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State of California
Energy Resources Conservation
and Development Commission

In the matter of	)	Docket No. 04-AFC-1
	)	
	)	
San Francisco Electric Reliability Project	)	
Power Plant Licensing Case	)	**Reply Brief to staff late filing**
	)	

7-21-06

DATE

Introduction

On July 11, 2006, Staff of the Energy Commission filed its *Commission Staff Reply Brief,* along with a request for leave to file late. All reply briefs were due by close of business on July 10, 2006, twenty-four hours prior to the time Staff filed. (5/31/06 RT 269.) While Staff's failure to meet the required filing date is "improper", the Committee decided to accept the Staff Reply Brief and grant all other parties until close of business on Friday, July 21, 2006 to respond to the late Staff Reply Brief. This filing constitutes Intervenor Sarvey's reply to this staff's late reply brief.

Exhibit 92B

Staff expends considerable ink in their reply brief trying to rescind a previous ruling by the committee granting administrative notice to the Southern Waterfront SEIR which is Exhibit 92B. As demonstrated below staff's arguments are unfounded and without merit and are nothing more than collateral attack on a prior committee ruling. Staff's Brief on page 1 complains "At the outset it should be noted that Sarvey relies heavily on the Southern Waterfront SEIR (Exhs. 92,92A, 92B, and 92C), of which the Committee has recently informed the parties it is taking "administrative" (or official) notice. This document has not been available to Staff in hard copy, and no party (with the possible exception of the City) possessed it during the hearings except Sarvey. Even as this is written, Staff counsel has not been able to obtain either a hard copy of a soft or electronic

copy of the SEIR." **Staff has had a copy of the Waterfront SEIR since July 25, 2005 almost a year ago. (Exhibit 27 page 3, 4)** The disk containing the Waterfront SEIR is part of the applicant's response to Sarvey Data Request 1-4, 1-5, and 1-6 of Exhibit 27. Exhibit 27 was received into evidence at the May 24 hearing. (RT 5-24-06 page 216) Staff has known that the cumulative impacts of the Illinois Street Bridge and the Southern Waterfront Projects have been an issue since the day I filed data request 1-6 on June 24, 2005. (Exhibit 27 page 4) The Waterfront SEIR projects were also the subject of a motion to compel a cumulative analysis of their impacts and environmental justice implications on February 2, 2006. (Docket #32657) Staff's complaint is disingenuous and without merit. Staff continues to complain later on page 10 of their brief that a hard copy of the Southern Waterfront EIR has not been provided to the committee's hearing advisor. I provided a hard copy of the SEIR to the hearing officer at the May 31, 2006 hearing. Staff states that "the document is not part of the record. As stated before this document was provided by the applicant as a reply to Sarvey data response 1-4, 1-5, 1-6 of exhibit 27 which has been received into evidence and which staff has had a copy since July 25, 2005. (RT 5-24-06 page 216). Staff asks the committee to rescind official notice of Exhibit 92B because it was never the subject of notice and objection by the parties. The document was introduced and applicant objected to its submission and was overruled. (RT 5-31-06 pages 41-42) The applicant's attorney even suggested that the committee take administrative notice of the Southern Waterfront SEIR.

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24 MS. SOL_: Yeah, and I believe in
25 addition that it could be taken administrative
1 notice of.
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(RT 5-31-06 page 44,45)

Staff had and opportunity to object and failed to do so. (RT 5-31-06 page 44)

Exhibit 92B was used extensively by staff (Exhibit 46) and the applicant (Exhibit 15) in their analyses. Some of the places where the SEIR is referenced are listed below but the list is by no means an exhaustive list of all the places where the Waterfront SEIR was utilized in the analyses of this project.

Staff's References to the southern Waterfront SEIR in the FSA (Exhibit 46)

1) Land Use Section Cumulative Impacts and Mitigations Exhibit 46 p. 4.5-2)
2)Noise Section- Cumulative impacts and mitigation Exhibit 46 p. 4.5-7-8
3) Traffic and transportation Section – Cumulative impacts and mitigation Exhibit 46 p. 4.10-13
4) Socioeocnics Section - Section Exhibit 46 page 4.8-9
5) Visual Section- Cumulative Impacts and Mitigation page 4.12-13
6) Cultural Resources Section Cumulative impacts and mitigation 4.3-29

It appears from the record every member of staff had a copy of the Waterfront SEIR except staff counsel. The Southern Waterfront SEIR is also extensively used in the applicants Exhibit 15 Supplement A analysis. Below are just a few citations to the Waterfront SEIR again the list is not complete.

Applicant's Supplement A Southern Waterfront References (Exhibit 15)

1) Exhibit 15 p. 8.10-30
2) Exhibit 15 p. 8.11-33
3) Exhibit 15 8.14-13
4) Exhibit 15 page 8.4-20
5) Exhibit 15 8.4-15
6) Exhibit 15 page 8.4-17
7) Exhibit 15 page 9-13

Finally staff states the Southern Waterfront SEIR is nothing more than a docketed government document that cannot alone support a finding or

conclusion" The committee has chosen to take official notice of the Waterfront SEIR under California Code section 1213 and the document can be used to support a finding as provided by California code Section 1702 (h) (5) . A review of the record some of which is listed above does not support the assertion that the SEIR is nothing more that a docketed government document. The Southern waterfront SEIR was used extensively in staff's FSA and the applicants Supplement A analyses.

Cumulative Analysis

Staff repeats their argument that their cumulative impacts analysis is adequate on pages 2 through 5 of their brief. Staff begins by stating that their summary of projections is sufficient under CEQA guidelines. As stated before and is becoming more evident every day staff's conclusion in their summary of projections that the BAAQMD will reach Ozone attainment this year has proven entirely false. The air resources board web site reports that there have already been seven violations of the 8-hour federal ozone standard in the months of June and July of 2006. (June 21, 22, 23 July 8, 16, 17, 18) http://www.arb.ca.gov/aqmis2/display.php?year=2006&report=AREA1YR&statistic=DMOL8&o3pa8=SFB&param=OZONE_ppm&submit=Get+the+Data&db=paqd and the ozone season is only half over. Staff's air expert discounts the summary of projections from the air resources board for PM-10 in his testimony. (Exhibit 46 pages 4.1-24, 25) "Argument, speculation, unsubstantiated opinion or narrative evidence **which is clearly inaccurate or**

erroneous is not substantial evidence. (Public Resources Code Section 21080 subd. (e), 21082.2 subd. (c).)

Next Staff then touts its list approach as satisfying CEQA. Staff states that the projects in the Waterfront SEIR have presumably already been built. Staff's witness's testimony Mr. Flores evinces just the opposite conclusion.

15 Q You list quite a few projects here. Do
16 you know which one of these are completed, or
17 which ones are still under construction?
18 A As indicated, the Muni project is now
19 under construction. Pier 70 is still under
20 review. The last time I checked it on the
21 internet they are still -- there was a plan that
22 was submitted and it was rejected by the
23 community. And so they're starting all over again
24 through the bidding process, and also modifying
25 their plan for their Pier 70 project.
RT 4-24 p. 159 Flores

21 Q You mention in your testimony on page
22 3.4-8 a Concrete ReadyMix facility. Is that under
23 construction?
24 A One is completed; the other one will be,
25 was anticipated to be done this month.
RT 4-24 p. 159 Flores

1 Mission Bay is still under construction.
2 And I have no idea at this point when it's
3 anticipated for final construction of that.
RT 4-24 p. 159 Flores

4 Q Okay. And there's also a bulk cargo
5 barge and rail transport at Pier 80?
6 A I wasn't aware of that.
7 Q Okay. It's in your testimony on page
8 4.5-8.
9 A Oh, forgot.
10 Q The Pier 90-94 backlands is a 44-acre
11 site. Can you tell us where they are with the
12 development of that project?
13 A Just to go back on that one, that is the
14 one that has been completed.
15 Q Okay.
16 A And the other one is -- there's another
17 one --
18 Q How recently was that completed?
19 A Six months, seven months ago.
20 Q Okay, thank you. And then the Pier 90-
21 94 backlands 44-acre site, that's still in the

22 initial planning phase?
23 A Yes, it is.
4-24 p. 160 Flores

24 Q Okay, and then the Pier 70 opportunity
25 area --
1 A That's the one I mentioned earlier.
2 Q Okay. **So basically all these projects**
3 that you list you consider reasonably to be
4 foreseeable land use projects?
5 A Yes, I do.
6 Q Okay.
RT 4-24 p. 161 Flores

Staffs testimony in the FSA (Exhibit 46 page 4.5-7, 8) also demonstrates that most of the projects in the Waterfront SEIR have not been built and also adds projects that are not covered by the Southern Waterfront SEIR which will have impacts on the local community. These are some of the same projects that are described by Environmental Justice Expert Francisco Da Costa (RT 5-31-06 p. 198)

Staff then goes on to state that other projects under construction are only the source of construction emissions like the Illinois Street Bridge project and the MUNI Project. The Illinois Street Bridge project has modeled operating impacts of .5 ug/m3. (Exhibit 92B addendum page 9) The MUNI maintenance facility will support a fleet of almost 200 diesel buses a considerable operating impact to the local community. The SEIR projects total impacts include concentrations at sensitive receptor locations of as high as 1.6ug/m3. (Exhibit 92B page 94 Table 17) These are the concentrations at sensitive receptor locations. These are not the maximum project impacts that the staff and applicant have described as extremely localized near the emission sources. These sensitive receptor

locations include schools and playgrounds located in the Bayview and Hunters Point neighborhoods. Staff relies on the applicant's testimony that "the magnitude of any impact even if all the SEIR projects are included is less than significant. (Staff reply brief page 3) The Southern Waterfront SEIR admits that it cannot characterize the multitude of sources that will occur in the community and therefore deems the emissions form the SEIR cumulatively significant. (Exhibit 92B page 98) The conclusion of the SEIR is directly opposite of Applicants witness's testimony that provides no analysis in the record or any evidence just an unsupported opinion directly contradicted by the conclusion in the five hundred page analysis of the Waterfront SEIR. Case law supports a complete analysis of cumulative impacts of the Southern Waterfront SEIR and other reasonably foreseeable projects controlled by the applicant CCSF. .

.

" This analysis should include a discussion of projects **under review by the Lead Agency** and projects under review by other relevant public agencies, **using reasonable efforts** to discover, disclose, and discuss the other related projects. **The cumulative impact analysis requires a discussion of projects with related cumulative impacts which required EIRs, Negative Declarations,** or were exempt from CEQA. (See: *San Franciscans for Reasonable Growth v. City and County of*

Environmental Justice Guidelines issued in the Cal/EPA Environmental Justice action plan uses the definition of Cumulative Impacts contained in Title 14 Section 15355. This section defines cumulative impacts:

s 15355. Cumulative Impacts.

"Cumulative impacts" refer to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.

(a) The individual effects may be changes resulting from a single project or a number of separate projects.

(b) The cumulative impact from several projects is the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.

Clearly here the Waterfront SEIR and the other reasonably foreseeable projects defined by staff's land use analysis should have been analyzed by the staff and applicant to analyze the cumulative air quality and public health impacts for environmental justice purposes.

Staff falls back on the argument that they have determined that the cumulative impact is significant but they fail to asses the magnitude of the impacts and the environmental justice implications. (Staff reply brief page 3) Staff then repeats the same argument they claimed in their opening brief that

they have mitigated all significant impacts. (Staff reply brief page 3) Staff's conclusion on page 5 of their opening brief is that "Staff concluded that SFERP could contribute to the PM10 and ozone levels that surpass the state 24-hour PM10 standard and the federal ozone standard, and that this constitutes a significant cumulative impact requiring mitigation." Even though staff states this is a significant cumulative impact requiring mitigation they do not require mitigation for over 44 tons of precursor emission.

On page 7 of staffs brief it states, "All NOx and VOC emissions are fully offset by NOx emission reduction credits ("ERCs") for reductions achieved at the nearby Potrero power plant. (*Id.* at 14.) The ERCs are required to be at a ratio that exceeds the highest potential ("worst case") emissions calculated for the project. (*Ibid.*)" The evidence in the record indicates that VOC emissions have not been offset at all. (Exhibit 54 page 14) The applicant will provide 45.8 tons of 1985 NOx Emission reduction credits at a 1.19 to 1 ratio for the projects NOx emissions of 39.8 tons which equals 45.8 tons. No emission reduction credits are offered for the 7.7 tons of VOC's (Exhibit 54 page 14) that staff has deemed cumulatively significant. Staff is under the impression that the VOC emissions have been mitigated although they clearly have not been as the record indicates. Staff has not required mitigation for the projects SOx impacts even though staff will allow the applicant to use SOx ERC's to mitigate direct PM 2.5. Staff has provided no mitigation for the projects 37 tons of ammonia emissions even though they form secondary PM 2.5 and contribute 73% of the projects nitrogen deposition on San Bruno Mountain.

Staff then argues that the applicant's street sweeping program is effective even during periods of rain based on a statement by the applicant's air quality witness which actually states just the opposite. The applicants witness clearly states that when there is rain the program will be ineffective for three or four days.

11 Q Well, what value is the street sweeping
12 during the PM season, i.e., foggy winter months?
13 A Well, at anytime that you're going to
14 have high dust levels for road traffic it's going
15 to provide a benefit. And the impacts of rainfall
16 in terms of dampening streets are maybe three or
17 four days. Consequently, you know, in between
18 rainstorms the program is going to be effective.
(Rubenstein RT 5-30-06 p. 251,252)

The applicant's witness testimony is clear that rainfall will dampen the roads eliminating the effectiveness of the street sweeping program. Rainfall will also wash away the accumulated dust from the streets and will reduce or eliminate the effectiveness of the street sweeping program for three or four days. The applicants testimony states that during the months of October through May the project area experiences and annual rainfall of 21 inches. (Exhibit 14 8.4-11). During the months of January through February it rains on the average of 39 days in the city of San Francisco.

(http://www.weatherreports.com/United_States/CA/San_Francisco/averages.htm) During the winter months when particulate matter is an issue the applicant's street sweeping program provides very little mitigation.

The applicants witness also has a clear history of exaggerating the effectiveness of the mitigation programs he proposes. In the Los Esteros

Project (03-AFC-02) Mr. Rubenstein claimed that the applicant's (Calpine) wood stove program provided over 1900 tons of PM-10 reductions.

Response: In July 2002, LECEF gave the BAAQMD $510,500 to fund PM_{10} mitigation programs consisting of wood stove and fireplace replacements/retrofits and the subsidies for the purchase of low-emitting school buses. The PM_{10} mitigation plan submitted to the CEC on June 24, 2002, demonstrated that the expenditures for both programs were expected to mitigate 3,947,427 lb/yr of PM_{10} from LECEF.
(Applicant Data Response Number 5 page 2 Los Esteros)
http://www.energy.ca.gov/sitingcases/losesteros2/documents/applicants_files/2004-05-11_DR_1-57_RESPONSE.PDF
(Los Esteros Critical Energy Facility 03-AFC-02 Exhibit 3 page 2)

Both staff and the BAAQMD gave the program only 6.8 tons of PM-10 reductions.

On July 16, 2004, the District submitted a status report to the CEC (BAAQMD 2004b) detailing the retrofits and replacements funded thus far through the program. The data is summarized in AIR QUALITY Table 1 below, along with the calculated emissions reductions achieved from the program.

AIR QUALITY Table 1
Total Emissions Reductions from the
Woodstove/Fireplace Retrofit Program (July 2004) (lbs)

Device	NOx	SOx	CO	POC	PM10
84 Replacement Stoves	650.0	100.8	46,869.8	7,811.4	7,836.6
570 Fireplace Retrofits	420.7	56.8	43,191.2	5,296.9	5,923.8
Total Reductions (lbs)	1,070.7	157.5	90,061.0	13,108.3	13,760.4
Total Reductions (tons)	**0.54**	**0.08**	**45.03**	**6.55**	**6.88**

Source: BAAQMD 2004b (Report on the Woodstove Rebate Program) and Sierra 2002

(FSA 03-AFC-02 Los Esteros page 4.1-2)
http://www.energy.ca.gov/sitingcases/losesteros2/documents/2004-11-15_FSA.PDF

The applicant's testimony and previous testimony before the commission indicates that the street sweeping program will not be effective and the applicant's witness may have exaggerated the emission reductions and benefits achieved under his proposed mitigation programs.

Staff on page 3 of their brief states "Sarvey contends that the offsets are not designed to mitigate local impacts and that woodstove offsets are preferable to

the alternative woodstove program (sic)." I'm not sure what staff is saying here but I think they meant to say that the woodstove program is preferable to SO2 emission credits for mitigating the projects PM 2.5 impacts. Regardless staff expresses that they also prefer the woodstove program for mitigating local impacts and it is indicative by the "woodstove programs proposed in various siting cases." On this issue staff and I are in agreement. I have also proposed that the applicant be allowed to use other local programs approved by staff to mitigate the projects local PM 2.5 impacts because "staff's experience n the Los Estero power plant proceedings was that it is difficult to achieve wood smoke reductions for a power plant in an urban area that are sufficient to cover all the PM emissions." As demonstrated above with 85% of the allocated $510,100 that Calpine spent on woodstove reductions they achieved 6.87 tons of PM emission reductions. This project needs to only achieve 4 tons of PM 2.5 reductions to mitigate its impacts according to staff. Exhibit 93 will allow the applicant to easily achieve these local reductions because it provides more flexibility than the woodstove program, a concern of the applicant, and $800,000 which should esaily be enough money to achieve the reductions. The applicant has estimated that the local SO2 credits required by staff in ASQC-12 will cost the applicant $400,000 alone including any contributions the applicant whishes to provide in AQSC-11. The committee should adopt Exhibit 93 as the method to mitigate local PM 2.5 emissions as it satisfies the applicants flexibility concerns and the CEC staff and intervenors believe that local mitigation is preferable to Regional SO2 mitigation. I will not repeat my arguments here that local PM 2.5 impacts

are not mitigated by regional SO2 emission reduction credits as the issue is thourghly covered in my initial reply brief page 5-8.

Staff mischaracterizes my testimony on page 4 by stating that I prefer to keep the Potrero 3 unit running in place of the SFERP My testimony is that the SFERP should be sited somewhere else in San Francisco or on the Peninsula and that no more generation should be sited in the envioromentally challenged Southeast San Francisco Community. My testimony is that the impacts of electrical generation should be distributed throughout San Francisco. The San Francisco Electric Resource Plan agrees. (Exhibit 96 p. 17)

My testimony is that the SFERP should not be sited without a guarantee that the Potrero 3 unit will be shut down or the diesel peaker units will be shut down. There is no testimony in the record that with the siting of the SFERP Mirant will shut down any of these units. It is also likely that for reliability reasons these units won't be shut down. The siting of the SFERP in Southeast San Francisco should not occur under any circumstances. The electricity Resource plan agrees with that conclusion. (Exhibit 96 p. 17)

Next staff again mischaracterizes my testimony. Staff says that I have stated the average annual emission rate for the Potrero 3 unit is lower that the worst case emission calculation for he SFERP. That is not what I have testified. What I have testified is that the PM 2.5 emission rate per Megawatt for the SFERP is twice the per megawatt emission rate for the Potrereo 3 unit. I base that assumption on the applicant's testimony in Exhibit 15 page 3.7 table 3.

TABLE 3-4
Emissions Per Megawatt-Hour for Existing and Proposed Plants

Plant	NO_x (pounds per MW-hour)	PM_{10} (pounds per MW-hour)
Potrero 3	1.1	0.03
Hunters Point 4	0.7	0.03
Hunters Point and Potrero Peakers	2.4 to 2.9	0.4
Potrero 3 (retrofit)	0.2	0.03
SFERP	0.09	0.06*

* Rubenstein, 2004.

The applicant tries to refute these numbers by stating that the PM-10 per megawatt hour is based on the permit limit of 3 pounds per hour for the SFERP while the Potrero 3 units per megawatt rate is the actual emission rate. Staff in their brief states that actual emission rates are substantially lower than the maximum rate allowed in the permit. Staff states that this fact is supported by expert testimony and logic itself. Fortunately we don't have to rely on Mr. Rubenstein's testimony or logic. We have source tests form the Los Esteros Facility that utilizes the same turbines as the SFERP. The data demonstrates that the average emission rate is around 2.5 pounds per hour which shows that on a per megawatt basis the SFERP emits almost twice the PM 2.5 as the Potrero 3 despite the applicants assertions to the contrary. These data requests are an exhibit in the Los Esteros Project 03-AFC-2 and the committee may take official notice of this data if they wish as this is exhibit #3 an official exhibit in the proceeding.

Emissions Data

3. Please provide emissions data and an analysis that substantiates the need for a 20% increased PM_{10} emissions limit for the facility.

Response:

1). All turbines were operated under identical conditions on the same pipeline natural gas, and the individual test results varied from a low of 1.45 lb/hr to a high of 3.47 lb/hr. The mean value for these twelve tests was 2.50 lbs/hr; the standard deviation was 0.65 lbs/hr.

Table DR3-1
Summary of Compliance Test Results Los Esteros Critical Energy Facility, March 2003

	PM_{10}, lb/hr				
	Run 1	**Run 2**	**Run 3**	**Average**	**Limit**
Unit 1	3.47	2.46	1.45	2.46	2.5
Unit 2	1.92	3.22	2.75	2.63	2.5
Unit 3	2.96	1.80	2.74	2.50	2.5
Unit 4	2.91	1.46	2.88	2.42	2.5

http://www.energy.ca.gov/sitingcases/losesteros2/documents/applicants_files/2004-05_11_DR_1-57_RESPONSE.PDF

(Los Esteros Critical Energy Facility 03-AFC-02 Exhibit 3 page 2)

Staff also states on page 4 or their brief that I favor reducing the community benefits program of $1,000,000 for tree planting and indoor air quality. To the contrary the community benefits program should receive the full $13,000,000 that the State has given CCSF to site the SFERP. The community groups have every right to demand that money be used in the community for projects that they favor. I only implied that the $800,000 I propose in Exhibit 93 is reasonable in light of the $1,000,000 for the benefits program and the committee could recommend the applicant shift some of that money form the community benefits program. I don't believe that the committee should do that I believe the applicant should supply an additional $800,000 for PM 2.5 mitigation since it is the identified significant impact by all parties.

Biology Ammonia Emissions

Staff on page 5 of their brief states that "Sarvey contends that ERC's are not mitigation for the cumulative nitrogen deposition impacts on the soil on San Bruno Mountain." Twenty three percent of nitrogen deposition on San Bruno Mountain occurs form the projects NOx emissions. Both applicant and staff claim that the 45 tons of NOx ERC's surrendered for the projects NOx emissions

mitigate the significant nitrogen deposition impact. BAAQMD witness Mr. Bateman testified that the NOx ERC's surrendered by the applicant are not mitigation for nitrogen deposition.

5 Q In your response to my comment number
6 five on the PDOC you state that the District's
7 offset requirements are not intended to mitigate
8 local impacts such as NO2 and nitrogen deposition
9 impacts, is that correct?
10 MR. BATEMAN: Correct. RT 5-24-06 p. 312

Staff in their brief tries to refute the air districts direct testimony by stating hat "offsets and new source review have been very successful in reducing nitrogen levels in the Bay Area." If you examine the Air Resources Board projection of NOx emissions from 2005 to 2020 (http://www.arb.ca.gov/app/emsinv/fcemssumcat_query.php) you see that 99% of all the NOx emissions reductions in the BAAQMD are generated by Mobile Sources Reductions. The New source Review program is contributing very little to the reduction of NOx in San Francisco County.

Staff states that no testimony supports the assertion that ammonia slip contributes significantly to nitrogen deposition. Staff claims that the testimony is contrary to that assertion as discussed in staff's Opening Brief regarding Air Quality. An examination of Staff's opening brief reveals that nitrogen deposition from ammonia emissions is never discussed. (Staff's Opening Brief pages 2-16) Staff's opening brief only discuses the secondary formation of PM 2.5 from the projects ammonia emissions and states that because of the aeroderivative turbines used in the project staff considers the 10ppm ammonia slip level acceptable. Staff should have provided mitigation for the secondary formation of PM 2.5 from the ammonia slip from the SFERP. Mounting bodies of scientific

studies have shown that the smaller size of particulate matter (PM2.5), such as that formed during the chemical reaction of ammonia with either NOx or SOx compounds in the flue gas and the downwind ambient air can be significantly damaging to both humans and animals. These studies have found that PM10 is associated with an increase in respiratory-related disease, but that the fine (PM2.5) and ultra-fine (PM0.1) fractions of PM10 likely cause the most significant adverse effects.

Studies have shown that the smaller particle fraction of PM10 can be 10 to 50 times as potent as the larger fraction in inducing tissue damage, such as inflammation.

According to studies conducted by health researchers, ambient particulate matter has been linked to not only acute and chronic respiratory diseases, but also to circulatory system problems.

The overwhelming evidence of the serious health impacts caused by exposure to excessive levels of smaller size PM is why both the California Air Resources Board (ARB) and the U. S. Environmental Protection Agency (U.S. EPA) have recently promulgated new health standards for the smaller PM2.5. In fact, the ARB has found that the health effects from both PM10 and PM2.5 are so severe that it adopted ambient standards lower than those established by the U.S. EPA.

PM emissions from power plant facilities similar to SFERP are generated directly from PM formation during fuel combustion and as secondary PM formed from unreacted ammonia combining with NOx and SOx compounds. The

unreacted ammonia and the NO x and SOx compounds formed during combustion create secondary PM emissions of ammonium nitrate and ammonium sulfate in the exhaust gases following the SCR.

Secondary PM emissions are also formed downwind in the atmosphere where the unreacted ammonia reacts with ambient NOx and SOx compounds produced from other combustion sources such as mobile and stationary sources located in the air basin. The down wind chemical reaction is "very reactive" due to the ammonia's "potential to combine with [NOx and SOx] reactants and will ultimately form particulate matter."

Moreover, the U.S. EPA, ARB, South Coast Air Quality Management District and San Luis Obispo Air District believe that the scientific evidence shows that ammonia slip from a project like SFERP does contribute to secondary PM formation. The secondary pm emissions formed by the SFERP ammonia slip are cumulatively considerable under CEQA due to the potential significant contributions of PM emissions to an air basin that is non-attainment for the state PM-10 and PM 2.5 standards. The Commission, as lead agency for the SFERP, has the legal responsibility under CEQA to determine if there will be a significant effect on the environment due to secondary PM emissions from the ammonia slip. (*CEQA Guidelines, Cal. Code Regs., tit. 14, § 15253(b) and Pub. Res. Code §§ 21080 and 25523*)

Under CEQA Guidelines, a significant effect on the environment is generally defined as a substantial or potentially substantial adverse change in the physical environment. (*CEQA Guidelines, Cal. Code Regs., tit. 14, § 15382*) With respect

to impacts on air quality from PM, environment means the existing air quality levels for PM within the surrounding area that could be adversely affected by the addition of secondary PM emissions from the SFERP (*Ibid.*) *In Kings* County Farm Bureau v. City of Hanford, (221 Cal.App.3d 687, 718), the court stated that the "significance of an activity depends upon the setting," and the "relevant question to be addressed" in the environmental study is "whether any additional amount of precursor emission should be considered significant **in light of the serious nature" of the associated air quality problem locally and in the air basin.**

Thus, when evaluating the potential significant effects of the secondary PM emissions from the ammonia slip, it is necessary to determine if any additional amount of PM emissions will be significant in light of the serious nature of the existing PM10 and PM2.5 problem in BAAQMD's air basin. (*CEQA Guidelines, Cal. Code Regs., tit. 14, § 15064(b); Kings County Farm Bureau, 221 Cal.App.3d 687, 718*) Under state law, the secondary PM emission must not prevent or interfere with the attainment or maintenance of the State's PM10 and PM2.5 Air Quality Standard. (*Health and Saf. Code § 42301(a))*

Determining whether SFERP's secondary PM emissions formed by the ammonia slip may contribute to a potential significant cumulative impact on the environment calls for careful judgment by the Energy Commission. (*CEQA Guidelines, Cal. Code Regs., tit. 14, § 15864 (b)*) To the extent feasible, CEQA requires the determination to be based on scientific and factual data. (*Ibid.*) The applicant and the staff and the BAAQMD have supplied no scientific or factual

data to support their argument that the 37 tons of ammonia from the ammonia slip will not cause a significant impact. To be meaningful, that data should be the best and most recent data available. BAAQMD's air basin is non-attainment for the state's 24-hour PM 10 and annual PM2.5 air quality standards.

The non-attainment status of the region for both the state PM10 and state PM2.5 Standards is an important factor in the overall substantial evidence in assessing the significance of the potential adverse impact of ammonia emissions on the existing ambient air quality. (*Kings County Farm Bureau, 221 Cal.App.3d 687, 718; CEQA Guidelines, Cal. Code Regs., tit. 14, § 15384*)

The exact amount of secondary PM formation due to ammonia slip is difficult to determine because of the complex chemistry within the exhaust plume and during downwind mixing.

However, the potential magnitude of secondary PM formation can be estimated by using the BAAQMD's figure of 37 tons per year of ammonia emissions calculated for the 10 ppm ammonia slip with the assumption that this ammonia will be available in the ambient air for potential chemical reaction with NOx and SOx compounds. The magnitude of this potential 37 tons per year of ammonia emissions could result in a potentially significant impact that is cumulatively considerable because of the potential for a contribution of PM emissions into an air basin that is non-attainment for the state's PM10 and PM2.5 Standards. This analysis is consistent with *Kings County Farm Bureau*, (221 Cal.App.3d 687 at 718) in which the court stated that the environmental analysis must consider the environmental significance of adding precursor emissions to

the ambient air that was non-attainment for the primary pollutant. (*CEQA Guidelines, Cal. Code Regs., tit. 14, §§ 15355, 15065, 15091, 15382, and 15384*) This potentially significant increase could contribute to the ongoing violations of the state's PM10 and PM2.5 Standards and prevent or interfere with attainment of these standards. (*Health and Saf. Code § 42301(a), and FSA 4.1-26*) Prior to approval, the Commission is required under its regulations to avoid or substantially lessen any significant adverse impact from secondary PM emission through mitigation measures if feasible. (*Cal. Code Regs., tit. 20, § 1755(c) and CEQA Guidelines, Cal. Code Regs., tit. 14, §§ 15091 and 15092*) Feasible options for mitigating include the use of emission offsets Under Commission regulations, CCSF has the "burden of proof and of producing evidence" to show their proposed emission levels will not cause new violations or contribute to the existing violation of any standards. *(Cal. Code Regs., tit. 20, § 1723.5 (a))* In this case there are existing violations of both state PM10 and PM2.5 standards in the region.

The Commission's responsibility is clear. It must recognize the significant cumulative effect of the project's ammonia slip and require the feasible mitigation measures.

The record demonstrates that Ammonia emissions are responsible for 73% of the nitrogen deposition on San Bruno Mountain. (Exhibit 25 page 9) The applicant's and the Staff's testimony is that nitrogen deposition is a significant impact. (Exhibit 46 p. 4.21) (RT 5-31-06 p. 124

Existing nitrogen deposition rates at San Bruno Mountain are estimated to be 6.169 kilograms/hectare/year (kg/ha/yr). The San Francisco Electric Reliability Project would contribute an additional 0.0059 kg/ha/year to this background level, resulting in a net nitrogen deposition of 6.175 kg/ha/year, or a 0.0009 percent increase. The background deposition rate is already above the level that is likely to be affecting listed species and their habitat on San Bruno Mountain.
(Exhibit 46 p. 4.2-1)

The Staff on page 5 of their brief tries to imply that the closure of the Potrero Power Plant is the principal purpose of the SFERP and that closure somehow mitigates the nitrogen deposition from the ammonia emissions from the SFERP. The closure of the Potrero Unit 3 has nothing to do with the SFERP's contribution to nitrogen deposition on San Bruno Mountain. Even with the closure of both the Hunters Point Power Plant and the Potrero 3 unit nitrogen deposition on San Bruno Mountain will be significant. The SFERP's contribution will continue to be significant even if both plants do close. The staff's reasoning is faulty. The fact is the SFERP has nothing to do with the closure of the Hunters Point Power Plant since the plant is already closed. The closure of the Potrero unit is not guaranteed by the siting of the SFERP as all parties including Mr. Tobias from ISO have testified, "It is important to note that only the power plant owner (Mirant) can decide to retire their generating units." (Exhibit 50 page 3) The latest statement form Mirant at the regional water board meeting to review their water permit is that they have no intentions of closing the Potrero unit 3. (RT 5-31-06 page 197) Even though the closure of the Potrero 3 unit is uncertain the staff and applicant want to credit the nitrogen reductions from the closure of the Potrero 3 unit to the SFERP. This argument fails the test of reason and also the requirements of CEQA. If the reductions in emission from the

Potrero 3 unit were allowed to offset emissions from the SFERP there would be no reason to require any emission reductions form the siting of the SFERP If that were the case the BAAQMD and the CEC would not be requiring any ERC's for the SFERP or any other power plant because all of its emissions would be offset by the closure of some other facility anywhere in the BAAQMD which is ridiculous. . Secondly the closure of both the Hunters Point Power plant and the Poterero Power plant are going to require that generation somewhere else will be required which may impact San Bruno Mountain or some other serpentine habitat more than the two existing facilities. A prime example is the turbine that must be sited at the airport to allow the action plan to **possibly** close the Potrero 3 unit. Those nitrogen and ammonia emissions are closer to the mountain and may impact it more than existing generation. The generation at Potrero and Hunters Point must be replaced by some other generation somewhere and the nitrogen impacts from that generation may possibly inflict greater damage to the environment than the existing Potreo unit or the now non operational Hunters Point unit. Staff's argument is ludicrous and points out that staff's analysis of the SFERP's purported closure of the Potrero 3 unit has been performed in a vacuum. It will take the turbine at the airport and the other transmission upgrades to replace the generation provided by the Potrero 3 and the Hunters Point Unit but staff does not analyze the impacts of the turbine at the airport or the other components of the action plan that are necessary to close the Potero 3 unit and Hunters Point. This fact is also fatal to staff's alternatives analysis.

Public Health

Staff's brief on page 5 says that both staff and applicant did a cumulative public health assessment. The applicant has admitted repeatedly that the community is already overburdened by pollution form industrial facilities. Both the staff's and applicant's analyses fail to provide a background to take into account that the community is already suffering from toxics. Staff's modeling of dry cleaners and other toxic sources is a meaningless exercise without a baseline to compare how the modeled concentrations affect human health. With the existing risk analysis models it is difficult if not impossible to establish a background risk. What is unusual about this case is we know because the applicant admits the background toxic levels already exceed levels that are harmful to human health. The cornerstone of environmental justice is the cumulative impact assessment and the application the precautionary principal. A cumulative impact assessment without a background is essentially a facility by facility impact which does not provide a true level of toxics but only a report on where individual facilities overlap. The City of San Francisco has a precautionary principal ordinance. On the San Francisco Department of the Environment website it describes the precautionary principal as follows:

"The Precautionary Principle is an alternative to the "Risk Assessment" model, which says it's OK to use a potentially harmful product until physical evidence of its harmful effects are established and deemed too costly from an environmental or public health perspective. For instance, a risk assessment approach might say it's OK to use a pesticide like DDT until we discover direct proof that it's bad for the environment. Our precautionary approach asks whether a given product or practice is safe, whether it is really necessary, and whether products or practices with less environmental impact would perform just as well."

Both applicant and staff's risk analysis by not taking into consideration that the Community is already overburdened by toxic industrial facilities and that all electrical generation in San Francisco has been and will be in the Southeast Community ignore the basic precepts of the precautionary principal. We already know and the applicant admits there is a pollution problem in the Southeast San Francisco Community so the precautionary principal would require an alternative to siting more pollution and toxics in this neighborhood to serve environmental justice. The San Francisco precautionary principal ordinance states:

Historically, environmentally harmful activities have only been stopped after they have manifested extreme environmental degradation or exposed people to harm. In the case of DDT, lead, and asbestos, for instance, regulatory action took place only after disaster had struck. The delay between first knowledge of harm and appropriate action to deal with it can be measured in human lives cut short."

We already know that the mortality and respiratory illness rates in Southeast San Francisco are higher than the rest of the city. The applicant freely admits that this is true. The toll of environmental pollution has already been felt in the community and the precautionary approach would not allow additional pollution in the community. There are alternative sites that are available in the city but have been rejected because of the financial costs are too high for the DWR to accept. Te human costs of siting the SFERP in Southeast San Francisco are not considered in this financial analysis. The precautionary principal requires that the human cost be weighed. The cost analysis for the SFERP does not do that.

The SFERP should be sited somewhere else in San Francisco to distribute the environmental burden equitably as required by the Electric Resource Plan, (Exhibit 96 page 17) With the siting of the SFERP at another location hopefully the action plan could possibly provide for the closure of the Potrero units. If this speculative scenario were to occur with the project at another location it could actually enhance the lives of the people in Southeast San Francisco and not merely replace one pollution source the SFERP unit with another pollution source the Potrero 3. If this occurred environmental justice would truly be served.

Environmental Justice

Staff on page 6 opines "there are extensive excerpts from comments on other environmental documents by a City witness related to environmental justice concerns. It is not clear whether such argument is intended to impeach the credibility of the witness. " The excerpts from the southern Waterfront SEIR demonstrate the city's environmental Justice Witness Ann Eng agrees with the assessment of the unrefuted testimony of Environmental Justice Expert Francisco Da Costa that the city continues to site industrial facilities in the Southeast Community in violation of Title VI of the Civil Rights Act. (Exhibit 75)

Official Notice

Finally on page 9 of staff's brief staff tries to entice the Committee to take official notice of a document that was not introduced in the evidentiary hearing and has not been the subject of evidentiary scrutiny. After complaining about

the Southern Waterfront SEIR not being served in a hard copy and there supposed lack of knowledge of the document they now want the committee to take official notice of a document that no one until July 10 has ever seen. Obviously staff's claim that they had no knowledge of the Southern Waterfront SEIR is a baseless shameful claim in light of the record. The record demonstrates that staff's analysis is replete with references to the Waterfront SEIR.

1) Land Use Section- Cumulative Impacts and Mitigations Exhibit 46 p. 4.5-2)
2) Noise Section -Cumulative impacts and mitigation Exhibit 46 p. 4.5-7-8
3) Traffic and transportation Section – Cumulative impacts and mitigation Exhibit 46 p. 4.10-13
4) Socioeconomics Section - Section Exhibit 46 page 4.8-9
5) Visual Section- Cumulative Impacts and Mitigation page 4.12-13
6) Cultural Resources Section -Cumulative impacts and mitigation 4.3-29

Regardless the document that staff wants the Committee to take official notice of changes none of the conclusions reached in the Southern Waterfront SEIR. The Waterfront SEIR's PM-10 impact of 1.6 ug/m3 at sensitive receptor locations was computed with mitigation measures. (Exhibit 92B page 94) The same mitigation measures that are in staff's Attachment A are contained in the Southern Waterfront SEIR. (Exhibit 92B page 146-149) The projects diesel particulate concentrations and health risks at sensitive receptor locations remain unchanged by any dust mitigation measures and are still at 9.0 in a million. (Exhibit 92B page 95 table 18) It's important to note that the Waterfront SEIR diesel particulate health risk estimates are not the maximum impacts but are the maximum impacts at sensitive receptor location which include schools and playgrounds and residential areas. (Exhibit 92B page 92 figure 7) The applicant

and staff would like the committee to believe that these are the maximum project impacts and that they are located in industrial areas they are not.

The Southern Waterfront SEIR concludes that even with mitigation measures "the project would result in a significant regional impact on air quality and the cumulative concentrations of PM-10 and diesel particulate experienced locally, while unknown because of the wide array of sources could exceed significance thresholds. (Exhibit 92B page 97) The Southern Waterfront SEIR concludes that it cannot characterize the multitude of sources that will occur in the community and therefore deems the emissions form the SEIR projects cumulatively significant. (Exhibit 92B page 98) The staff's attachment is irrelevant to the impacts determined in the Waterfront SEIR. Staff's attachment A is an attempt to provide new evidence that has not been subject to evidentiary scrutiny and was added in a late filed reply brief and should be stricken.

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Subject: SFERP Reply brief 04-AFC-01

Attached is the Reply brief to staffs late filed reply brief 04-AFC-01 the
San Francscio Electrical reliability Project

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