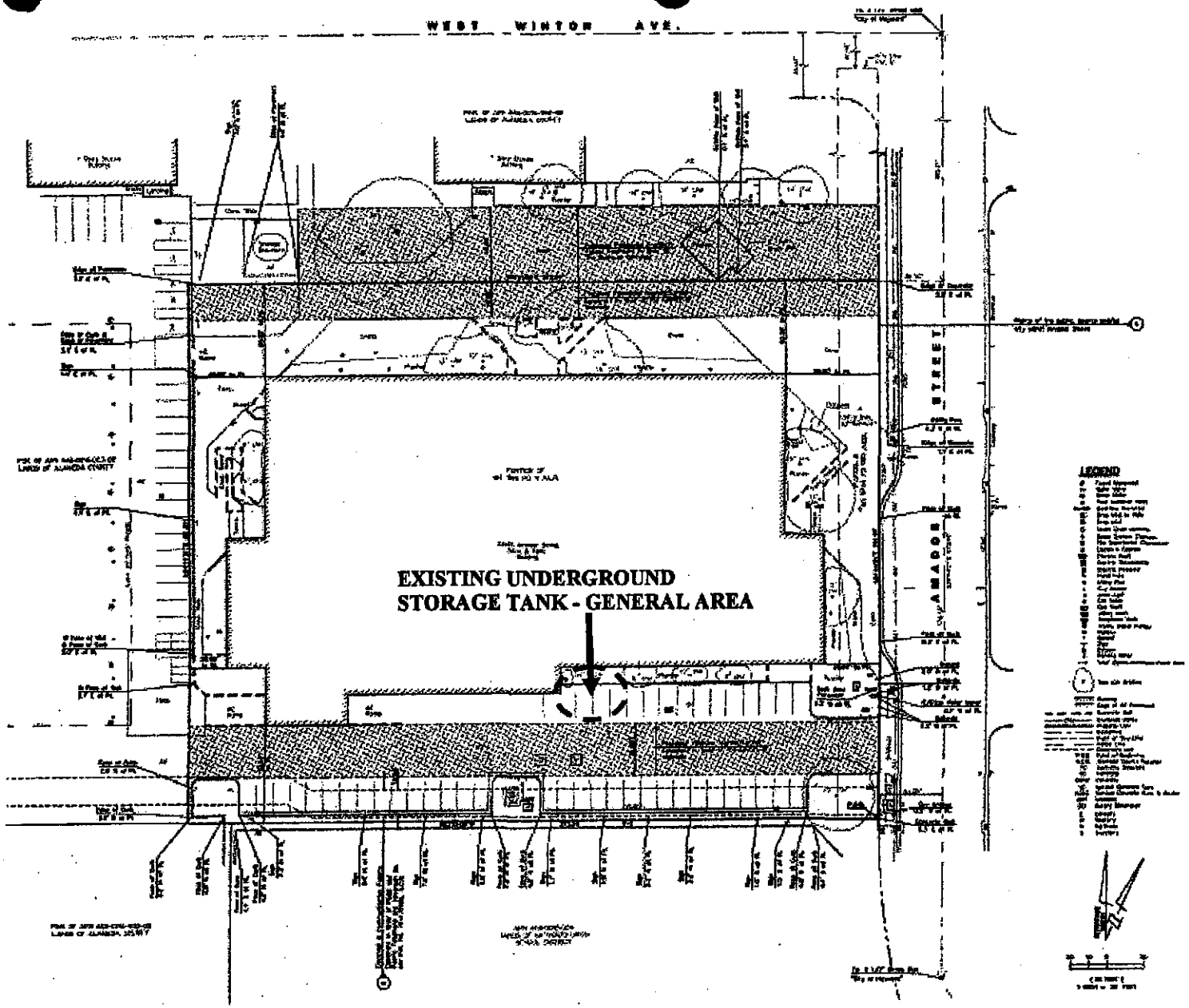
The shorelands need more protection, not more development. We support conservation, reclamation and preservation of the shorelands in a natural state for habitat, wildlife diversity, and recreational use. HASPA should be strengthened to do its job. Land use designations and zoning should prohibit destructive uses like these power plants.

We need to get off the fossil energy path; we need to get on a sustainable energy path.

Sincerely

Sherman Lewis

Sherman Lewis. President
HAPA
2787 Hillcrest Ave.
Hayward CA 94542
510-538-3692
sherman@csuhayward.us



01-D1 Hayward Hall of Justice - Site Plan

BEFORE THE ENVIRONMENTAL APPEALS BOARD

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON DC

In the matter of Russell City Energy Center	)))))	Appeal No. 08-01

DECLARATION OF MICHAEL TOTH

I HEREBY DECLARE AS FOLLOWS:

I reside in the City of Hayward with my wife and infant child. I have been an active participant in the Eastshore Energy Center proceedings since March 2007 and in the Russell City Energy Center proceedings since November 2007. I maintain a web site which initially covered the Eastshore Energy Center but began to cover the Russell City Energy Center as I became aware of the RCEC proceedings. I have attended meetings and hearings regarding the plants. I have submitted public comments to the CEC. I have contacted the Bay Area Air Quality management staff and submitted public comments to BAAQMD multiple times by e-mail during the Eastshore Energy Center PDOC public comment period, and submitted a formal public comment on June 1, 2007. I have received informal replies via e-mail from Brian Lusher of the BAAQMD during this period, though I only received a response to my formal public comments approximately 4 months after my comments, dated October 24, 2007 from Brian Bateman. At no time was I invited to be on a mailing list or notified of permit actions regarding the Russell City Energy Center. If I had been informed about the Russell City permit action and other activities I certainly would have exercised my rights. By withholding notice of this action from me, my rights have been violated. I would like the public comment period to be reopened and legally noticed to the public and our affected governmental agencies. I would also like a Public Hearing regarding both Calpine's Plan and the Eastshore plan.

Had I been informed of the November 1, 2007 permit action and thus given the opportunity to provide public comment, I would have alerted the responsible agencies to apparent deficiencies in their analysis of the risk to the public health of Toxic Air Contaminants, otherwise known as Hazardous Air Pollutants, which are regulated by both

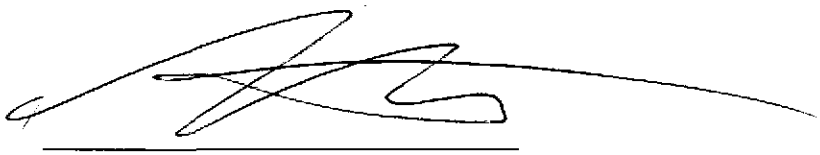
the U.S. Environmental Protection Agency and CARB (California Air Resources Board).

As the RCEC is intended to be run in a **"load following"** profile, which represents a significant change from the "baseload" profile originally permitted in 2001, **it is permitted to start and stop twice per day, with a warm start duration of 3 hours and a cold start duration of 6 hours.**

The Toxic Air Contaminant emissions during these starts and stops were not factored into the public health risk analysis. Instead, this analysis used emission factors associated with normal "baseload" operation when the plant is running at peak efficiency. However, as a "load following" plant, the RCEC may spend a significant number of its daily operating hours either starting up or shutting down. In these inefficient states, where conditions are not optimal for emission controls to function efficiently, **the RCEC will potentially emit Toxic Air Contaminants (Hazardous Air Pollutants) at a rate orders of magnitude higher than under a "normal" operating scenario.**

By omitting the frequent startup and shutdown periods from the public health risk analysis, the BAAQMD **failed to estimate the plant's maximum potential to emit**, and have thus failed to conduct an adequate analysis of the risk to public health of this plant as required by the applicable regulations. Furthermore, by the BAAQMD's own admission during the RCEC evidentiary hearing, **the BAAQMD does not source test for toxic air contaminant emissions during startup and shutdown**, leaving potential health hazards both unpredicted, unmonitored, and thus insufficiently regulated.

I hereby certify under the penalty of perjury under the Laws of California that the forgoing is true and correct, and that this Declaration was executed on February 8, 2008



Michael Toth

BEFORE THE ENVIRONMENTAL APPEALS BOARD

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C.

In the matter of Russell City Energy Center	Appeal No. 08-01

DECLARATION OF SHANA LAZEROW

I, SHANA LAZEROW, hereby declare:

1. I am an attorney admitted to practice before the courts of the State of California. I am a staff attorney for, serve as counsel for Petitioner Communities for a Better Environment ("CBE"). I have been a CBE staff attorney since November 2005. I am a member of the bar of the State of California, admitted to practice in the Federal Court of Appeals for the Ninth Circuit, and the United States District Court for the Northern, Eastern and Central Districts of California. I have personal knowledge of the matters hereinafter set forth, and if called as a witness would be competent to testify thereto.

2. CBE works in low income communities of color to help those communities self-empower by addressing environmental injustice. Environmental injustice includes the siting of new sources of pollution in already-impacted communities. It often comes about as a result of administrative decisions that are made without adequate notice to the affected community, or without opportunities for the affected community to give testimony concerns the new source's impacts.

3. CBE has attempted to follow the Bay Area Air Quality Management District ("BAAQMD") approval process for the Russell City Energy Project in Hayward ("Project"). In September 2001, the Senior Attorney Anne Simon requested notification

of the Preliminary Determination of Compliance for the Project, which alerted BAAQMD that CBE was interested in the Project. A true and correct copy of the e-mail from Anne Simon to BAAQMD staff is attached hereto.

4. It is my understanding that BAAQMD recently issued draft and final Approvals to Construct for the Project. To the best of my knowledge, CBE never received notification of the draft or final approval.

5. Had CBE received such notification, I believe that CBE would have participated in the administrative process. Since we were not notified the process was occurring, CBE did not participate.

6. CBE supports the reopening of the BAAQMD proceedings so that the public has an opportunity to participate.

I declare under penalty of perjury that the foregoing is true and correct. Executed at Oakland, California, on February 7, 2008.

Shana Lazerow

Author: <asimon@cbecal.org> .c INTERNET
Date: 9/14/01 9:42 AM
Priority: Normal
TO: Weyman Lee at cc_fs3
Subject: Russell City Energy Center PDOC

Hello,

I am hoping that I will be able to obtain a copy of the Preliminary Determination Of Compliance for the Russell City Energy Project in Hayward as soon as it is released. Please let me know whether I need to make a more formal request, and to whom it should be directed.

Thank you.

Anne Simon

Anne E. Simon
Senior Attorney
Communities for a Better Environment
1611 Telegraph Ave. Suite 450
Oakland, CA 94618
(510) 302-0430
fax: (510) 302-0438

BEFORE THE ENVIRONMENTAL APPEALS BOARD
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON DC

In the matter of	)	
Russell City Energy Center	)	Appeal No. 09-01
	)	
	)	

Declaration of James Forsyth

I hereby declare as follows:

I did not receive notice of the Bay Area Air Quality Management Districts permitting action In regard to Russell City Energy Center AKA Calpine

If I had received notice I would have participated in in the public comment action pursuant to my rights within 40cfr124.10 et al.

I would like the proceedings to be reopened to provide required notice to the public and affected agencies, consider comments and conduct a public Hearing.

I declare, under the penalty of perjury, under the laws of the state of California, that the forgoing is true and correct, and this declaration was executed on

Date 2-07-08

James Forsyth

BEFORE THE ENVIRONMENTAL APPEALS BOARD
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON DC

In the matter of	)	
Russell City Energy Center	)	Appeal No. 09-01
	)	
	)	

Declaration of Ernest A. Pacheco

I hereby declare as follows:

I did not receive notice of the Bay Area Air Quality Management Districts permitting action In regard to Russell City Energy Center AKA Calpine

If I had received notice I would have participated in in the public comment action pursuant to my rights within 40cfr124.10 et al.

I would like the proceedings to be reopened to provide required notice to the public and affected agencies, consider comments and conduct a public Hearing.

I declare, under the penalty of perjury, under the laws of the state of California, that the forgoing is true and correct, and this declaration was executed on

Date 2/7/8

Ernest A. Pacheco

BEFORE THE ENVIRONMENTAL APPEALS BOARD
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON DC

In the matter of	)	
Russell City Energy Center	)	Appeal No. 09-01
	)	
	)	

Declaration of Audrey A LePell

I hereby declare as follows:

I did not receive notice of the Bay Area Air Quality Management Districts permitting action In regard to Russell City Energy Center AKA Calpine

If I had received notice I would have participated in in the public comment action pursuant to my rights within 40cfr124.10 et al.

I would like the proceedings to be reopened to provide required notice to the public and affected agencies, consider comments and conduct a public Hearing.

I declare, under the penalty of perjury, under the laws of the state of California, that the forgoing is true and correct, and this declaration was executed on

Date February 8, 2008

Audrey A LePell

BEFORE THE ENVIRONMENTAL APPEALS BOARD
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON DC

In the matter of	)	
Russell City Energy Center	)	Appeal No. 09-01
	)	
	)	

Declaration of SUSAN M. SILVA

I hereby declare as follows:

I did not receive notice of the Bay Area Air Quality Management Districts permitting action In regard to Russell City Energy Center AKA Calpine

If I had received notice I would have participated in in the public comment action pursuant to my rights within 40cfr124.10 et al.

I would like the proceedings to be reopened to provide required notice to the public and affected agencies, consider comments and conduct a public Hearing.

I declare, under the penalty of perjury, under the laws of the state of California, that the forgoing is true and correct, and this declaration was executed on

Date 7 FEBRUARY 2008

Susan M. Silva

BEFORE THE ENVIRONMENTAL APPEALS BOARD
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON DC

In the matter of	)	
Russell City Energy Center	)	Appeal No. 09-01
	)	
	)	

Declaration of CYNTHIA PADILLA CHAVEZ

I hereby declare as follows:

I did not receive notice of the Bay Area Air Quality Management Districts permitting action In regard to Russell City Energy Center AKA Calpine

If I had received notice I would have participated in in the public comment action pursuant to my rights within 40cfr124.10 et al.

I would like the proceedings to be reopened to provide required notice to the public and affected agencies, consider comments and conduct a public Hearing.

I declare, under the penalty of perjury, under the laws of the state of California, that the forgoing is true and correct, and this declaration was executed on

Date 2-7-08

Cynthia Padilla Chavez

BEFORE THE ENVIRONMENTAL APPEALS BOARD
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON DC

In the matter of	)	
Russell City Energy Center	)	Appeal No. 09-01
	)	
	)	

Declaration of Clara Watters

I hereby declare as follows:

I provided public comments to the Bay Area Air Quality Management District BAAQMD regarding Russell City Energy Center and Eastshore Energy Center. I received a response from BAAQMD months later dated October 24, 2007 in the form of a letter from Brian Bateman Director of Engineering.

I did not receive notice of the Bay Area Air Quality Management Districts permitting action Dated November 1, 2007 In regard to Russell City Energy Center AKA Calpine despite my above participation in both proceedings.

If I had received notice I would have participated in in the appeal action pursuant to my rights.

I would like the proceedings to be reopened to provide required notice to the public and affected agencies, consider comments and conduct a public Hearing.

I declare, under the penalty of perjury, under the laws of the state of California, that the forgoing is true and correct, and this declaration was executed on

Date 2-8-2008

Clara Watters

BEFORE THE ENVIRONMENTAL APPEALS BOARD
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON DC

In the matter of	)	
Russell City Energy Center	)	Appeal No. 09-01
	)	
	)	

Declaration of Kimberley FINN

I hereby declare as follows:

I provided public comments to the Bay Area Air Quality Management District BAAQMD regarding Russell City Energy Center and Eastshore Energy Center. I received a response from BAAQMD months later dated October 24, 2007 in the form of a letter from Brian Bateman Director of Engineering.

I did not receive notice of the Bay Area Air Quality Management Districts permitting action Dated November 1, 2007 In regard to Russell City Energy Center AKA Calpine despite my above participation in both proceedings.

If I had received notice I would have participated in in the appeal action pursuant to my rights.

I would like the proceedings to be reopened to provide required notice to the public and affected agencies, consider comments and conduct a public Hearing.

I declare, under the penalty of perjury, under the laws of the state of California, that the forgoing is true and correct, and this declaration was executed on

Date 2/9/08

Kimberley Finn

BEFORE THE ENVIRONMENTAL APPEALS BOARD
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON DC

In the matter of	)	
Russell City Energy Center	)	Appeal No. 09-01
	)	
	)	

Declaration of Karen Kramer, 2215 Thayer Ave, Hayward, CA 94545

I hereby declare as follows:

I did not receive notice of the Bay Area Air Quality Management Districts permitting action In regard to Russell City Energy Center AKA Calpine

If I had received notice I would have participated in in the public comment action pursuant to my rights within 40cfr124.10 et al.

I would like the proceedings to be reopened to provide required notice to the public and affected agencies, consider comments and conduct a public Hearing.

I declare, under the penalty of perjury, under the laws of the state of California, that the forgoing is true and correct, and this declaration was executed on

Date 2/7/08

Karen Kramer