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STATE OF CALIFORNIA

Energy Resources Conservation and Development Commission

In the Matter of:)
)
Application for Certification) Docket No. 04-AFC-01
For the San Francisco)
Electric Reliability Project)

OPENING BRIEF THE CITY AND COUNTY OF SAN FRANCISCO

June 26, 2006

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I. Introduction.

The City and County of San Francisco (the City or CCSF) proposes to construct the San Francisco Electric Reliability Project (SFERP), a nominal 145-megawatt (MW) simple-cycle plant, using three natural gas-fired, General Electric LM 6000 gas turbines and associated infrastructure. Exh. 15 at 1-1. The SFERP is proposed to be located on a 4-acre site of City-owned land near the San Francisco Bay in the Potrero neighborhood of San Francisco. Id.

The City is pursuing the SFERP to eliminate the need for existing, unreliable and highly-polluting in-City generation while maintaining the reliability of the electric system. Id. For the past ten years, the City has worked with its citizens, particularly members of the southeast San Francisco community, to modernize its energy system. These efforts included opposing new generation by private entities who had no plans or commitments to provide for the closure of in-City power plants, such as the AES and the Potrero Unit 7 proposals. The City and members of the southeast San Francisco community have also focused on closing down the Hunters Point and Potrero Power Plants. Both of these power plants are over forty years old, relatively unreliable and polluting, and located in southeast San Francisco, a part of San Francisco that has been disproportionately impacted by industrial facilities, including electric power generation. At the same time, the City has focused on aggressive development of renewable resources and implementation of energy efficiency.

As part of these efforts, during the past three years, the City has worked with members of the southeast San Francisco community and the California Independent System Operator (CAISO) to identify the steps necessary to eliminate the reliability need for the Hunters Point and Potrero Power Plants, and hence provide for their release from

applicable Reliability Must Run (RMR) agreements between their owners and the CAISO. Exh. 15 at 3-6. These efforts culminated in a Revised San Francisco Action Plan approved by the CAISO Board of Governors in November 2004, which identified the generation and transmission system improvements needed to terminate the RMR agreements for the Hunters Point and Potrero Power Plants.

The last of the upgrades needed to release the Hunters Point Power Plant from its RMR agreement - the Jefferson-Martin 230 kV transmission line and the AP-1 cable - were placed in operation recently, and within the last month the Hunters Point Power Plant has ceased operating. The SFERP, along with an additional generating unit proposed by the City at the San Francisco International Airport and a number of transmission system improvements expected to be in service by the time the SFERP commences operation, will provide for termination of the RMR agreement for the Potrero Power Plant. The City is committed to ensuring that, once the SFERP is in place, the Potrero Power Plant will also close down.

The City is pursuing the SFERP to further environmental justice. Nonetheless, the City has recognized from the start that siting the SFERP in southeast San Francisco in itself, presents an environmental justice concern that must be addressed. Thus, the City designed the project to minimize its impacts and has additionally proposed a PM_{10} mitigation and community benefits package to ensure that the project results in a net benefit to public health.

The record in this case demonstrates that construction of the SFERP will meet all applicable LORS. Moreover, with the conditions of certification that the City has accepted, including compliance with existing regulatory programs and environmental

laws, the SFERP will have no significant impacts. This is true even without considering the substantial additional environmental benefits that will accrue from the closure of the Potrero Power Plant. The City accepted the bulk of the conditions of certification proposed by California Energy Commission (Commission or CEC) Staff during the Preliminary Staff Assessment (PSA) and Final Staff Assessment (FSA) comment and workshop process. On the one issue that remained outstanding at the commencement of evidentiary hearings - the treatment of contamination on the site- the City ultimately proposed conditions of certification that incorporated Staff's substantive requirements. Staff testified that the City's proposed conditions are acceptable.

Although, as the Commission knows, siting fossil-fueled generation in the City is inherently controversial, only two intervenors remain active in this case - one of them a single individual who does not work or live in the City. While these intervenors have attempted to create the impression that there are significant issues outstanding in the case, the record clearly demonstrates otherwise. All qualified expert witnesses agree that, with the proposed conditions of certification, the Project will meet all applicable LORS and will not result any in unmitigated significant impacts to the environment or public health. Accordingly, the City's application for certification should be granted forthwith.

This brief discusses key areas that have typically been of concern to the southeast San Francisco community in the context of new power plant development: purpose; need and alternatives; environmental justice; air quality; public health; the treatment of contamination on site; hazardous materials; and worker health and safety. The City reserves the right to address any additional topics raised in the briefs of other parties in its reply brief.

II. The Project is Needed to Facilitate the Closure of the Potrero Power Plant And There is No Alternative that Will Meaningfully Reduce the Impacts of the SFERP While Obtaining this Key City Objective.

With the passage of Senate Bill 110 (Stats. 1999 ch. 581), since January 1, 2000, the Commission is no longer required to make a finding of need conformance in the context of licensing a proposed power plant. Nonetheless, under CEQA, the project description must include a statement of the objectives sought by the proposed project that "will help the lead agency develop a reasonable range of alternatives to evaluate in the EIR and will aid the decision makers in preparing findings or a statement of overriding considerations." §15124 (b).

The City's objectives are simple: "The SFERP is being pursued by the City to reduce the need for existing unreliable and highly-polluting in-City generation while maintaining the reliability of the electric system. The City is committed to minimizing impacts on the community in southeast San Francisco where the SFERP will be located." Exh. 15 at 1-1. Substantial evidence in the record demonstrates that there is no alternative that will meaningfully reduce the impacts of the SFERP while still accomplishing the City's core objectives in pursuing the project. *Sierra Club v. County of Napa* (2004) 121 Cal. App 4th 1490 (holding that an EIR need not analyze the effects of an alternative that could not feasibly obtain most of the basic objectives of the project).

A. GENERATION WITHIN THE CITY IS NEEDED TO FACILITATE THE CLOSURE OF POTRERO POWER PLANT.

As Ms. Kubick explained on the stand, for the past several years, the City has been working energetically with community activists to obtain clarity from the CAISO about how to close down old, polluting in-City generation, in particular the Hunters Point and Potrero Power Plants. 5/31/06 RT (Kubick) at 220: 10-17; 5/1/06 RT (Tobias) at 22-

23; Exh. 15 at 3-6. These efforts culminated on November 5, 2004, with the adoption of a revised action plan for San Francisco by the CAISO Board of Governors. Exh. 15 at 3-6. The action plan provides that with nine specific transmission system improvements (including the Jefferson-Martin 230-kV transmission line) the Hunter Point Power Plant could be released from its reliability must run (RMR) agreement. Id. The action plan provides that with the further addition of the SFERP and a fourth combustion turbine at the San Francisco International Airport (SFIA), Potrero Unit 3 could be released from its RMR agreement. Finally, the action plan provides that with an additional four specific transmission projects, Potrero Units 4, 5 and 6 could be released from their RMR agreement. Id.

With the completion of the Jefferson-Martin line and the eight other transmission system improvements listed in the SF action plan, the RMR agreement for the Hunters Point Power Plant has been terminated and the plant has ceased to operate. See 5/31/06 RT. (Eng) at 144; 5/1/06 RT (Tobias) at 22-23. As Mr. Flynn explained, because the in-service date for the City generation projects has been delayed, it is now expected that all the transmission projects needed to terminate the RMR agreement for Potrero Power Plant, including units 3, 4, 5 and 6, will be in place when the SFERP commences operation. 4/27/06 RT (Flynn) at 30: 14-24. Thus, after the SFERP and a combustion turbine at the airport commence operation, the CAISO will no longer renew the RMR agreement for the Potrero Power Plant. Exh. 15 at 3.6-7.

CAISO witness Mr. Tobias confirmed on the stand that in order for the RMR agreement for the Potrero Power Plant to be terminated, 100 MWs of generation is needed north of the Martin substation. 5/1/06 RT (Tobias) at 47:1-4. Mr. Tobias

explained that this requirement would be met by the SFERP's three generating units within the City and the one generating unit at the SFIA. Id. at 24:12-25. Three generating units are needed within the City in order to maintain approximately 100 MW while meeting the CAISO's one generator out and one transmission line out criteria. Mr. Tobias testified clearly that generation is needed within the City even after the next major planned transmission project, the Transbay Cable, is in place. 5/1/06 RT (Tobias) at 26: 1-5. The only other transmission planning expert to testify on the matter, Mr. Flynn, explained that the 115 kV system in the City was designed by PG&E to be minimize needed investment by relying on existing generation at Potrero and Hunters Point and that therefore the CAISO's position requiring in-City generation is justified. 5/31/06 RT (Flynn) at 232-3.

Mr. Tobias' testimony support's the City's representation that the SFERP is needed in order to eliminate the local reliability need, and hence, the RMR agreement for the Potrero Power Plant. Thus, the objective of facilitating the closure of the Potrero Power Plant cannot be achieved by a no project alternative, by any proposed transmission alternative, or by an alternative that has less than three 50 MW units somewhere other than on the 115 kV within-City system.

B. THERE ARE NO ALTERNATIVES THAT WOULD MEANINGFULLY REDUCE THE IMPACTS OF THE SFERP WHILE STILL ACHIEVING THE CITY'S OBJECTIVES.

The record demonstrates that there are no alternatives that would meaningfully reduce the impacts of the SFERP while still achieving the City's key objectives. As Ms. Kubick indicated, the record demonstrates that the SFERP will not have any significant impacts that are not effectively mitigated by measures that the City has indicated it will accept. 5/31/06 RT (Kubick) at 219: 16-18. CEQA requires analysis of alternatives only

when those alternatives substantially reduce or avoid significant environmental impacts. 14 Cal. Code Regs. §15126.6(b). CEQA only requires analysis of alternatives that reduce or avoid significant impacts. CEQA Guidelines §15126.6(b); see also *Concerned Citizens of South Central Los Angeles et. al. v. Los Angeles Unified School District* (1994) 24 Cal.App. 4th 826 ("CEQA does not require analyses of every imaginable alternative or mitigation measure, its concern is with feasible means of reducing environmental effects"). Nonetheless, given its objective to minimize impacts on local communities, the City reviewed alternatives that would reduce insignificant impacts even further. No feasible alternatives to the project were identified, either by the City, or by CEC Staff, or by any intervenor.

The range of alternatives required in an EIR is governed by a "'rule of reason' that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice. 14 Cal. Code Regs. § 15126.6 (f). Of those alternatives, "the EIR need examine in detail only the ones that the lead agency determines could feasibly attain most of the basic objectives of the project." Id. "Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries (projects with a regionally significant impact should consider the regional context), and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site." 14 Cal. Code Regs. § 15126.6 (f)(1); *see also San Francisco Bay Association v. San Francisco Bay Conservation and Development Commission* (1992) 10 Cal.App.4th 908, 922, and *Sierra Club, supra,*121 Cal.App.4th at 1509.

As described above, the CAISO has made it clear for several years now, including the recent testimony in the evidentiary hearings, that in-City generation is needed for the RMR agreement for the Potrero Power Plant to be terminated. With this understanding, the City reviewed potential locations for generation within the City focusing on industrially zoned areas and near necessary infrastructure (i.e. 115 kV electric substations and natural gas lines). Exh. 15 at 9-3; 5/31/06 RT (Kubick) at 221:7-22. There are four 115-kV substations within the City: Larkin, Mission; Potrero; and Hunters Point. Exh. 15 at 9-3. The City systematically reviewed options for siting the SFERP in the vicinity of each of these substations.

Larkin Substation was eliminated from consideration because there is no industrially zoned land in the vicinity. Exh. 15 at 9-3. Mission Substation was eliminated because there was insufficient land to site multiple units at the limited adjacent industrially-zoned land. Exh. 15 at 9-3. The one potentially appropriate parcel that was available in the vicinity of the Mission-substation was a parcel generally known as the 5th and Jessie Street Parcel, which could accommodate one unit. However, the 5th and Jessie Street Parcel was eliminated from consideration on the grounds that:

- the capital costs of the 5th and Jessie Street Parcel was $40-50 million dollars more expensive than the airport site, and the City had been given informal indications by DWR that it would resist paying those additional costs under the DWR PPA.

- The City faced a site control deadline and there were no prospects for any kind of an agreement with NRG within that time frame. In fact, in the most recent meeting between NRG and the City, NRG had indicated that some of the City's assumptions about operations would not be workable given NRGs operational needs, resulting in additional costs at the site.

- The City's air quality consultant had raised concerns about the potential air quality impacts if the Project is located at the 5th and Jessie Street Parcel given the configuration of buildings surrounding that site.

Exh. 12 response 9.

The Hunters Point substation was eliminated from consideration because of environmental justice concerns. Given the longstanding impacts of the Hunters Point Power Plant on the local communities and continued community concerns about the impacts from the Southeast Water Pollution Control Plant, City policy makers were determined to avoid siting any new City-sponsored generation in the Hunters Point area. Exh. 15 at 9-3.

By this process of elimination, the City was left with properties in the vicinity of the Potrero Substation. The City identified five possible plots for siting of the SFERP near the Potrero Substation; however, none of these sites results in meaningfully lower impacts than the proposed site. The City acknowledges that environmental justice considerations exist with regards to the communities in the neighborhood of the Potrero Substation. Thus, as is explained in the section on environmental justice, the City has sought to address these concerns through project configuration, design, and a PM_{10} mitigation/community benefits package. Exh. 15 at 9-4.

Staff's exhaustive alternatives analysis corroborates the City's conclusions that there are no feasible alternatives that would meaningfully reduce the SFERP's already insignificant impacts. See Exh. 46, Section 6: Alternatives.

C. INTERVENORS HAVE NOT SHOWN THAT THERE ARE FEASIBLE ALTERNATIVES TO THE SFERP THAT FURTHER REDUCE THE PROJECT'S ALREADY INSIGNIFICANT IMPACTS.

Intervenors have leveled a series of challenges to the City's need and alternative conclusions. These include: 1) a critique to the effect that the City cannot guarantee the closure of the Potrero Power Plant; 2) a suggestion that in-City generation is not needed

to meet reliability; and 3) a suggestion that the City's application should be denied until the possibility of siting four combustion turbines at the SFIA is studied. None of these challenges provides the basis for disapproval of the Project by the Commission.

1. The City is Taking Aggressive Action to Ensure that the Potrero Power Plant Shuts Down When the SFERP is Placed in Operation.

The City has admitted that it does not at this time have an agreement with Mirant for the closure of the Potrero Power Plant. However, this fact does not provide a basis for a denial of the City's application for certification. California law no longer makes the Commission responsible for demand conformance or related need determinations. The City's interest in facilitating the closure of aging generation through the elimination of the RMR agreement for the Potrero Power Plant is important in this CEC licensing process from a CEQA standpoint only; alternatives that do not assure local area reliability in the absence of the Potrero Power Plant, and hence, provide for the elimination of the Potrero Power Plant RMR agreement, do not achieve a key City objective and cannot be considered feasible under CEQA.

Elimination of the RMR agreement for the Potrero Power Plant is an important step in securing the closure of the Potrero Power Plant. First and foremost, it means that the plant is no longer needed for local area reliability. Further, it eliminates an important source of revenue for Mirant from continued operation of the plant. Exh. 15 at 3-5. Moreover, the City is pursuing additional steps to ensure that once the RMR agreement is eliminated, the Potrero Power Plant will indeed close down. The City remains in discussions with Mirant to seek an agreement for closure of the plant and continues to insist on aggressive enforcement of applicable environmental restrictions. 5/31/06 RT (Kubick) at 222: 9-21. Recently, the City, working with the community, obtained an

important victory when it persuaded the San Francisco Regional Water Quality Control Board (SFRWQCB) to limit the extension of the National Pollution Discharge Elimination System Permit for Potrero 3 to two and a half years. 5/31/06 RT (Eng) at 148: 13-25; id. (Kubick) at 222:13-18. After the two and a half years are over, Mirant will only be able to persist in the use of once through cooling if it can show that there will be no adverse impacts to the Bay. Id.

Intervenors question whether any witness knows of an intention on the part of Mirant to close down the Potrero Power Plant upon the elimination of the RMR agreement. However, Mirant's intentions are irrelevant because the City and its allies are not waiting for Mirant to decide. Instead, they are aggressively pursuing any available options to ensure that, upon elimination of the RMR agreement, closure is Mirant's best, and possibly only, economic option.

2. The CAISO Testified Clearly that the SFERP is Needed to Maintain Local Area Reliability in the Absence of the Potrero Power Plant.

CARE submitted testimony by Mr. Homec which claimed that generation in the City will not be necessary after the Jefferson-Martin 230 kV Transmission Project is complete. Exh. 97. Mr. Homec admitted that he has no training or expertise in transmission planning: "I'm not an expert in transmission line planning." 5/31/06 RT (Homec) at 259-60. Mr. Homec's testimony thus relies solely on testimony by a Pacific Gas and Electric Company (PG&E) witness, Mr. Yeung, in the Jefferson-Martin transmission line case. Exh. 97.

Mr. Homec characterizes Mr. Yeung's testimony to state "that generation in the City and County of San Francisco will not be necessary after the Jefferson-Martin 230 kV Transmission Project is complete." Exh. 97 at 1. However, the Yeung testimony

that Mr. Homec relies upon is not clear as to whether, in stating that reliability could be met with the Jefferson-Martin transmission line alone, Mr. Yeung assumed the Potrero Power Plant was in service. See Exh. 59 at 467-471. Mr. Homec cites to pages 468-469 of the transcript. On pages 471-72, however, there is a discussion of the fate of Hunters Point Power Plant in the event that the Jefferson-Martin transmission is not built. Exh. 59 at 471-472. Mr. Yeung testified that if the Jefferson-Martin line were not built, the CAISO might not allow PG&E to close down Hunters Point Power Plant. Exh. 59 at 471. There is no discussion of closing down Potrero Power Plant, however, which suggests that Mr. Yeung was assuming the Potrero Power Plant would still be operating. In any event, the transcript makes it clear that Mr. Yeung's testimony, such as it is, relates to the year 2006, Exh. 59 at 469: 1-5, whereas the SFERP is now projected to be in service in 2008. 4/27/06 RT (Flynn) at 30:1-4.

Even more importantly, it is not PG&E that will determine whether, when, or under what circumstances the RMR agreement for the Potrero Power Plant will be terminated. The RMR agreement for the Potrero Power Plant is between the CAISO and Mirant, not between PG&E and Mirant. In case there is any dispute as to this fact, the Commission can take administrative notice of the CAISO Tariff, which is approved by the Federal Energy Regulatory Commission. Evidence Code §45 (c)(h). Section 30.6A of the Conformed Simplified and Reorganized CAISO Tariff explains that the RMR agreement is a yearly agreement between the CAISO and a generator that operates a generating unit needed to meet local reliability. That section also explains that on a yearly basis, the CAISO must determine which RMR agreements must be continued for another year and which can be terminated. The testimony of the CAISO witness, Mr.

Tobias, regarding the need for the SFERP in order to terminate the RMR agreement for the Potrero Power Plant was, as described above, absolutely clear. Accordingly, the testimony of Mr. Yeung in the Jefferson-Martin line case is immaterial.

3. The CAISO Testified Clearly that the SFERP Must Be Located North of Martin Substation.

Mr. Homec also testified that it is necessary to study whether the SFERP built at SFIA. This testimony is similarly unconvincing. First, it is flatly contrary to the testimony of CAISO witness, Larry Tobias, who testified that the SFERP must be located within San Francisco. See 5/1/06 RT (Tobias) at 24-25. Further, it is apparent from Mr. Homec's testimony that he assumed that there was a very limited discussion between the City and the CAISO regarding the need for the SFERP. 5/31/06 RT (Homec) at 261-62. Mr. Homec's opinion was apparently based on an unreasonably narrow reading of the City's answer to one of CARE's interrogatories. 5/31/06 RT (Homec) at 262:4. Mr. Homec was not present during Mr. Tobias' testimony and did not read the transcript. 5/31/06 RT (Homec) at 262:23-24. When asked whether he was familiar with how the CAISO reached its conclusion about the need for the SFERP, Mr. Homec indicated, "I understand that he was replying to a request by the applicant, a written request submitted several years ago." 5/31/06 RT (Homec) at 263:6-8. When pushed further about whether he was familiar with the reasons Mr. Tobias gave for his testimony, Mr. Homec responded, "I guess not. I've stated my basis, the interrogatories and written replies. That was all I have. I don't know anything else. I read Mr. Tobias' testimony. Didn't seem to contradict the testimony – or the interrogatory replies." Id.

Mr. Homec's interpretation of the data response in question is unreasonably narrow. The response notes that it was the CAISO in the first instance that indicated that

all four units should be within the City. It was only upon concerted advocacy by the City and upon further study and the approval of the Jefferson-Martin transmission line that the CAISO agreed to allow one unit to be moved to the airport. Exh. 25 at 2. Moreover, as is made clear in other parts of the record, these exchanges were made in the context of a long, intensive study process during which there was much back and forth between the City and the CAISO. See Exh. 15 at 3-6, 5/1/06 RT (Tobias) at 24: 12-25. In contrast, Mr. Homec suggests that the entire CAISO position regarding the location of the SFERP was based on one request by the City.

Further, as Mr. Tobias and Mr. Flynn both testified, the CAISO's position that the SFERP must be within the City is based on a reliability need for 100 MWs on the 115 kV system that arises from the characteristics of the City's internal 115 kV system. See 5/1/06 RT (Tobias) at 24-25; 5/31/06 RT (Flynn) at 232-233. Thus, Mr. Homec's testimony, which he admitted was regarding a topic on which he is not an expert, was based on an unreasonably narrow reading of one data response taken out of context from the rest of the record and is contrary to the clear and consistent testimony of Mr. Tobias and Mr. Flynn. As such, Mr. Homec's testimony is unpersuasive.

In sum, there are no alternatives that meaningfully reduce the already insignificant impacts of the SFERP while still achieving the City's key objective of terminating the RMR agreement for the Potrero Power Plant in order to facilitate the shut-down of the plant.

III. Both the City and CEC Staff Have Concluded that the SFERP Will Operate Efficiently and Reliably and Have No Significant Adverse Impacts on Energy Resources.

Staff and City witnesses agree that, if constructed and operated as proposed, the SFERP will operate efficiently and reliably, and will have no significant adverse impacts

on energy resources. The suggestions to the contrary by Mr. Sarvey are not supported by the record.

The Final Staff Assessment sets forth Staff's overall conclusion on the SFERP's efficiency and reliability as follows:

> While it [the project] will consume substantial amounts of energy, it will do so in the most efficient manner practicable. It will not create significant adverse effects on energy supplies or resources, will not require additional sources of energy supply, and will not consume energy in a wasteful or inefficient manner. No energy standards apply to the project. Staff therefore concludes that the project would present no significant adverse impacts upon energy resources.

Exh. 46 at 5.3-1

Staff witness Steven Baker summarized his conclusions during cross examination by Intervenor Sarvey:

> Mr. Sarvey: Mr. Baker, in your professional opinion do all these turbines need to be site [sic] in simple cycle configuration for reliability purposes?
>
> Mr. Baker: That's my understanding.
>
> Mr. Sarvey: Did you do an analysis of that at all?
>
> Mr. Baker: I analyzed the proposed use of the project, which is to provide peaking power and reliability service in San Francisco. And based on my experience and understanding of how the power grid works, I believe that that's an appropriate application for simple cycle, gas turbine peakers.

4/27/06 RT (Baker) at 79: 13-24.

The Final Staff Assessment summarizes Staff's conclusions on the SFERP's reliability:

> Based on a review of the proposal, staff concludes that the plant will be built and operated in a manner consistent with industry norms for reliable operation. This should provide an adequate level of reliability.

Exh. 46 at 5.4-1. The FSA goes on to indicate that the SFERP has noteworthy project benefits:

> The applicant proposes that one of the primary justifications for the SFERP is that it will improve reliability in San Francisco and the peninsula. This will be accomplished by replacing old unreliable units with a new highly-reliable technology. The fact that the project consists of three combustion turbine

> configured as independent equipment trains provides inherent reliability. A single equipment failure cannot disable more than one train, thus allowing the plant to continue to generate (at reduced output).
>
> The gas turbines that will be employed in the project have been on the market for several years now, and can be expected to exhibit typically high availability. The applicant's prediction of an equivalent availability factor of 94 to 98 percent appears reasonable compared to the NERC figure for similar plants throughout North America . . . . Staff believes this should provide an adequate level of reliability.

Exh. 46 at 5.4-6.

City-sponsored testimony supports this conclusion and describes a study undertaken in 2003 that demonstrated that the average outage rate for existing San Francisco/Peninsula units is more than twice that of all units on the CAISO system other than the existing San Francisco/Peninsula units even without considering the Hunters Point Power Plant. Exh. 15 at 3-8 to 3-9. This testimony noted that the SFERP involves new aeroderivative combustion turbine technology with a very high availability record. Id. at 3-9. The testimony concludes that "[r]eplacing old generation that is more than twice as likely to be unavailable than the averge, with this new highly reliable technology will substantially enhance San Francisco/peninsula electrical reliability." Id.

Intervenor Sarvey suggested through his cross examination of CAISO, City and Staff witnesses that electricity reliability is best enhanced both in general, and specifically in San Francisco, if there is more electricity generating capacity than less[1]. In addition, Mr. Sarvey suggested that reliability is improved by having dual fuel availability at power plants in the case of an earthquake[2]:

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[1] An example of the first line of questioning:

> Mr. Sarvey: Okay. Do you believe that the net loss of 300 megawatts of inCity [sic] proposed by the action plan will leave the San Francisco Peninsula more prone to impacts from natural disasters?
>
> Mr. Flynn: Not necessarily, no.

4/27/2006 RT (Flynn) at 89: 2-7.

[2] An example of the second line of questioning:

> Mr. Sarvey: If you had an alternative fuel supply like the Potrero peaking units would your project be more reliable in the event of a natural disaster? …
>
> Mr.: Flynn: What type of natural disaster are you postulating?

These suggestions were effectively addressed in the sworn testimony of City witness Mr. Flynn:

> Ms. Solé: So is it the case that having more generation will – more rather than less generation will always result in more reliability?
>
> Mr. Flynn: If the generation is all of equal individual reliability, meaning they all have the same failure rates, and they're all of equivalent size, then you'll always be better to have more generation.
>
> However, if you're talking about the situation in San Francisco where you have very old equipment with a high failure rate, having more of that does not necessarily provide better reliability than less of a new, highly reliable facility.
>
> Ms. Solé: And would having an alternative fuel source be an advantage in any type of natural disaster?
>
> Mr. Flynn: Not necessarily. It depends on what happens to the, in this case it would be the natural gas fuel supply.

4/27/06 RT (Flynn): at 90: 9-25; 91: 1-3.

Further, Intervenor Mr. Sarvey sponsored testimony arguing as to the SFERP that "[t]he cost to the ratepayer per megawatt could be astronomical." Exh. 76 at 1. Mr. Sarvey acknowledged on the stand that he is not a transmission planner. 4/27/06 RT (Sarvey) at 58. Mr. Flynn, who was a transmission planner with PG&E in the late sixties and early seventies and has followed all the grid planning processes at the CAISO, 5/31/06 RT (Flynn) at 232: 18-23, provided a response to the testimony of Intervernor Sarvey explaining why Mr. Sarvey's focus on a dollars per kilowatt hour is inappropriate for a reliability peaking unit:

> The other statement was concerning Mr. Sarvey's testimony which discusses how costly peaking plants can be on a dollar per kilowatt hour basis. I don't believe it is appropriate to evaluate peaking power plants solely on a dollar per kilowatt hour basis.
>
> Peaking power plants can be very costly on a dollar per kilowatt hour basis, and still be a cost effective component of a least- cost mix of generation resources. Electric utility systems are planned to provide highly reliable service for a [sic] highly fluctuating loads. Total generating capacity usually is built to exceed the expected highest hourly peak load plus a reserve margin. The CPUC has recently set a reserve margin of 15 to 17 percent for California.

Mr. Sarvey: An earthquake, I believe.

4/27/06 RT (Flynn) at 83 2-14.

> If a power plant provides this reserve service its expected cost on a kilowatt hour basis could be infinity if it doesn't produce any kilowatt hours, even though it could be the most cost effective way to provide the service.

4/27/06 RT (Flynn) at 30: 25; 31: 1-21.

In sum, if constructed and operated as proposed, the SFERP will operate efficiently and reliably and have no significant adverse impacts on energy resources.

IV. The SFERP Will Alleviate Environmental Justice Concerns.

The City has acknowledged from the start, and stated repeatedly throughout this proceeding, that the southeast San Francisco community has been disproportionately impacted by industrial facilities including electric power generation. See e.g. Exh. 15 at 1-1. A key objective of the City in pursuing the SFERP is to facilitate the closure of the Potrero Power Plant and, thus, reduce the environmental impacts of electric power generation in the southeast San Francisco community. As Ms. Eng explained, *environmental justice considerations are the reason for the SFERP*. 5/31/06 RT (Eng) at 166: 16-20. In addition, the City is proposing to completely mitigate all its potentially significant impacts, as though the Potrero Power Plant were to continue to operate, and to provide a community benefits package to further reduce public health impacts in southeast San Francisco. Thus, the project will provide a net overall benefit in the Bayview area. 5/31/06 RT (Eng) at 154-55.

A. THE SFERP IS ONE COMPONENT OF A LONG-STANDING CITY EFFORT TO IMPROVE AND MODERNIZE ENERGY INFRASTRUCTURE IN THE CITY.

As Ms. Eng explained, the SFERP is one component of the most recent efforts by the City to improve and modernize the energy infrastructure in the City. 5/31/06 RT (Eng) at 144: 2-7. These efforts includes renewables and energy efficiency, as well as tidal, wind and wave energy. Id. at 144:8-10. The City is also moving aggressively to

put in solar systems throughout the City, and particularly in the southeast area. Id. at 144: 11-13.

Ms. Eng explained the ten-to-twelve year history of hard work by the City to protect the local community from pollution from power generation. 5/31/06 RT (Eng) at 145-149. Ms. Eng detailed how in 1994, the City joined with community groups in opposing a 240 MW cogeneration facility proposed by AES in the Bayview neighborhood because there were no plans in place for the closure or sale of other power plants - the proposal was basically a third power plant in the same area. Id. at 146. The AES power plant was never built.

In the late 1990 the City opposed the sale of the Hunters Point and Potrero Power Plants due to concerns that outside energy companies might attempt to expand them. Id. at 147: 10-24. The City was able to negotiate an agreement with PG&E that provided for the closure of Hunters Point Power Plant once it was no longer needed for reliability but allowed Potrero Power Plant to be sold. Id. However, when Mirant did in fact, propose to expand the Potrero Power Plant by building the 540 MW Unit 7, the City opposed that project along side the community. Id. at 147-8. That project also was defeated. Id. at 148.

Hunters Point Power Plant is now closed, thanks to the efforts of many in the community and the City's commitment to environmental justice. Id. at 148: 6-12. With the SFERP, the opportunity now exists to close down Potrero Power Plant and replace it with a smaller, cleaner facility.

B. ALTHOUGH THE CITY EXPECTS THE SFERP TO FACILITATE THE CLOSURE OF POTRERO POWER PLANT, THE CITY IS PROPOSING TO MITIGATE THE IMPACTS OF THE SFERP WITHOUT REGARD TO THE BENEFITS THAT WILL ACCRUE FROM THE CLOSURE OF THE POTRERO POWER PLANT.

The City expects that the SFERP will facilitate the closure of Potrero Power Plant, and hence offer substantial environmental benefits. Nonetheless, the City is additionally proposing a series of mitigation measures and project conditions to independently address any significant impacts from the SFERP irrespective of the expected benefits from closing down the Potrero Power Plant.

The City will offset emissions of NOx at a 1.19 to 1 basis rather than the 1.15 to 1 basis required by the BAAQMD. Id. at 4-3. The City is procuring local emission reduction credits to offset its NOx emissions at the request of the community and to ensure that it is not exchanging impacts from the SFERP to the local San Francisco communities for benefits from emission reduction credits that were created in distant communities in the BAAQMD. Id.

In addition, the City is proposing a PM_{10} mitigation program that will offset 24 tons of PM_{10} even though the project will only produce 15 tons. 5/31/06 RT (Rubenstein) at 28: 16-22. Moreover, the particular PM_{10} mitigation program "targets a real ground-level source of health-affecting emission which is urban road dust" and is thus "an extremely effective and beneficial mitigation measure." 5/22/06 RT (Rubenstein) at 223-224.

> [T]he particulate matter removed by the proposed mitigation program (both PM_{10} and $PM_{2.5}$) is more hazardous to human health than the particulate matter emitted by the project, both because of the composition of the particulates and the dispersion potential of the source. Urban road dust contains higher concentrations of hazardous materials, including trace metals and tire and brake dusts, than does the particulate matter emitted from the combustion of natural gas.

Exh. 38 at 2. In addition, urban road dust is emitted at the "nose level", whereas the plume from generating units will be dispersed in the air at much lower concentrations before they are inhaled. Id.

Further, the City has proposed a community benefit program that includes tree planting – among the most requested mitigation measures during community meetings - and an indoor air quality program focusing on reducing potential impacts of indoor air quality on asthmatics and children. 5/22/06 RT (Rubenstein) at 224:12-18. As Mr. Rubenstein testified, the indoor air quality program may be one of the most effective mitigation measures ever to come before the Commission because it focuses specifically on pediatric asthma. Id. at 249: 19-23. Indoor air quality levels for pollutants that can exacerbate asthma are typically much higher than outdoor air quality levels. Id at 250: 4-9.

Finally, the City acquiesced to the request from CEC Staff to provide additional reductions for $PM_{2.5}$ air quality impacts even though the Bay Area District is currently in attainment for the Federal $PM_{2.5}$ standard and there have been no exceedances of the state $PM_{2.5}$ standard for the last three years. 5/22/06 RT (Rubenstein) at 225:6-19. The City worked with Staff to develop two additional proposed conditions of certification that provide for $PM_{2.5}$ reductions through a wood stove/fireplace retrofit program and a back up sulfur dioxide emission reduction credit purchase requirement. Id at 225-26.

C. THE CITY IS FOCUSING SUBSTANTIAL RESOURCES ON ADDRESSING AIR QUALITY CONCERNS IN SOUTHEAST SAN FRANCISCO THAT ARE INDEPENDENT OF AND UNRELATED TO THE SFERP.

The proposed mitigation measures and community benefit proposal for the SFERP are in addition to an extensive effort by the City to improve air quality and

public health in southeast San Francisco. 5/31/06 (Eng) at 149-151. During the negotiations related to the proposed divestiture of Hunters Point Power Plant, thirteen million dollars were appropriated by the state to the City, which placed those funds into a dedicated account for the Bayview/Hunter's Point and Potrero neighborhoods. The money was used for a special environmental justice grant program that has to date awarded more than $9 million in grants to nonprofit local community groups, and environmental groups that are serving the Bayview/Hunter's Point and Potrero neighborhoods. Id at 149: 4-18. The funds were used to, among other things, install 71 indoor air filters, fund 1.7 megawatts of electricity savings, install over 42 solar systems, and distribute food. Id. at 150-151.

In addition, the City has been working aggressively to address emissions from mobile sources that contribute to air pollution and emit substantial amounts of toxic air contaminants. Id. at 151: 15-24. The City worked with the American Lung Association and parents of local school children to persuaded the San Francisco School District to require PM filters on school buses. Id. at 151-152. The City recently secured rate board approval to convert 400 garbage collection trucks to clean fuel. Id. at 152: 19-23. The Mayor recently issued an executive order requiring all City vehicles that use diesel fuel to incorporate a blend of biodeisel. Id. at 152-3. The first phase of this project will be in the Bayview neighborhood. Id. at 153. And Ms. Eng recently obtained a grant from the California Department of Transportation to identify and inventory the diesel emission sources in the Bayview area and develop mitigation strategies to reduce the impacts. Id. at 153-4.

Thus, the SFERP is consistent with and complements a long-standing and aggressive effort by the City to address environmental justice concerns raised by the disproportionate impact of industrial activities, particularly electric power generation, on southeast San Francisco.

D. INTERVENORS HAVE NOT SUPPORTED THEIR CLAIMS THAT THE SFERP IS CONTRARY TO ENVIRONMENTAL JUSTICE.

The intervenors, through their testimony and cross-examination of City witnesses, have suggested that the SFERP creates, rather than addresses, environmental justice concerns. They have attempted to raise questions about the relative benefits of the SFERP over the Potrero Power Plant; they have challenged the use of older NOx credits and suggested that the City could instead create emission reduction credits from particular mitigation programs; and they have challenged the use of SO2 credits to address $PM_{2.5}$ emissions. Finally, intervenors have suggested that the SFERP is inconsistent with City Ordinance No. 124-01 adopted May 23, 2001 (Ordinance No. 124-01). These critiques ignore the larger context laid out by Ms. Eng and are otherwise unfounded.

The Potrero Power Plant, even with the SCR retrofit now in place, emits NOx at a rate that is more than twice what would be emitted by the SFERP. Exh. 15 at 3-7. Moreover, the Potrero Power Plant is larger and, because of its configuration, expected to run more frequently than the SFERP. 5/31/06 RT (Rubenstein) at 29: 7-21. Thus, the NOx reduction benefits of the SFERP versus the Potrero Power Plant are even greater. Moreover, although the particulate emission rate for the SFERP is expected to be similar to or slightly less than that of Potrero Unit 3, the overall annual particulate emissions from the SFERP are expected to be substantially lower than those of Potrero 3 because it

is smaller and is expected to operate less frequently. 5/31/06 RT (Rubenstein) at 29: 11-25. In addition, Potrero Units 4, 5 and 6 have PM_{10} emission rates that are more than twenty times higher than those of the SFERP. Moreover, the Potrero Power Plant has not put into place any measures to mitigate its PM_{10} impacts.

The City's use of older credits was necessary to meet the community request that the City use local NOx emission reduction credits. 5/22/06 RT (Rubenstein) at 221-2, 227-8. As described in the section on Air Quality, the City's use of older credits complies with the law. Moreover, as Mr. Rubenstein testified, although it may be theoretically possible to use "real-time ERCs" to offset NOx emissions, in practice doing so is extremely difficult, very challenging, and has rarely been approved. 5/31/06 RT (Rubenstein) at 40-41.

Finally, the use of SO2 emission reduction credits to further mitigate $PM_{2.5}$ emissions is necessary to ensure that the City can feasibly meet the requirements of the conditions of certification. 5/22/06 RT (Rubenstein) at 226: 5-12. It is a necessary backup in the event that the wood stove/fireplace retrofit program is unable to generate sufficient $PM_{2.5}$ credits. Id. at 225-6. Moreover, as Mr. Rubenstein testified, the $PM_{2.5}$ mitigation measures are in addition to an aggressive particulates mitigation program proposed by the City that will address particulates of a type and in a location where they are more detrimental to health than the emissions from the SFERP.

The City could focus on making adjustments to its overall mitigation program along the lines advocated by the intervenors. However, given limited resources, this approach would likely result in the need to scale back on other, highly effective, components of the mitigation package such as the street cleaning program and the indoor

air quality program. There is no evidence to demonstrate that this tradeoff would either be worthwhile or acceptable to the broader southeast San Francisco community.

Finally, the intervenors suggest that the SFERP is inconsistent with Ordinance No. 124-01. However, on its face, most of the requirements of the Maxwell Ordinance apply to new fossil fueled generation at the Potrero Hill Power Plant in southeast San Francisco, whereas the City is no longer proposing to locate the SFERP at the Potrero Hill Power Plant site. See Ordinance No. 124-01. Thus, although the Maxwell Ordinance provides general policy guidance that the Board of Supervisors will likely consider in evaluating the SFERP, it does not set forth specific requirements enforceable by the Commission as LORS. In addition, the SFERP meets the spirit of the Maxwell Ordinance. The SFERP will eliminate the need for existing in-City generation, and will mitigate its adverse social, economic, cultural, environmental and public health impacts on the communities in southeast San Francisco. Exh. 15 at 4-2-4-4.

In sum, the City is pursuing the SFERP as part of its long standing effort to modernize its energy infrastructure and address environmental justice concerns that arise from the operation of old, heavily polluting power plants in southeast San Francisco. With the recent closure of the Hunters Point Power Plant, a key objective of City advocacy for years, the City is now focusing its efforts on the closure of the Potrero Power Plant. The construction of the SFERP paves the way for closure of the Potrero Power Plant, because it eliminates the local reliability need for the plant.

V. SFERP Will Comply with the Applicable Federal, State, and Local Laws, Ordinances, Regulations, and Standards, and, with Mitigation, Does Not Result in Any Significant Air Quality Impacts.

Substantial evidence in this record demonstrates that SFERP is safe and will meet all applicable air quality standards. This is true under all operating conditions, under all meteorological conditions and at all locations, based on conservative assumptions regarding background or existing air quality, operating levels, emission rates, and meteorology. Exh.15 at 8.1-1 to 8.1-54; Exh. 46 at 4.1-32 to 4.1-33; Exh. 55 at . 30; 5/22/06 RT (Rubenstein) at 218: 4:8. In addition, the record supports the conclusion that there are no significant, unmitigated air quality impacts associated with SFERP if the conditions proposed by the Staff are adopted. 5/22/06 RT (Rubenstein) at 218: 9-13; 5/22/06 RT (Ngo) 298: 7-13.

A. SFERP WILL HAVE NO SIGNIFICANT IMPACTS TO LOCAL AIR QUALITY.

With respect to local air quality effects, SFERP addressed those issues with four different types of analyses: (1) pollution control technologies; (2) air quality impacts analysis; (3) localized cumulative impacts analysis; and (4) preparation of a health risk assessment. 5/22/06 RT (Rubenstein) at 219 to 220.

1. SFERP Will Meet or Exceed the BAAQMD's BACT Requirements.

To address local air quality impacts, SFERP, the CEC Staff, and the Bay Area Air Quality Management District (BAAQMD) analyzed the appropriate pollution control technology and the "best available control technology" (BACT). Exh. 15 at 8.1-48 to 8.1-50; Exh. 15, Volume 2, Appendix 8.1E; Exh. 46 at 4.1-32; Exh. 55 at 9-12; 5/22/06 RT (Rubenstein) at 219 4:7. BACT is the fundamental cornerstone of any licensing process, requiring that new facilities have to use the cleanest technologies available. By

ensuring that projects use the cleanest technologies, potential impacts on local air quality are minimized. Id. In this case, the BAAQMD's revised Final Determination of Compliance (FDOC) dated January 25, 2006, Exh. 55, confirms that SFERP complies with BACT. Exh. 55 at 9-12.

With respect to carbon monoxide (CO), SFERP will comply with the BACT requirement through the use of an oxidation catalyst. Exh. 15 at 8.1-50. The BAAQMD has determined that BACT for CO for this project is an emission limit of 4.0 parts per million, by volume, dry basis, corrected to an oxygen level of 15% ("ppmvd @ 15% O_2"), averaged over three hours. Exh. 55 at 11-12. There is no dispute among the testimony of the City, the BAAQMD or CEC Staff that this level satisfies BACT requirements in this case. Exh. 15 at 8.1-50; Exh. 55 at 12; Exh. 46 at 4.1-32.

Nitrogen oxides (NOx) will be controlled through a combination of two technologies. One is the use of water injection. The second is a system called selective catalytic reduction (SCR), a system that the Commission has reviewed many times before and found to be safe and effective. Each combustion gas turbine train will be designed to meet a NO_x emission concentration limit of 2.5 ppmvd NO_x @ 15% O_2, averaged over 1 hour, during all operating modes except gas turbine start-ups and shutdowns. Exh. 15 at 8.1-49 to 8.1-50; Exh. 46 at 4.1-49; Exh. 55 at 10-11). This complies with BAAQMD's BACT determination. Exh. 55 at 10.

Precursor organic compounds (POCs) will be controlled through the use of good combustion practices. Exh. 15 at 8.1-50. The BAAQMD has determined that BACT for POC is an emission limit of 2.0 ppmvd @ 15% O_2, averaged over three hours. Exh. 55 at 12. The SFERP will meet this standard. Exh. 55 at 12.

Emissions of sulfur dioxide (SO_2) and respirable particulate matter (PM_{10}) will be controlled through the use of natural gas as a fuel. SFERP will use exclusively California Public Utilities Commission (CPUC)-regulated natural gas, which satisfies the BACT requirement for SO_2. Exh. 15 at 8.1-50; Exh. 55 at. 12. Similarly, PM_{10} emissions will be controlled through the use of clean burning natural gas for the combustion turbines, which will result in minimal PM_{10} emissions and minimal formation of secondary PM_{10}. Exh. 15 at 8.1-50; Exh. 55 at 12.

2. The City's Air Quality Impact Analysis Confirms That There Will Be No Significant Local Air Quality Effects.

The City has performed a thorough air quality impact analysis using dispersion models required by United State Environmental Protection Agency (USEPA) and the BAAQMD and a number of worst-case assumptions. Exh. 15 at 8.1-31 to 8.1-44; Exh. 46 at 4.1-19 to 4.1-20; 5/22/06 RT (Rubenstein) at 219 7:9. Specifically, the analysis assumes worst-case operating scenarios, worst-case emissions, <u>and</u> worst-case weather conditions at the project site. The analysis makes these combined worst-case assumptions even if those conditions physically cannot occur at the same time.[3]

The air quality impact analysis shows the location and levels of the greatest air quality impact. By definition, all other locations would have lesser levels of air quality impacts.

The purpose of these conservative assumptions is to make sure that SFERP will not cause any violations of any federal or state or air quality standards at *any* location at

[3] For example, the worst-case of emissions from a power plant might occur during winter conditions when the ambient temperatures are lowest and the mass flow through the engines are highest. The worst-case meteorological conditions for dispersion might occur in the summer. The air quality impacts analysis nonetheless assumes that those worst-case emissions aspects of the wintertime apply during the summer meteorological conditions, even though that is not physically possible.

any time under *any* weather conditions and under *any* operating conditions. The air quality impacts analysis confirms that this is the case for SFERP. Exh. 15 at 8.1-44; Exh. 46 at 4.1-19 to 4.1-20; 5/22/06 RT (Rubenstein) at 233: 19-23; 5/22/06 RT (Ngo) at 297: 17-19.

3. There Will Be No Significant, Cumulative Localized Air Quality Impacts Associated with SFERP.

As a part of the air quality impact analysis associated with the project, a localized cumulative air quality impacts analysis was performed. This analysis demonstrated that SFERP, in combination with other, reasonably foreseeable projects in the area (including continued operation of the Potrero Power Plant), would not result in localized significant cumulative air quality impacts. Exh. 15, Volume 2, Appendix. 8.1F at F-2 to F-5.

4. The Health Risk Assessment Performed for SFERP Confirms that there are No Adverse Local Air Quality Impacts.

The Health Risk Assessments (HRAs) performed for SFERP confirm that there will be no significant adverse local air quality impacts associated with the Project. Exh. 15, Volume 2, Appendix. 8.1C at C-1 to C-3; Exh. 55 at 14-15; Exh. 46 at 4.7-24; 5/22/06 (Rubenstein) RT at 219-220; 5/22/06 RT (Greenberg) 299: 16-19). The results of the HRAs show that the health risk is not significant at any location, at any time, under any operating conditions. The public health impacts associated with the project are not in dispute with CEC Staff.

B. SFERP WILL HAVE NO SIGNIFICANT IMPACTS ON REGIONAL AIR QUALITY.

SFERP will have no significant impacts on regional air quality. This finding of no significant impact is confirmed by the four components to the regional air quality

studies performed for SFERP: (1) the use of best available control technology; (2) cumulative impacts analyses regarding regional air quality; (3) health risk assessment, and (4) emission offset requirements and the City's proposed mitigation program. 5/22/06 RT (Rubenstein) at 220-221.

Each of these four regional impact analyses is considered in turn, below.

1. SFERP Will Use Best Available Control Technology to Minimize Regional Air Quality Impacts.

As discussed above, SFERP will use best available control technology to minimize project emissions. Minimizing project emissions is one of the most effective techniques for minimizing regional air quality impacts. 5/22/06 RT (Rubenstein) at 219 4:7.

2. SFERP Will Not Cause Any Significant Unmitigated Cumulative Air Quality Impacts.

There have been several cumulative air quality impacts analyses undertaken for SFERP that looked at the impacts of SFERP and other reasonably foreseeable projects against the backdrop of existing background air quality levels. As with the local air quality analysis, the City used multiple conservative assumptions in its cumulative air quality impact analyses. The three analyses were as follows:

- A dispersion modeling analysis of worst-case project impacts added to worst-case measured ambient concentrations.
- A dispersion modeling analysis of the worst-case combined impacts of the project in combination with existing nearby power plants and reasonably foreseeable projects, added to worst-case measured ambient concentrations.

- A comparison of project emissions with regional emissions of the same pollutants from other, existing sources.

Each of these cumulative impact analyses is discussed in more detail below.

The first analysis was included in Supplement A to the AFC. Exh. 15 at 8.1-44. In this analysis, if the highest PM_{10} levels currently in this region occurred in the wintertime, and if the highest project impacts for PM_{10} were to occur in the summertime, the analysis would nonetheless assume that they occurred at the same time. Even with this level of conservatism, SFERP will not cause any new violations of any state or federal air quality standards. Exh. 15 at. 8.1-44; Exh. 46 at. 4.1-19 to 4.1-20; 5/22/06 RT (Rubenstein) 230 2:4).

This analysis did show, not surprisingly, that SFERP would contribute to existing violations of the state ozone standard and of the state standards for PM_{10} and $PM_{2.5}$, which occur at times in the region even absent the SFERP. Exh. 15 at 8.1-44. Because of this contribution to these existing problems, air quality regulations require that SFERP provide the second element of the regional air quality analysis - emissions offsets - as discussed in the next section below.[4]

The second cumulative air quality impact analysis was included in Supplement A. Exh. 15, Volume 2, Appendix 8.1F at. F-2 to F-5. The analysis demonstrated that the cumulative impacts of the proposed project and other new/modified sources in the project area are not expected to cause a new violation or contribute significantly to an existing violation of any state or federal air quality standard in the project area. Exh. 15, Volume

[4] Because SFERP's contribution to existing violations of the state PM_{10} air quality standards are considered to be below the regulatory de minimis levels, CCSF developed a community benefits and mitigation package to address this impact; the package is discussed further below.

2, Appendix 8.1F at F-5; Exh. 46 at. 4.1-27 to 4.1-29; 5/22/06 RT (Rubenstein) at 230: 4-12.

The third analysis evaluated the Project's increased emissions of ozone precursors and PM_{10} precursors in the context of other emission sources in the area and taking into account proposed mitigation measures. This analysis, too, demonstrated that regional cumulative impacts would be negligible. Exh. 15, Volume 2, Appendix 8.1F at. F-1 to F-2; 5/22/06 RT (Rubenstein) at 230: 13-19.

Thus, there have been three cumulative air quality impact analyses prepared for the SFERP, and all of these analyses reached the same conclusion: the SFERP will not cause any new violations of state or federal ambient air quality standards but will contribute to existing violations of the state standards for ozone, PM_{10} and fine particulate matter ($PM_{2.5}$). These potential cumulative, regional air quality impacts are addressed through the provision of emission reduction credits and supplemental mitigation to address community and CEC Staff concerns. Exh. 15 at 8.1-54; Exh. 46. at. 4.1-32 - 4.1-33; 5/22/06 RT (Rubenstein) at 231: 11-18.

3. The City has Identified and Obtained Emission Offsets to Fully Mitigate Any Potential Regional Air Quality Impacts from the SFERP.

Emission offsets are part of a regional mitigation program designed to ensure that new plants of any type can be constructed while still making sure that progress towards cleaner air is maintained. Emission offsets are a requirement of local regulations, state law and federal law. Exh. 15 at. 8.1-50 - 8.1-51; Exh. 55 at 13-14; Exh. 46 at 4.1-32.

The City will provide offsets for the SFERP as required by the BAAQMD. Specifically, the City will provide offsets for all criteria pollutants in the quantities required by applicable law and regulation. Id. There is no dispute that the City has

satisfied the emission offset requirements of the BAAQMD for the SFERP: "The project emissions would be fully offset, and the project would incorporate BACT in accordance with the District NSR requirements." Exh. 46 at. 4.1-32.

In addition, in order to address community air quality concerns, the City has agreed to implement a community benefits and PM mitigation program. Exh. 38. This program will result in reductions in direct particulate emissions in the community of 23.6 tons per year of PM_{10} – 55% more than the Project's emissions of 15.2 tons per year. Exh. 38 at. 2; 5/22/06 RT (Rubenstein) at 222-225. Furthermore, the community benefits package will enhance air quality in the community through a tree planting program and, more importantly, a community health program focused on reducing emission sources in the home that can aggravate asthma. Exh. 38 at 3; 5/22/06 RT (Rubenstein) at 224: 12-18. These three programs – enhanced street cleaning, tree planting, and indoor air quality – were adopted by the City after an extensive number of workshops and community meetings and community involvement – including involvement by Commission Staff and Intervenors. Exh. 38, Attachment A; 5/22/06 RT (Rubenstein) at 224: 19-22; 5/31/06 RT (Sarvey) at 61:15-25. Finally, the City has agreed to additional conditions with CEC Staff, Exh. 46 at. 4.1-41, conditions AQ-SC11, AQ-SC12, to ensure that all project impacts are fully mitigated to Staff's satisfaction. Exh. 46 at. 4.1-32 to 4.1-33; 5/22/06 RT (Rubenstein) at 225-226; 5/22/06 RT (Ngo) 298: 7-13.

C. ALL ISSUES OF DISAGREEMENT BETWEEN THE CITY AND STAFF IN THE AREA OF AIR QUALITY HAVE BEEN RESOLVED.

As a result of exchanges between the City and Staff during the discovery process and workshops, all areas of disagreement between the City and Staff in the area of air quality have been resolved. The proposed conditions of certification for air quality

contained in Staff's FSA (including the errata) Exh. 46 at. 4.1-34 to 4.1-58; Exh. 48, are acceptable to the City.

D. AIR QUALITY ISSUES RAISED BY INTERVENOR SARVEY DO NOT CHANGE THE CONCLUSION THAT SFERP'S IMPACTS ARE NOT SIGNIFICANT.

There are several issues in this case that remain in dispute between the City and Staff on the one hand, and Intervenor Sarvey on the other.[5] These issues include:

- Use of "old" offsets;
- PM_{10} emission rate from the SFERP turbines;
- Cumulative impacts;
- Ammonia slip; and
- Adequacy of proposed mitigation for particulate matter.

Each of these issues is addressed further below.

1. The Emission Offsets Provided for the SFERP are Consistent with Air Quality Regulations, and Provide Mitigation Under CEQA.

In several prior proceedings before the CEC, Intervenor Sarvey has raised concerns about the adequacy of emission reduction credits from the perspective at the point in time in which they were created and in the context of a 1994 memo published by the USEPA. Exh. 65. In each such prior case, the Commission has properly found Intervenor Sarvey's concerns to be misplaced. However, Intervenor Sarvey raises these concerns in the SFERP proceeding, and so they must be addressed here again.

There are two aspects to this issue as raised by Intervenor Sarvey:

[5] Intervenor CARE indicated that it stipulated to the Staff's conclusions regarding air quality. 5/2206 RT (Boyd) at 304-305.

- The use of emission reduction credits created before 1990 are not acceptable to USEPA; and
- The use of "old" emission reduction credits does not provide mitigation under CEQA.

Both of these claims are incorrect.

The USEPA memo cited by Intervenor Sarvey does *not* prohibit the use of emission reduction credits created before 1990. Rather, this memo establishes criteria for the use of these older credits in the context of the 1990 federal Clean Air Act Amendments. 5/22/06 RT (Rubenstein) at 226: 20-24. These criteria include the establishment and maintenance of a tracking system to ensure that these credits are properly accounted for in BAAQMD's emissions inventory. Id. In fact, consistent with USEPA's requirements, the BAAQMD treats the emissions reflected in emission reduction credits as if they were current, ongoing emissions, and therefore adopts new regulations sufficient to ensure attainment and maintenance of air quality standards in the absence of the emission reductions represented by these credits. 5/22/06 RT (Rubenstein) at 226-227. Thus, from a regulatory perspective, the surrender of emission reduction credits represents no net increase or, in some cases, a net decrease, in emissions, on a real-time basis, because the "old" emissions are removed "from the books" at the same time that the new emissions are added in.

The BAAQMD complies with the USEPA criteria contained in the memorandum brought forward by Intervenor Sarvey, and there is no evidence in the record to refute this conclusion. Exh. 56, 10/17/05 letter from BAAQMD to Sarvey, at. 4-5. The PDOC for SFERP was distributed to the USEPA and CARB, and neither agency commented. Exh.

53 at 15, referencing BAAQMD Rule 2-2-406. The ERCs proposed for SFERP are fully compliant with all applicable air quality regulations.

Emission offsets are part of a regional mitigation program designed to ensure that new plants of any type can be constructed while still making sure that progress towards cleaner air is maintained. Emission offsets are not an option that can be elected by a project applicant to avoid any other requirements. Emission offsets are mandated by local regulations, state law, and federal law. Exh. 15 at 8.1-19, 8.1-51; Exh. 55 at. 13-14; Exh. 46 at. 4.1-32.

The City will provide offsets for this project as required by the BAAQMD. Specifically, the City will provide offsets for oxides of nitrogen (NOx), a precursor of ozone. Exh. 15 at. 8.1-51. Although the BAAQMD itself provides the ERCs for precursor organic compounds (POCs, another ozone precursor) for SFERP, by virtue of the project's de minimis emissions of that pollutant, BAAQMD Rule 2-2-302; Exh. 15 at 8.1-51, the City will surrender sufficient NOx ERCs to ensure that both POC and NOx impacts are fully mitigated. Exh. 15 at 8.1-51.

The emission offset program is specifically designed to encourage emission sources to reduce their emissions in advance of future requirements. 5/22/06 RT (Rubenstein at 237:11-25. This is beneficial to air quality, in that emission reductions occur earlier than they might otherwise. Id. The City selected these particular emission reduction credits – created at the nearby Potrero Power Plant in the 1980s – specifically to address concerns raised by residents of the Potrero and Bayview/Hunters Point communities that "local" credits should be used for SFERP. 5/22/06 RT (Rubenstein) at 221-222. Moreover, the Commission has found in prior cases that the use of emission

reduction credits – which satisfy all applicable air quality regulations and, in this case, address community concerns – is appropriate under CEQA, given the role that emission reduction credits play in the regulatory cumulative impacts mitigation program implemented by the BAAQMD in the form of its new source review program. 5/22/06 RT (Rubenstein) at 239–240.[6]

2. The PM_{10} Emission Rate Proposed for the SFERP Turbines Are Responsive to Intervenor Sarvey's Concerns and are Technically Defensible.

In his comments to the BAAQMD regarding the PDOC for SFERP, Intervenor Sarvey requested that the BAAQMD consider reducing the PM_{10} emission rate from the SFERP turbines from 3.0 to 2.5 lbs/hr. In BAAQMD's response to Intervenor Sarvey, the agency agreed with the request, and imposed the lower PM_{10} emission limit on SFERP:

> Los Esteros has an emission limitation of 2.5 lb/hr, which has been demonstrated to have been achieved for a turbine that is identical to the turbines proposed for SFERP. Although the SFERP turbines will be used less frequently than the Los Esteros turbines, and will spend a greater fraction of their operation transitioning between load levels, the District has determined that the Los Esteros turbines are the same type of equipment. The Los Esteros limitation of 2.5 lb/hr is more stringent than the 3.0 lb/hr proposed for SFERP, and therefore comprises BACT."

Exh. 56, letter from BAAQMD to Sarvey responding to PDOC comments, at. 2-3; Exh. 55, condition 18.

Intervenor Sarvey's filed written testimony reverses his position, and suggests that the 2.5 lbs/hr emission rate he had proposed last fall is no longer technically feasible.

> The BAAQMD has changed the PM 2.5 emission limit from 3 pounds per hour to 2.5 pounds per hour. Applicant's air quality witness has provided testimony and data in previous licensing cases that the LM-6000 turbines utilized for this project will not meet the 2.5 pounds per hour limitation.

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[6] See, e.g., CEC decisions regarding the Walnut Energy Center (02-AFC-4 at p. 98); Metcalf Energy Center (99-AFC-3 at p. 132).

Exh. 74 at. 4-5.

The initial, higher PM_{10} emission rate was proposed for SFERP based on anticipated vendor guarantee emission rates derived from a review of other projects. Exh. 15 at. 8.1-27. The City accepted the lower PM_{10} emission rate proposed by Intervenor Sarvey, and imposed by the BAAQMD, based on a review of available source test data (including that cited by Intevenor Sarvey in his comments on the PDOC). Exh. 56, 12/21/05 letter from Sierra Research to CEC Staff; 5/22/06 RT (Rubenstein) at 229:5-6. The City's Air Quality witness testified that both emission levels are technically achievable and Staff ultimately agreed. 5/22/06 RT (Rubenstein) at 229:10-20; see also Id. (Ngo) at 315:8-13(in response to a question from intervenor Sarvey "So if once they meet that PM2.5 in the source test, and we have no reason to believe that beside a upset condition, that we have no reason to believe that the PM10 and PM2.5 emission from the facility or from the turbine, itself, will exceed that limit.")

2. There are No Significant, Unmitigated Cumulative Air Quality Impacts Associated with SFERP.

Intervenor Sarvey has suggested that SFERP will have significant, unmitigated cumulative air quality impacts because neither the City nor the CEC Staff have explicitly analyzed all of the projects that Intevenor Sarvey has identified. Exh. 74 at. 6-8.[7] However, the City has prepared and submitted four different cumulative impacts analyses in the record of this proceeding:

1. An analysis of SFERP's impacts in combination with worst-case measured background air quality levels. Exh. 15 at 8.1-44.

[7] Intervenor Sarvey suggests, in his Prehearing Conference statement, that SFERP will result in a significant cumulative air quality impact; however, his pre-filed testimony makes no such allegation.

2. An analysis of SFERP's emissions in the context of regional emissions of other sources of air pollution. Exh. 15, Volume 2, Appendix 8.1F, at F-1 to F-2.

3. An analysis of SFERP's emissions in the context of anticipated changes in the operation of nearby power plants. Exh. 15, Volume 2, Appendix 8.1F, at F-2 to F-5.

4. An analysis of SFERP's emissions in the context of potential cumulative impacts with other, reasonable foreseeable projects identified by the BAAQMD, and based on a cumulative impacts protocol contained in the AFC. Exh. 15, Volume 2, Appendix 8.1F, at F-2 to F-5.

In addition, in response to data requests, the City has provided Intervenor Sarvey with information regarding other projects proposed by other City departments in the general vicinity of SFERP. Exh. 27, Data Responses 1-4, 1-5 and 1-6. In those data responses, the City has discussed the potential for further cumulative impacts between SFERP and these other projects, and concluded that this potential was not significant. Id. Finally, in response to comments by Intevenor Sarvey and others, the CEC Staff conducted its own cumulative air quality impacts analysis, and concluded that there were no significant, unmitigated cumulative impacts. Exh. 46 at 4.1-27 to 4.1-30.

Intevenor Sarvey ignores each of these analyses and suggests that there is a potentially significant cumulative impact based on a five year old Environmental Impact Report. Exh. 74 at. 6-8; Exh. 92a; Exh. 92(b). The only credible expert testimony in this proceeding related to this report indicates that the conclusion of no significant cumulative air quality impacts associated with the SFERP would be unchanged if the impacts from

the projects identified in the Southeast Waterfront EIR were quantitatively analyzed. 5/31/06 RT (Rubenstein) at 33–34.

The projects identified by Intervenor Sarvey that would allegedly cause potential cumulative air quality impacts are all listed in the Southeast Waterfront EIR. Exh. 74 at. 6-8. However, each of these projects, of necessity, must fall into one of the following categories:

- The project has been built, and hence its impacts are included in one of the cumulative air quality impact analyses prepared by the City because its emissions are reflected in the background data used by the City. Exh. 15 at. 8.1-44.
- The project has not been built, but has an application pending before the BAAQMD, and the project was identified by the BAAQMD and explicitly analyzed in one of the cumulative impacts analyses prepared by the City. Exh. 15, Volume 2, Appendix 8.1F at. F-2 to F-8.
- The project has not been built, has an application pending before the BAAQMD, but was not included in the cumulative impacts analysis because its emissions were below the de minimis levels identified in the City's cumulative impacts protocol. Exh 15, Volume 2, Appendix 8.1F at F-4.
- The project has not been built, and has not yet submitted an application to the BAAQMD.

In the first two cases above, the projects identified by Intervenor Sarvey would have already been included in either the baseline analysis or in one of the cumulative air

quality impacts analyses. In the third case, the project would not have been explicitly analyzed based on de minimis criteria the Commission has accepted in numerous proceedings. And in the final case, if the project has not been built and has not submitted an application to the BAAQMD after being identified in a 2001 EIR, the City believes that the potential for cumulative impacts between such a project and SFERP is remote and speculative: if the project has not been developed after five years then one would have to speculate as to whether, or when, the project might be developed.

In addition, Mr. Rubenstein in his testimony explained why the conclusions of the Southern Waterfront EIR did not change his analysis:

> [H]aving reviewed all of appendix D, as well as -- rather, including the page that Mr. Sarvey handed me, I can indicate that the data on the page he handed out in terms of the potential impacts from these other facilities would not change my conclusions regarding cumulative impacts for SFERP.
>
> The reason is that when I compare the PM-10 concentrations shown on page D-7 of exhibit 92(a), both for the 24-hour average and annual average concentrations, when I compare those values with the values included in the cumulative impacts analysis provided with supplement A, which is exhibit 15, and in particular I'm referring to appendix 8.1F, as in frank, which is the air quality appendix relating to the cumulative impacts analysis, there are three tables included in that analysis which provide the results of a cumulative dispersion modeling analysis that is analogous to what's presented on page D-7 from the southern waterfront EIR.
>
> For example, taking a look at the maximum concentration shown on page D-7 for 24- hour average PM10, which is 1.16 mcg/cubic meter, all that would do in my cumulative impacts analysis is modify the value that I show for other cumulative sources. Meaning sources that are not necessarily reflected in the background air quality measurements.
>
> And in the case of 24-hour average PM10, the number would change from 8.7 mcg/cubic meter up to 9.9, assuming that all of the facilities identified in the southern waterfront EIR were built and operational, but not until some time after 2003, which is the data upon which our background air quality measurements are made.
>
> So, it's a fairly hypothetical situation. But even if that was the case, and I were to add all of these impacts on top of the impacts we modeled, it would not change our conclusions with respect to cumulative impacts.
>
> Which is that the 24-hour average PM10 impacts and the annual average PM10 impacts from this project contribute to levels that on a worst-case already

> exceeding the air quality standards, which is one of the reasons why we're providing mitigation.
>
> But the changes are minor in terms of both the increment and the total cumulative impact. And as a result, my conclusions would not change regarding SFERP.

5/31/06 RT (Rubenstein) at 33-35.

Consequently, the evidence in the record demonstrates that the potential for cumulative air quality impacts associated with SFERP has been extensively evaluated, and the only testimony by experts in the field of air pollution control and analysis is that all potential cumulative air quality impacts have been mitigated to a less than significant level.

4. The Proposed Ammonia Slip Limits are Consistent with Air Quality Regulations and Result in No Significant Unmitigated Air Quality Impacts.

Intervenor Sarvey suggests that the ammonia slip limit from SFERP should be reduced from the 10 ppm level required in both the FDOC and FSA to 5 ppm. Exh. 55 at 24; Exh. 46 at 4.1-49; Exh. 74 at 5-6). However, Mr. Sarvey has failed to show this level is a requlatory requirement and has failed to establish the technical feasibility of such a requirement in this case.

Intervenor Sarvey has proposed that SFERP be required to maintain ammonia emissions below 5 ppm. Exh. 74 at 5-6. In contrast, both the FDOC issued by the BAAQMD and the FSA issued by CEC Staff have established a 10 ppm ammonia slip limit. Exh. 55 at 24, condition 18; Exh. 46 at 4.1-49, condition AQ-18. In a letter to the BAAQMD dated August 31, 2005 commenting on the PDOC, Intervenor Sarvey proposed to the BAAQMD that the SFERP project be required to use the SCONOx technology to eliminate any potential ammonia emissions. The BAAQMD reviewed this issue, responded to Intervenor Sarvey's comments, and concluded that lower ammonia

emissions associated with the SCONOx system were not necessary for this project. Exh. 56, 10/17/05 letter from BAAQMD to Sarvey, at. 3-4.

It is undisputed that there is no Best Available Control Technology (BACT) requirement for ammonia emissions; Intervenor Sarvey's proposed ammonia slip limit is based purportedly on the need to address environmental impacts under CEQA. Exh. 74 at 5-6. However, there is no CEQA basis for Mr. Sarvey's proposal since formation of ammonium nitrate in the Bay Area air basin is limited by the formation of nitric acid and is not driven by the amount of ammonia in the atmosphere. Exh. 56, 10/17/05 letter from BAAQMD to Sarvey, at 3. Ammonia emissions from the proposed project are not expected to contribute significantly to the formation of secondary particulate matter within the District. Id.

Moreover, the City's Air Quality witness testified that there are concerns about the technical feasibility of achieving a 5 ppm slip level given the control technology used with this equipment in combination with other emission limits imposed on the facility; the only example cited by Intervenor Sarvey as a potential precedent for this requirement was shown to be failing to meet its applicable NOx and ammonia slip limits on a consistent basis. 5/31/06 RT (Rubenstein) at 35-36. Each of these issues is discussed in more detail below.

a. There is No BACT Requirement for Ammonia Slip in the BAAQMD.

BACT in the BAAQMD is required under District Rule 2-2-301. This rule identifies specific pollutants that are subject to BACT requirements. In contrast with other Air Quality Management Districts with which the Commission is familiar, such as the South Coast AQMD, the BAAQMD does not regulate ammonia emissions directly.

This is not an oversight that warrants correction by the CEC Staff; rather, it is a conscious decision by the regulatory agency charged by the State with protecting air quality in the San Francisco Bay Area.

Intervenor Sarvey has, however, attempted to suggest that there is some regulatory impetus from the California Air Resources Board (CARB) in support of a 5 ppm slip level. Exh. 74 at 5. However, the only evidence cited by Intervenor Sarvey in support of this conclusion is a 1999 report by the CARB[8]. Id.

However, Intervenor Sarvey mis-reads the CARB report, which states the following:

> When selective catalytic reduction is the control method for NOX emissions, districts should consider establishing health protective ammonia slip levels at or below 5 ppmvd at 15 percent oxygen in light of the fact that control equipment vendors have openly guaranteed single-digit levels for ammonia slip.

Exh. 94 at 7.

> The permit should include conditions to minimize the amount of ammonia slip to a health protective level when selective catalytic reduction is used as a control method; districts should consider establishing ammonia slip levels at or below 5 ppmvd at 15 percent oxygen.

Exh. 94 at 12.

> Ambient particulate matter of 2.5 microns or less (PM2.5) is composed of a mixture of particles directly emitted into the air and particles formed in air from the chemical transformation of gaseous pollutants (secondary particles). Principle types of secondary particles are ammonium sulfate and ammonium nitrate formed in air from gaseous emissions of SOX and NOX, reacting with ammonia. Studies conducted in the South Coast Air Basin by Glen Cass of Caltech have indicated that ammonia is a primary component in secondary particulate matter. As a result, districts should consider the impact of ammonia slip on meeting and maintaining PM10 and PM2.5 standards. Where a significant impact is identified, districts should revise their respective new source review rules to regulate ammonia as a precursor to both PM2.5 and PM10.

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[8] Guidance for Power Plant Siting and Best Available Control Technology as Approved by the Air Resources Board on July 22, 1999 (ARB Report). Exh. 94.

Exh. 94 at 27.

The BAAQMD has considered the impact of ammonia slip on meeting and maintaining the PM_{10} and $PM_{2.5}$ air quality standards and has set an ammonia slip limit that is protective of public health in light of the particular chemistry of the air in the Bay Area air basin.

> Formation of ammonium nitrate in the Bay Area air basin is limited by the formation of nitric acid *and is not driven by the amount of ammonia in the atmosphere*. The relevant atmospheric conditions at the project location are consistent with those elsewhere in the region. *Ammonia emissions from the proposed project are not expected to contribute significantly to the formation of secondary particulate matter within the District*.

Exh. 56, 10/17/05 letter from BAAQMD to Sarvey, at 3; emphasis added.

Consequently, the BAAQMD's limit of 10 ppm for ammonia slip is consistent with the CARB's recommendations. In short, there is no regulatory or CEQA basis for Intervenor Sarvey's proposed lower ammonia slip limit.

b. Intervenor Sarvey has Presented No Credible Technical Evidence to Support His Proposed Ammonia Slip Condition.

In its response to Intervenor Sarvey's comments on the PDOC, the BAAQMD has indicated that further control of ammonia emissions, below the 10 ppm level required by the BAAQMD, will not result in any air quality or health benefits. Exh. 56, 10/17/05 letter from BAAQMD to Sarvey, at 3. Intervenor Sarvey has not disagreed with any analyses performed by the BAAQMD – only with the conclusions reached by that agency.

Intervenor Sarvey's argument with respect to the alleged need to reduce ammonia slip emissions consists of two components:

- Ammonia compounds form particulate matter; and
- The Bay Area is designated as a nonattainment area for state PM_{10} and $PM_{2.5}$ air quality standards.

Intervenor Sarvey's argument is missing a key element: Intervenor Sarvey has not established a cause-and-effect relationship between additional emissions of ammonia and increased PM_{10} or $PM_{2.5}$ levels <u>in the San Francisco Bay Area air basin</u>. As has been discussed before this Commission in numerous cases, including most recently (and quite extensively) in the Los Esteros case, ammonia reacts with other compounds (notably sulfur dioxide/sulfates and nitrogen dioxide/nitrates) to form particulate matter. However, it would be sheer coincidence if the concentrations of ammonia, sulfates, and nitrates were in such perfect balance that all of the available ions found pairs to form particulate compounds such as ammonium sulfate and ammonium nitrate. In reality, there is always a surplus of one ion or another.

Which compounds are in surplus (ammonia or sulfates/nitrates) depends on the geographic region and, in some cases, the time of year. If, for example, ammonia compounds are in surplus, the formation of particulate matter will be limited by the amount of sulfates and nitrates available to react. If the reverse is true, then the formation of particulate matter will be limited by the amount of ammonia in the air. Air pollution control agencies in California perform this analysis and base their regulatory judgments on the results of this analysis. In the Bay Area air basin, BAAQMD has concluded that

formation of ammonium nitrate is limited by nitric acid. Exh. 56, 10/17/05 letter from BAAQMD to Sarvey, at 3.

In the recent case involving the Los Esteros Critical Energy Facility ("LECEF") project, the CEC Siting Committee for that case concluded the following:

> 10. The evidence of record does not persuasively establish that an ammonia slip level of 10 ppm will lead to the formation of secondary particulates in the area of this project, or result in significant adverse impacts.
> 11. The evidence of record does not establish that a reduction in the ammonia slip from 10 ppm to 5 ppm will lead to a reduction or elimination of a significant environmental impact.

Presiding Member's Proposed Decision, Los Esteros Critical Energy Facility, Phase II, 03-AFC-2, at 151.

Intervenor Sarvey's position in this case is at odds with the only scientifically based analyses relevant for this project and is inconsistent with the Commission's prior conclusions on the same issue, in the same air basin.

In sum, there is no regulatory requirement for a lower ammonia emission limit because a lower ammonia emission limit will not reduce adverse impacts related to particulate matter. Moreover, there is no demonstration in the record that such a lower level is technically feasible for SFERP.

5. The Proposed PM Mitigation for SFERP is Adequate and is Based on Community and CEC Staff Input.

At the Prehearing Conference Workshop, Intervenor Sarvey suggested that the PM mitigation proposed for SFERP was inadequate and should be replaced by other measures. Interenor Sarvey continued this suggestion in his written testimony, Exh. 74 at 4; Exh. 75 at 4-5, and in his oral testimony before the Committee. 5/31/06 RT (Sarvey) at 52; Exh. 93. However, Intervenor Sarvey's preference for a different form of

mitigation does not demonstrate the inadequacy of the mitigation proposed by the City, and imposed by the CEC Staff, nor does his testimony identify a significant air quality impact that remains unmitigated. The City has demonstrated that the proposed mitigation measures:

- Reflect substantial input from the affected community. Exh. 38, Attachment A.
- Reduce PM_{10} emissions by 55% more than the project's direct emissions. Exh. 38 at 2; 5/31/06 RT (Rubenstein) at 28:16-19.
- Reduce $PM_{2.5}$ emissions in an amount sufficient to mitigate any remaining air quality impacts related to that pollutant. Exh. 46 at . 4.1-32 to 4.1-33; 5/22/06 RT (Ngo) 297-298.
- Provide additional public health benefits from the tree planting and indoor air quality programs. Exh. 38 at 3; 5/22/06 RT (Rubenstein) at 224:2-18).

The PM mitigation measures proposed by the City and required by the CEC Staff will result in no unmitigated, significant air quality impacts from the project. 5/22/06 RT (Rubenstein) at 233:14-23; 5/22/06 RT (Ngo) at 298:7-13. There is no credible contrary evidence in the record.

VI. The SFERP Will Not Adversely Impact Public Health in Southeast San Francisco.

Consistent with its concern about environmental justice in southeast San Francisco, the City has been very concerned about ensuring that the public health impacts of the SFERP are adequately identified and addressed. The record establishes that the SFERP will not have a significant adverse impact on public health. Moreover,

the City's PM_{10} mitigation and community benefits programs will contribute towards improved public health in southeast San Francisco.

A. THE SFERP WILL NOT CREATE ADVERSE PUBLIC HEALTH IMPACTS.

The City's public health witness Mr. Lowe undertook an analysis of the public health impacts of the SFERP that addressed

> emissions of toxic air contaminants during facility operation and during construction, including potential cumulative impacts with other emission sources in the community, and potential influences of project emissions on preexisting health issues in the surrounding community. It also addresses potential offsite consequences associated with the worst case release of aqueous ammonia that will be stored and used at the facility. And potential exposures to soil and groundwater contaminants detected at the project site.

5/31/06 RT (Lowe) at 78-79. This assessment concluded that the SFERP will not have a significant adverse public health impact. CEC Staff conducted an independent public health risk assessment that also showed an insignificant impact. Exh. 46 at 4.7-17.

To address the emission of toxic air contaminants during facility operation and construction, Mr. Lowe undertook a human health risk assessment to evaluate the emissions from diesel-powered equipment that would be used during construction, and emissions that would occur during routine operation of the facility. Id. at 78-80. "The health risk assessment was prepared according to guidelines developed by the State of California and the U.S. Environmental Protection Agency, and is based on conservative methods and assumptions that are intended to protect human health. The human health risk assessment evaluated potential cancer risks, noncancer effects from chronic or long-term exposure, and noncancer effects from acute or short-term exposure." Id. at 80: 6-11.

Mr Lowe described in his testimony the conservative, or health-protective, nature of the risk assessment :

> The health risks from emissions were estimated at the point of maximum impact. This is the location where the maximum concentrations in air and the maximum risks from facility emissions are expected to be located, taking into consideration the characteristics of the emission sources and local meteorological conditions. The concentrations in air at the point of maximum impact were modeled using the maximum emission rates from the facility. Health risks were assessed at the point of maximum impact regardless of whether or not there is a residence of [sic] individual there. An individual is hypothetically assumed to reside at the point of maximum impact continuously for an entire 70-year lifetime. Therefore, the impacts from facility emissions at locations where residents or other individuals may be located will be lower than the maximum impacts projected in this analysis.

Id. at 80-81.

Using the conservative approach described above, the analysis showed that, during operation, the highest cancer risk for the project is 0.045 in one million, which is over 200 times lower than the ten in one million risk that the CEC and BAAQMD agencies consider to be significant. Exh. 15, Volume 2, Appendix 8.1C, Figure 8.1C-1; 5/31/06 RT (Lowe) at 81:12-19. Moreover, the three highest cancer risk points, including the point of maximum impact, are in the San Francisco Bay. Exh. 15, Volume 2, Appendix 8.1C, Figure 8.1C-1. Impacts where sensitive receptors and residences are located will be below this level.

CEC Staff conducted an independent public health risk assessment that showed a slightly higher but nonetheless insignificant impact. Staff's analysis showed the highest cancer risk for the project to be 0.073 in one million at the point of maximum impact, which Staff found to be at the proposed construction laydown area. Exh. 46 at 4.7-17. At the closest residence, the risk dropped down to 0.0014 in one million, id., which is over 7000 times lower than the ten in one million risk level considered to be significant.

During construction, diesel emissions to the air would be associated with an increased lifetime cancer risk of 0.75 to 1.1 in one million at the point of maximum impact which is located at the facility fence line. This estimated risk is ten times below

the 10 in one million cancer risk threshold used as the level of significance for public health impacts. 5/31/06 RT (Lowe) at 82: 1-9. Moreover, these insignificant impacts occur at the fence line where the public is highly unlikely to be present for extended periods of time. The analysis of these impacts does not account for several mitigation measures included in the FSA and accepted by the City that were formulated after the public health assessment was undertaken, including a requirement to use ultra low sulfur diesel fuel and Tier 2 or Tier 1 California Emission Standards for Off-Road Compression-Ignition Engines or the installation of an oxidation catalyst and soot filter on diesel equipment. Exh. 46 at 4.7-11.

Using the conservative approach described above, the analysis showed that the chronic non-cancer health hazard index for the project is 0.002, which means that the highest concentration of toxic air contaminants in the air from the project is 500 times lower than the level that would cause any chronic (long-term) non-cancer health effects. Exh. 15, Volume 2, Appendix 8.1C at C-4. A health hazard index less than one indicates that there is very little likelihood that adverse health effects could be associated with exposure to emissions from a facility. 5/31/06 RT (Lowe) at 82-3. As in the case of cancer risk, the three locations with the highest non-cancer chronic health effect, including the point of maximum impact, are in the San Francisco Bay. Exh. 15, Volume 2, Appendix 8.1C at C-4. Again, impacts where sensitive receptors and residences are located will be lower than at the point of maximum impact. This analysis was confirmed by Staff's analysis, which found a slightly higher, but still insignificant, chronic noncancer health hazard index of 0.0027. Exh. 46 at 4.7-17.

Finally, and again using the conservative approach described above, the acute health hazard index for the project is 0.025, which means that the highest concentration of toxic air contaminants in the air from the project is 40 times lower than the level that would cause any acute (short-term, immediate) health effects. Exh. 15, Volume 2, Appendix 8.1C at C-4. The three points of highest non-cancer acute health effects, including the point of maximum impact, are in the Bayview/Hunters Point neighborhood. Id. Although the impacts of toxic air contaminants from the project are far below levels considered to be significant by regulatory agencies, the City recognizes that, as to acute non-cancer health effects, the points of highest impact are in the Bayview/Hunters Point and it intends to target the PM_{10} mitigation/community benefits package to the areas potentially affected by the project. Id. Staff's assessment again confirmed the City's finding of no significant impact with an acute noncancer hazard index of 0.038. Exh. 46 at 4.7-17.

Accordingly, the public health impacts of the SFERP, even using a conservative analyses, are insignificant. 5/31/06 RT (Lowe) at 83-84.

B. THE SFERP WILL NOT CONTRIBUTE TO SIGNIFICANT PUBLIC HEALTH CUMULATIVE IMPACTS.

1. Construction of the SFERP Will Not Contribute to Significant Public Health Cumulative Impacts.

The record demonstrates that the SFERP will not contribute to significant cumulative impacts. With regards to construction, impacts are well below levels of significance 5/31/06 RT (Lowe) at 82: 1-8. Moreover, aggressive air quality control

measures will ensure that even for the short construction time period, already insignificant impacts are reduced to the lowest possible level.[9]

Estimates of construction impacts were undertaken by the City in its air quality modeling. See Exh. 15, at 8.1-47 and Volume 2 Appendix 8-1D. These estimates show that there are no significant impacts. Moreover, the estimates are conservatively high because assumptions were made for both emissions calculations and modeling techniques that tend to over-predict results. Maxima were calculated assuming that all equipment would operate simultaneously, and a significant source of plume dilution was ignored. Exh. 15, Vol. 2, Figures 8.1D-1 through 5.

In addition, aggressive specific dust and diesel emission control measures are set forth in conditions of certification proposed in the FSA and have been accepted by the City.

- AQ-SC3 sets forth 14 specific dust control measures.
- AQ-SC4 sets forth a process for dust plume monitoring and response that provides for monitoring of all construction activities for visible dust plumes; a directive for more intensive application of existing mitigation measures within 15 minutes of an observation that visible dust plumes have the potential to be transported off the project site; a directive for additional dust control measures within thirty minutes of such an observation; and a directive to temporarily shut down an activity that is causing emissions if additional measures do not result in effective mitigation of the problem within an hour of its initial observation. The activity may not resume until the monitor is satisfied that appropriate additional mitigation or other site conditions have changed so that visible dust plumes will not result upon restarting the shutdown source.
- AQ-SC5 sets forth specific requirements for diesel-fueled engines at the construction site to control diesel construction-related emissions.

As Dr. Greenberg testified, the conditions of certification that require aggressive fugitive dust control measures are assumed to result in 90% reductions of emissions.

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[9] The determination of significance with respect to construction emissions should be based on a consideration of the control measures to be implemented. BAAQMD CEQA Guidelines, (1999) http://www.baaqmd.gov/pln/ceqa/ceqa_guide.pdf at 14, cited in Exh. 27 at 5.

Exh. 46, section 4.7; 5/22/06 RT (Greenberg) at 155: 3-5. Dr. Greenberg testified that with control measures, there would be negligible emissions, and these would be immediately addressed. 5/22/06 RT (Greenberg) at 154: 6-11. Mr. Rubenstein echoed the opinion that with control measures, fugitive dust and particulate emissions from construction could be expected to be lower than the estimates provided. 5/31/06 RT (Rubenstein) at 97-98. Mr. Bushnell also testified that "Dust control is a standard part of construction. And engineering controls during construction include measures such as dust suppression using water hoses. They can include items up to and including the use of respiratory protection. In my experience in projects such as this, dust suppression is easily dealt with with standard construction techniques." 4/27/06 RT (Bushnell) at 126. These measures, along with the mitigation measures related to diesel fueled equipment, will protect both the general public and workers during construction.

Aggressive measures for monitoring and enforcing these control measures and state and Commission safety requirements are set forth in Conditions of Certification in the FSA that have been accepted by the City.

- AQ-SC1 requires the City to retain an onsite air quality construction mitigation manager (AQCMM) responsible for directing and documenting compliance with conditions of certification AQ-SC3, 4 and 5. This person must have full access to tall areas of construction and authority to stop any and all construction activities as warranted by applicable construction mitigation conditions. The AQCMM may only be terminated by the City with the written approval of the CPM.

- Worker Safety-3 provides that the City must hire a site construction safety supervisor responsible for coordination and implementation of all occupational safety and health practices, policies and programs.

- Worker Safety-4 requires the City to pay for a Safety Monitor who reports directly to the CBO and is responsible to verify that all appropriate CAL/OSHA and Commission safety requirements.

Further, the City will be required to develop plans, which must be approved by the CPM, that incorporate the requirements of the conditions of certification:

- AQ-SC2 requires the City to prepare an air quality construction mitigation plan which details the steps and reporting that will be undertaken to ensure compliance with AQ-SC3, 4 and 5.
- Worker Safety-1 requires the City to prepare a project construction safety and health program.
- Worker Safety 2 requires the City to prepare a project operations and maintenance safety and health program.

In addition, it is important to note that any impacts from construction would be highly localized near the project site. Exh. 15, Vol. 2 at 8.1D-7. Even using the conservatively high estimates prepared by the City, the area in which the cancer risk may exceed 1 in one million extends less than 100 meters from the facility fence line. Id. There is no evidence to suggest that there will be any simultaneous construction projects underway in that proximity to the SFERP site. Dr. Greenberg testified that there will be no simultaneous site mobilization and soil movement between the Muni Metro East Project and the SFERP. 5/22/06 RT (Greenberg) at 161-162.

In a data response to Mr. Sarvey, Mr. Rubenstein explained further (in response to a request by Mr. Sarvey asking Mr. Rubenstein to supplement his cumulative impacts analysis to assess the Muni Metro East project):

> The Muni Metro East maintenance facility was analyzed in the Final Environmental Impact Statement/Final Environmental Impact Report for the Third Street Light Rail Project (November 1998: Attachment AQ1-5). Air quality impacts during construction were summarized as follows:
>
> > "Dust and exhaust emissions occurring during construction of the [Initial Operating Segment] and new [Light Rail Vehicle] maintenance facility would be mitigated to less-than-significant level by watering the site and using exhaust controls". (FEIS/FEIR, p. S-28_)
>
> Construction of the Muni Metro East Light Rail maintenance facility is anticipated to begin this summer. Consequently, dust generating and heavy

> equipment activities are expected to be completed before construction is commenced on the SFERP facilities.

Exh. 27 at 5.

The record shows clearly that, from a public health standpoint, the construction impacts have been identified and shown to be less than significant. Aggressive and effective control measures have been identified and made conditions of certification for the SFERP. Measures have also been included in the conditions of certification for monitoring and enforcement of the control measures. The record shows that there will be no significant cumulative impacts and that insignificant impacts will be reduced further by the measures included in the conditions of certification.

2. Operation of the SFERP Will Not Contribute to Significant Public Health Cumulative Impacts.

Public health cumulative impacts from operation of the SFERP were also shown to be insignificant. To analyze cumulative impacts to public health, Staff undertook a ground-breaking exercise to assess the cumulative impacts of stationary toxic air contaminant sources in southeast San Francisco. Staff quantitatively assessed 20 facilities representing 50 individual sources, including the SFERP, the Potrero Power Plant, and the Hunters Point Power Plant, which has now shut down. Exh. 46, Section 4.7, Appendix E; 5/22/06 RT (Greenberg) at 300-1.

Dr. Greenberg explained the study and its results as follows:

> I also conducted a detailed public health cumulative risk assessment. That included 20 different facilities, including the SFERP site, Potrero power plant, all emission sources, all their turbines. The Hunter's Point plant which now has been closed, the Southeast Water Pollution Control plant, dry cleaners, gasoline service dispensing stations, et cetera. A total of 50 sources were plotted in the HARP program. That's one of the beauties of the HARP program that you can put in all these sources and produce an isopleth here showing any overlap, if it exists.
>
> I believe this is the first utility by a state agency or anyone, for that matter, using the HARP model in a cumulative risk assessment. So this is a quantitative

> risk assessment, the first time the Energy Commission Staff has provided on [sic], as opposed to a qualitative one.
>
> And, once again, what we are finding is from the SFERP site there is no significant overlap at all. Now, yes, there would be some overlap, but way way down there in the 10 to the -12, or 10 to the -13 cancer risk range. Nothing showing any significance whatsoever. Indeed, what we did find out is that there was some significant overlap due to other sources in the area between those other sources, such as the dry cleaners and the southeast water treatment plant. Those, however, have nothing to do with the SFERP site . . .

5/22/06 RT (Dr. Greenberg) at 300-01.

Dr. Greenberg's testimony describes the most important finding of his public health analysis: *that there are no overlapping impacts that result in a significant impact*. This is consistent with the explanation in the FSA that that elevated concentrations of toxic air contaminants from stationary sources tend to be quite localized and that cumulative risks are likely to occur only when multiple facilities are immediately adjacent to, or very close to, one another. Exh. 46 at 4.7-21.

It is important to note that there are no background air concentration limits for toxic air contaminants that can be used to assess the results of Staff's analysis. Exh. 38 at 2. Because the 10 in one million cancer risk threshold and the hazard index of one for noncancer acute and chronic impacts are established at an extremely stringent level designed to apply to <u>individual</u> facilities, it is not appropriate to use these standards to assess the emissions from multiple facilities.

Nonetheless, a review of Staff's results against the individual facility standards is instructive. With regard to cancer risk, Staff found that the emissions from stationary sources within the community, including the SFERP, only exceeds the 10 in one million threshold established by the BAAQMD for <u>individual</u> sources in four locations, near One-Hour Martinizing, near Chevron 0683, near the Southeast Water Pollution Control Plant (SWPCP) and near San Francisco Petroleum. Ex. 46 at 4.7-113. At the highest

level, the cancer risk is 19 in one million, slightly less than twice the level allowed for individual facilities, even though the emissions from 20 facilities, including the Hunters Point Power Plant, which has now closed, were considered. Id. Moreover, the areas where the cancer risk exceeds the individual facility level are all locations a good half mile away from the SFERP and all well away from the point of maximum cancer impact from emissions of the SFERP as calculated by the City (which occurs in the Bay) and as calculated by Staff (which occurs east of the facility boundary at the proposed construction laydown area).

These results are consistent with Dr. Greenberg's testimony that there are no areas where the impacts of the SFERP overlap with impacts of other facilities to produce a significant impact. They also support the conclusion that there are no significant cumulative cancer risk impacts from the SFERP.

Staff's cumulative impacts analysis found that even considering multiple stationary sources, including the SFERP and the now closed Hunters Point Power Plant, there are no exceedances of the chronic non-cancer individual facility threshold, and only one exceedance of the acute non-cancer individual facility threshold. The one exceedance of the individual facility threshold for non-cancer acute risk is in the vicinity of the SWPCP. Id. The acute hazard risk index near the SWPCP is 3.0, three times the individual facility level even though the emissions of 20 sources, including the now shut down Hunters Point Power Plant, are considered. Moreover, the SWPCP is roughly 2000 feet from the highest non-cancer acute impact from the SFERP located generally in the hilltop park area. See Exh. 15, Vol. 2, Figure 8.1C-1. Again, these results support the

conclusion that there are no significant non-cancer acute or chronic public health impacts from the SFERP.

The record also shows, based on a review of the key air quality conclusions of the Southern Waterfront EIR, that the impacts shown in that EIR do not change the conclusion that there are no significant cumulative air quality or public health impacts associated with the SFERP. To the contrary, the City's public health panel explained, upon reviewing appendix D, that the information from the Southern Waterfront EIR did not change the conclusions that there are no cumulative public health impacts as follows:

> Ms. Solé: You were asked, as well, whether your analysis included the impacts of projects listed in the southern waterfront EIR. Could you explain whether there's a problem in terms of your analysis and those projects?
>
> Mr.. Rubenstein: No, there isn't a problem. The question was raised about table D-7 on page D-8 of the appendix D of the southern waterfront SEIR. And the risks that are reflected there projecting for the future are related to diesel particulates.
>
> Diesel particulates are reflected in the risk numbers that Mr. Lowe discussed earlier in terms of background risks. And as he indicated, as a result of the Air Resources Board's diesel risk reduction program those numbers have been dropping significantly and are expected to continue dropping regardless of the presence or absence of any of the projects identified in the 1999 southern waterfront SEIR.
>
> So, I don't believe that the failure to explicitly reflect these individual projects affects our conclusions regarding the significance of the impacts from SFERP.

5/31/06 RT (Rubenstein) at 114-5. Moreover, Mr. Rubenstein had explained earlier that the SFERP is not a source of diesel particulate matter except for a short period during construction. 5/22/06 RT (Rubenstein) at 285-6.

It is worth noting moreover that the Southern Waterfront EIR was a programmatic EIR certified in 2001, five years ago. Exh. 92. Projects assessed in the document differ in their distance from the SFERP, their level of impact, their timing and the certainty of going forward. Id. Mr. Rubenstein performed his cumulative air impacts analysis several

years after in accordance with well established protocols, including incorporating into the analysis information regarding applications for projects received by the BAAQMD that were received subsequent to the time period covered by the ambient air quality data used by Mr. Rubenstein. 5/22/06 RT (Rubenstein) at 230: 2-12.

Finally, as explained by the City's public health witness, in the context of toxic air contaminants, rather than establishing background concentration limits, the BAAQMD has established extremely stringent individual facility standards. These very stringent standards for individual facilities in combination with regional programs to reduce air toxics, are designed to minimize public health impacts from air toxics. 5/31/06 RT (Lowe) at 84: 8-12. The SFERP comfortably meets the BAAQMD stringent individual facility standards. Id.

Monitoring data collected by the California Air Resources Board has shown decreases in key toxic air contaminants and their associated risks over the past several years in response to different control measures, particularly for mobile source emissions. Id. Total cancer risk in the Bay Area from toxic air pollutants has decreased almost by half in the past fifteen years, from 1153 in one million in 1990, to less than 600 in one million in 2005. Further, both the U.S. Environmental Protection Agency and the California Air Resources Board are instituting more stringent controls on other emission sources, such as perchloroethylene used in dry cleaning, which will further reduce the risks associated with those sources. Id. at 85. Additionally, the programs detailed by Ms. Eng and described above in the section on environmental justice to reduce diesel emissions in southeast San Francisco will further reduce the impacts from toxic air pollutant emissions in southeast San Francisco.

In addition, the City's proposed PM_{10} mitigation program will target a real ground-level source of health-affecting emissions that contains higher concentrations of hazardous materials than does the particulate matter emitted from the combustion of natural gas and this mitigation measure will address pollution at nose level where impacts are most severe. Exh. 38 at 2. And, the City's community benefits program includes a component that focuses on one of the public health issues of greatest concern in the community, childhood asthma.

Thus, there will be no significant cumulative public health impacts from the SFERP.

C. THE SFERP WILL NOT EXACERBATE PREEXISTING HEALTH ISSUES IN THE SURROUNDING COMMUNITY.

The City's public health witness also assessed impacts of the Project's emissions on preexisting health issues in the surrounding community. The results of this analysis were briefly summarized by Mr. Lowe in his introductory statement as follows:

> Emissions from the proposed facility also will not contribute to existing public health issues identified as concerns for the Bayview Hunter's Point community. These include instances of certain cancers, childhood mortality and asthma.
>
> As shown in the human health risk assessment the risks from emissions from the project were estimated using very conservative methods that are designed to account for the most sensitive individuals in the population. The estimated risks associated with emissions from the project at the point of maximum impact are well below regulatory levels of significance. Therefore, the project emissions would not be expected to have an influence on either the observed cancer incidence in the community, or an influence on those causes of childhood mortality, such as cancer or birth defects, where environmental exposures might be a factor.
>
> Some neighborhoods in southeastern San Francisco report higher rates of hospitalizations for asthma compared with other neighborhoods in the City, and compared with national statistics. Factors that may be associated with asthma include heredity; allergic reactions to common substances such as mold, dust mites and pet hair; socioeconomic factors; and environmental factors, including air pollutants.

> Particulate matter may increase the severity of asthma symptoms. However, particulate matter emissions associated with the project will be mitigated completely. Some of the chemicals emitted from the proposed facility are short-term respiratory irritants which might increase the severity of asthma symptoms. The levels of these chemicals emitted into the air would be well below acute or short-term, no-effect thresholds.
>
> These thresholds are based on the most sensitive associated with exposure to a chemical and incorporate additional safety factors for protection of sensitive individuals. Therefore, the concentrations in air are well below limits that would affect sensitive individuals. And it would not be expected to be an influence on the observed asthma incidence in the community. In addition, the project provides for a community benefits plans that will include indoor air quality measures to address several of the factors contributing to asthma, particularly the factors associated with indoor air quality. This benefits program will include improvements to indoor ventilation, cleaning or replacement of carpets, and providing vacuum cleaners equipped with high efficiency particulate air or HEPA filters; along with an educational program to address children affected with asthma.
>
> The benefits for this program will be to reduce exposure to the allergens that might be responsible for triggering asthma, and to reduce indoor air concentrations of particulates and respiratory irritants that can exacerbate asthma symptoms.
>
> As Mr. Rubenstein mentioned during his testimony, the enhanced street-cleaning program also will reduce risk to public health by reducing emissions of urban dust and generating [sic] at breathing level for cars, for trucks on neighborhood streets.

5/31/06 RT (Lowe) at 86-88. Thus, the Project will not contribute to preexisting health issues in the community, but rather will likely have a beneficial impact because of the PM_{10} mitigation/community benefits program.

D. CONTAMINATION WILL NOT RESULT IN SIGNIFICANT IMPACTS TO PUBLIC HEALTH.

Mr. Lowe, the City's public health witness reviewed the potential public health impacts from the existing site contamination, and concurred with the analysis of Dr. Greenberg: that with the conditions of certification proposed by the City, there will be no significant impacts. Mr. Lowe assessed the specific contaminants that were detected in soil and ground water and explained the potential exposure pathways to the public off-site and individuals on-site. He noted that the contaminants in question are consistent

with those typically detected at former industrial properties or brownfield sites. He testified, consistent with the testimony of other witnesses, that there are well established mitigation and risk management measures used routinely at brownfield sites that will reduce the risks to less than significant levels. 5/31/06 RT (Lowe) at 91-92.

Mr. Lowe noted that the City has agreed to appropriate health-based standards for both the off-site public and workers. He agreed that the process agreed to by the City would result in the selection of the appropriate mitigation/risk management measures, including dust control measures, and their implementation, and that with these measures there would be no significant impact on public health. Id. at 92-93. Mr. Lowe explained that he had reviewed the results of the soil sampling plan and that there would be no cumulative impacts from the chemicals detected in the soil and diesel particulate emissions during construction. Id. at 96-97. Moreover, Dr. Greenberg explained that there would be no cumulative impacts from the contamination on-site and operational impacts because there would be no concurrent site-mobilization and operations. 5/22/06 RT Greenberg at 306.

E. THE STORAGE AND USE OF AMMONIA AT THE SFERP WILL NOT RESULT IN SIGNIFICANT IMPACTS ON PUBLIC HEALTH.

Mr. Lowe testified that there would be no significant public health impacts, even in the event of a catastrophic failure involving the storage of aqueous ammonia on site. Mr. Lowe explained that the analysis undertaken in the City's offsite consequence analysis shows that even in the event of a catastrophic failure, ammonia concentrations in areas where the public could be present are no higher than 5 ppm. 5/31/06 RT (Lowe) at 88-89. Mr. Lowe also explained that the off-site consequence analysis that yielded these results used highly conservative assumptions including, for example, "a constant,

unchanging evaporation rate of ammonia from a spilled pool of 29 percent ammonia solution occurring during nighttime, under the worst case atmospheric stability conditions, but also during the maximum air temperature of 97 degrees Fahrenheit, which would occur only during daylight conditions." Id. at 88. As Mr. Lowe explained, "[t]his represents a combination of conditions that is unlikely ever to occur." Id. at 88-89.

F. THE TESTIMONY OF INTERVENORS DOES NOT INDICATE A SIGNIFICANT PUBLIC HEALTH IMPACT FROM THE SFERP.

Intervenors introduced testimony by Mr. Lynne Brown that addresses public health. Mr. Brown's resume indicates that for the past ten years, Mr. Brown has been and remains a committed public advocate. But, he has no formal training in public health or any related topic; instead, his training is in English and computers. Nonetheless, there is nothing in Mr. Brown's testimony that is inconsistent with the testimony of the City's public health experts.

Mr. Brown's testimony states that residents in Bayview Hunters Point have the highest asthma and respiratory diseases than any other place in the state of California. Exh. 57 at 3. The City has acknowledged that southeast San Francisco has relatively high rates of serious respiratory diseases. Exh. 15 at 1-5. Mr. Brown also testified that the Hunters Point and Potrero Power Plants are significant industrial polluters and should close down. Exh. 57 at 5. Again, the City agrees. Thanks to the efforts of the City and dedicated members of the community, the Hunters Point Power Plant has finally shut down, and the City is pursuing the SFERP in order to facilitate the closure of Potrero Power Plant. This is the extent of Mr. Brown's testimony as it relates to public health.

In sum, the record establishes based on substantial investigation on the part of both City and Staff witnesses that, with the proposed conditions of certification, the

SFERP will not result in either individual or cumulative significant public health impacts. The individual public health impacts of the SFERP are insignificant and do not contribute in any cumulatively considerable way to significant public health risks in southeast San Francisco. Despite the lack of any individual or cumulative significant impacts on public health associated with the project, the City has committed to PM_{10} mitigation/community benefits programs that will provide important public health benefits.

VII. The Existing Contamination at the Proposed SFERP Site Has Been Thoroughly Characterized and, With the Proposed Conditions of Certification, Will Not Create a Significant Impact.

The proposed SFERP site is a brownfield site on a reclaimed area of the Bay underlain by fill. Exh. 88 at 4. As is typical for such sites, there is existing soil and groundwater contamination. However, there is nothing unusual or particularly severe about the contamination on the site. 5/22/06 RT (Feldman) at 25:11-18; 5/22/06 RT (Greenberg) at 106: 6-16; 5/31/06 RT (Hill) at 23-4. The proposed SFERP site has been extremely well characterized. 5/22/06 RT (Feldman) at 25:11-18; 5/22/06 RT (Greenberg) at 127-8. Based on this characterization, Staff and City witnesses testified that there are well understood mitigation measures available to address the contamination on the site. 5/22/06 RT (Feldman) at 25: 11-18; 5/22/06 RT (Greenberg) at 106-107. Staff and City witnesses described the nature of available mitigation measures and testified to their effectiveness. Exh. 88 at 11-12; Exh. 46 at 4.13-6 to 4.13-7; Exh. 47 at 4-5; 5/22/06 RT (Greenberg) at 106-7; 5/31/06 RT (Hill) at 14-15). Staff and the City have agreed to conditions of certification that will ensure: 1) that the appropriate site-specific suite of measures and controls will be implemented to ensure that agreed-upon health-based standards are achieved, 5/22/06 RT (Feldman) at 29: 8-16; and 2) that the City remains in compliance with the Basin Plan for the San Francisco Bay, 5/22/06 RT

(Feldman) at 29: 17-23. The conditions of certification provide for the City to continue its efforts to address the contamination on-site in accordance with an established regulatory program. Staff and City witnesses agree that, with the conditions of certification proposed by the City, there will be no significant impacts resulting from the existing contamination on site.

A. THE PROPOSED SFERP SITE HAS BEEN THE SUBJECT OF SIGNIFICANT INVESTIGATION UNDER THE AEGIS OF THE SAN FRANCISCO REGIONAL WATER QUALITY CONTROL BOARD.

In 1998, the SFRWQCB was designated as the administering agency for a parcel that includes the SFERP site, pursuant to Health and Safety Code sections 25260-25268 (AB 2061). Exh. 88 at 4, and Exh. 89. AB 2061 provides that the administering agency shall supervise all aspects of site investigation and remedial action, including those required by state or local laws, ordinances, or regulations, and shall have sole jurisdiction over all activities that may be required to carry out such actions. Health & Safety Code section 25264(a). This includes determining the adequacy of site investigation and remedial actions. Once an administering agency determines that a site investigation and remedial action is complete, the administering agency shall issue a certificate of completion. Health & Safety Code § 25264(b). The issuance of a certificate of completion shall constitute a final determination that the responsible party has complied with the requirements of all state and local laws, ordinances, regulations and standards (LORS) that are applicable to the site investigation and remedial action for which the certificate is issued. Health & Safety Code § 25264(c).

Both prior to and since the City's acquisition of the Western Pacific Property (which includes the SFERP site, adjacent property to the east, and the Muni Metro East Site), environmental investigations of the property have been conducted. Exh. 88 at 6.

Since January 1999, after the City acquired the property and the SFRWQCB was designated administering agency, the SFRWQCB has overseen investigation and remedial design for on-site hazardous materials releases on the Western Pacific Property. Exh. 88 at 5. In 2000, on behalf of the Port, Geomatrix prepared a human health and ecological risk assessment evaluation for a parcel that includes the SFERP site using previously collected data. Exh. 88 at 7. Based on the results of the risk assessment, Geomatrix concluded that the potential health risks were at or below acceptable levels and that no remedial actions were warranted if the parcels were developed for high-density housing, commercial, light industrial, or recreational uses. The SFRWQCB approved the risk assessment in 2000. Exh. 88 at 7.

In addition, in 2000, AGS conducted a risk assessment for the adjacent MUNI Metro East site using the soil and groundwater data collected during the prior environmental investigations. The results of the risk assessment indicated that chemicals underlying the MUNI Metro East site do not pose a significant risk to on- or off-site receptors, and, therefore, "no active soil and groundwater remediation is required with the exception of capping the MUNI [Metro East] site with concrete, asphalt, or 2-foot of clean soil, and implementing risk management practices." Exh. 88 at 7. Because conservative estimates of risk to future construction workers slightly exceeded the acceptable target risk levels, risk management practices were recommended to address health and safety issues associated with proposed construction work. The risk management practices were set forth in a Risk Management Plan/Site Management Plan (the MUNI Metro East RMP/SMP). Exh. 88 at 7. Due to the presence of contamination, the City recorded Environmental Restrictions, pursuant to Civil Code section 1471, for

the MUNI Metro East site, which includes compliance with the MUNI Metro East RMP/SMP, and for the SFERP site. Exh. 88 at 7-8. The City has agreed to abide by the MUNI Metro East RMP/SMP for the SFERP site, until an updated site-specific RMP/SMP is in place. Exh. 88 at 8.

B. THE CITY HAS UNDERTAKEN SUBSTANTIAL ADDITIONAL SITE CHARACTERIZATION, WHICH INDICATES THAT THE CONTAMINATION ON-SITE CAN BE EFFECTIVELY ADDRESSED BY KNOWN MITIGATION MEASURES.

Initially, the City and Staff disagreed about whether and to what extent additional site characterization beyond what had taken place in 2000 was necessary and whether the MUNI Metro East RMP/SMP would be sufficient to address any issues posed by existing soil contamination. Ultimately, the City agreed to undertake substantial additional soil characterization. Both the City and CEC Staff presented qualified and experienced witnesses who agreed that the site has been extremely well characterized[10] and that the information that is now available provides a solid basis to conclude that the environmental condition on the site can be effectively addressed through the use of standard protocols and measures.

Mr. Feldman, a professional with over 30 years experience in the development, implementation, and consultation related to water resources and toxics and hazardous materials control programs, 5/22/06 RT at 22:5-19, indicated that "[s]ubstantial environmental investigation has been conducted at the site thus far. The investigations have indicated the character of the environmental impacts at the site. . . . In light of our knowledge from the investigation that has thus far been conducted, we know that there

[10] The fact that the site has already been extremely well characterized does not mean that no further sampling and analysis will be undertaken. To the contrary, additional sampling and analysis is underway in order to select which, among the well-known measures to address contamination, are most appropriate to use at the SFERP site, including for example, sampling and analysis to determine whether chromium found on-site includes hexavalent chromium. 5/22/06 RT (Cheung) at 33: 16-25.

are readily available and commonly applied engineering technologies and controls that can be utilized to address environmental issues at the site." 5/22/06 Tr. at 25: 11-24.

Dr. Greenberg, who has conducted site mitigation and health risk assessment at over fifty Federal Superfund and State Superfund sites, 5/22/06 RT (Greenberg) at 99: 23-25, testified:

> It was at my urging and request and with a proposed condition of certification that has since been removed that the City did, indeed, conduct this sampling and analysis. I believe this is a very thorough site sampling plan. It was reviewed and approved by myself. It was reviewed and approved by the Regional Water Board Staff.
>
> This is only a four-acre site. And if one were to just combines [sic] the number of samples, the analytes, those are the contaminants, sampled for and the various depths, add those up and compare it to the other sites of much greater size, you'll find that this site is more than adequately characterized.

5/22/06 RT (Greenberg) at 127-128.

Dr Greenberg explained also:

> In my experience this site does not present anything unusual as far as hazardous waste sites go around the state or even some of them I'm familiar with around the country.
>
> There can be only a limited number of remedial actions that can be taken. And I have catalogues [sic] some of those, not only in supplemental testimony, but in the original final staff assessment.
>
> And these would include removal of some hot spots. What we term a hot spot is an area of soil that contains particularly high levels of say PAHs, polynuclear aromatic hydrocarbons, or arsenic. And that oil then would be removed, transported to either a hazardous waste treatment facility or a disposal facility.
>
> Confirmatory sampling would then be taken at the edges of the removal area to confirm that you've got the whole hot spot.
>
> Alternatively, there can be soil gas remediation. There has been some toxic substances in vapor form found in the soil gas at the site. This could be a soil vapor extraction referred to as SVE.

> There's also contaminants in the groundwater, principally polynuclar aromatic hydrocarbons. And those can be removed by pumping and treating.
>
> You can have a combined system where you're pumping and treating the groundwater, removing contaminants, and at the same time removing contaminants from the soil gas.
>
> I'm not saying at this time which one the Regional Board will choose. But there are a limited number of remedial actions that can be proposed. They are aware of them; we're aware of them. We have discussed those as companion agencies, and we're all pretty much onboard as to what they might come up with.
>
> Mr. Ratliff: And if those remedial actions are used, is it your opinion that you would expect public health to be protected?
>
> Dr. Greenberg: Yes, I not only expect it but it would be required. And as I mentioned, the City's going to have its monitor there, and we're going to have our monitor there.

5/22/06 Tr (Greenberg) at 105-07.

Finally, even though the witness for the SFRWQCB, Mr. Hill, indicated that additional information is needed before the particular mitigation measures appropriate for the site can be identified, he was able to address in his testimony both the degree of contamination on the site and the types and efficacy of mitigation measures that could be used:

> For contaminants that are more mobile in the soil, such as fuels, we have the technology called soil –- extraction, which we apply a vacuum to the soil and basically just remove the vapors, treat them if necessary; that cleans up the soil.
>
> Turning to groundwater, if the contaminants are mobile, they can migrate, things like solvents and fuels, that are a variety of technologies what we call pump-and-treat, installing a well, pumping out the water, treating it, and then discharging it to say a storm drain or a sand – sewers; probably the most familiar method.
>
> But we also have other technologies such as permeable reactive barriers where you would install iron or some other material in a trench and allow the contamination groundwater to flow through it and remove the contaminants as it goes through the wall. Bi-degradation [sic] is a commonly used technology now, especially for fuels, but increasingly for solvents. That's an inplace method. And

> also rapid oxidation, where you introduce an oxidant such as ozone or hydrogen peroxide to actually chemically break down the compounds.
>
> For immobile contaminants in groundwater such as heavy oils or metals, treatment is much more difficult and very often those are managed in place if they're not posing a threat to beneficial uses of groundwater, and they're not threatening to daylight.
>
> The Commission also wondered if we thought that those sorts of remediation measures can be accomplished at this site while observing the performance standards. And I argue that we do that all the time in our cleanup sites.

5/31/06 RT (Hill) at 14-15.

In addition, Mr. Hill was able to discuss the degree of contamination on the site as follows:

> … In terms of the overall degree of contamination or concern at this site, I would say it's pretty typical for bayside waterfront property in San Francisco where you have some of the land has been filled; and the fill material were [sic] placed pretty much wherever they could be from wherever they [sic] could be obtained.
>
> So you have a bit of a hodge-podge in the fill. And whenever that happens you have to take a look around and see what's there.
>
> We don't see anything that's really dramatic here that would pose a particular threat in terms of human health or water quality, though.

5/31/-6 Tr (Hill) at 23-4.

C. THE CITY HAS PROPOSED CONDITIONS OF CERTIFICATION THAT WILL, WHEN COMBINED WITH EXISTING REGULATORY PROGRAMS, PROTECT PUBLIC HEALTH AND THE ENVIRONMENT AND THAT GIVE AN APPROPRIATE ROLE TO ALL RELEVANT AGENCIES.

In its proposed conditions of certification, the City has agreed to undertake a site-specific human health risk assessment (HHRA) and screening-level ecological risk assessment (ERA) and to use these to prepare a Site Cleanup Plan[11], a revised Risk Management Plan, a Site Management Plan and a Certification Report. Exh. 88 at 15-16.

[11] The City must prepare a site cleanup plan unless it obtains a waiver or no action letter from both the San Francisco Regional Water Quality Control Board and the San Francisco Department of Public Health.

These further steps essentially involve the selection of the particular measures that are appropriate to address the existing site contamination, from among the suite of known available measures; their implementation; and the documentation of their successful implementation. The implementation of these proven measures to achieve specific health-based standards will ensure the continued protection of the public health and the environment.

After some initial disagreement among the City and Staff, City and Staff are now in agreement on a process and proposed conditions of certification.[12]

The initial uncertainties stemmed in part from the interplay of various regulatory requirements. First, the CEC is in the process of licensing the SFERP under the Warren-Alquist Act. Cal. Pub. Resources Code § 25000 et seq. Pursuant to the Act, the CEC must ensure compliance with all applicable LORS and, as the lead agency under CEQA must identify and address any significant impacts of the project on the environment. In addition, as explained above, since 1999, the SFRWQCB has been designated as the administering agency and has been overseeing the site investigations and remedial actions at the SFERP site. Exh. 88 at 4. Finally, the San Francisco Department of Public Health (SFDPH) oversees compliance with Article 22A of the San Francisco Public Health Code (the "Maher Ordinance"), which requires analysis and mitigation if hazardous wastes are present in soil at locations in the City known to contain historic fill, including the SFERP site. Exh. 88 at 6.

[12] Staff waste witness Dr. Greenberg testified that he is generally comfortable with the conditions of certification proposed by the City in its May 1 testimony on contamination. 5/22/06 RT (Greenberg) at 104-105. Mr. Greenberg indicated that he would have some slight corrections to add. These have not yet been communicated to the City. In addition, Staff water witness Lindley testified that he is comfortable with the conditions of certification proposed by the City. 5/22/06 RT (Lindley) at 116:1-8.

Initial draft conditions of certification by Staff and the City largely agreed on the steps to be taken but variously suggested processes, regulatory standards and nomenclature from the Maher ordinance, the SFRWQCB, and the Department of Toxic Substances Control (DTSC). In its May 1 testimony on contamination, the City sought to synthesize the various requirements, standards, and procedures into an efficient process that gave all relevant agencies an appropriate role. Given the SFRWQCB's role as administering agency, the City considers that the additional work requested by Staff must be undertaken under the direction of the SFRWQCB. However, the City's proposed conditions of certification also give the CEC, as the permitting and lead agency under CEQA, a key role. Similarly the SFDPH has been included to effectively ensure compliance with Article 22A.

The City's proposed conditions of certification require the City to prepare and obtain approval for the following documents prior to commencement of any activities that disturb soil or the beginning of site mobilization:

- a site specific health and screening level ecological risk assessment to determine whether the constituents that are present on the site present a risk to workers, the offsite public, or the San Francisco Bay.
- a site clean up-plan (SCP) to present site-specific clean up goals and remedial alternatives selected to address any incremental health and ecological risks identified in the health and ecological risk assessment to less than significant levels. The SCP must be prepared to meet SFRWQCB requirements and Article 22A.

- a risk management plan (RMP) to govern soil and ground water handling procedures that would incorporate the requirements of Article 22A and serve as the Site Mitigation Plan under Article 22A.

The documents must be approved by the SFRWQCB and reviewed by the SFDPH for verification of compliance with Article 22A. In addition, the documents must be approved as meeting the conditions of certification by the CPM. The City cannot begin activities that disturb soil until it obtains these approvals, including approval by the CPM. Exh. 88 at 15.

In addition, prior to commencing commercial operations, the City must prepare:

- a site management plan (SMP) to govern the long term management of the environmental conditions at the site. This plan will be recorded as an Environmental Restriction on the property under Civil Code section 1471 which will run with the land and be enforceable by the state.
- A certification report.

The documents must be approved by the SFRWQCB and reviewed by the SFDPH for verification of compliance with Article 22A. In addition, the documents must be approved as meeting the conditions of certification by the CPM. The City cannot begin commercial operation until it obtains these approvals, again including approval by the CPM. Exh. 88 at 15-6.

Repeatedly during the evidentiary hearings, intervenors sought to ask which entity has the ultimate authority in the City's proposal. However, the City has crafted its conditions of certification to give each agency a meaningful and appropriate role. As to the CEC, the CPM must approve the documents as meeting the conditions of

certification. Because the City has proposed conditions of certification that give an enforcement role to both the SFRWQCB and the CEC, it is not necessary to determine in this case the precise boundaries of authority among the agencies.

1. The Proposed Conditions of Certification Will Ensure Protection of the Public Health and the Environment.

The proposed conditions of certification will ensure that both public health and the environment are protected. They require the necessary analysis to identify, from the suite of mitigations measures that are available to address the contamination at the site, those that will best address the specific risks that may exist at the site as a result of the project. As required by the conditions of certification, a Site Cleanup Plan "to address the incremental human health and ecological risks identified in the HHRA and screening-level ERA to less than significant levels" will be prepared. Exh. 88 at 15. Health-based performance standards are included in the conditions of certification that are enforceable by both the SFRWQCB and the CEC. The results of a human health risk assessment will be compared to these performance standards, and contamination that contributes to excedances of the health-based performance standards will be mitigated. The section of this brief regarding public health discusses the testimony by the City's public health witness, confirming that, with the proposed conditions of certification, there will be no adverse impacts on public health.

The proposed conditions of certification will similarly protect the environment. The proposed conditions of certification require the performance of an screening level ecological risk assessment. "Any identified threats to San Francisco Bay will be mitigated in accordance with the United States Environmental Protection Agency and the State Water Resources Control Board's approved water quality control plan, and that is

the Basin Plan for the San Francisco Bay that is administered by the Water Board." 5/22/06 RT (Feldman) at 29: 17-23. In addition, the City will have to comply with State Board Resolution 92-29. Exh. 88 at 5; see also 5/31/06 RT (Hill) at 5: 6-15. The clean up/management effort will be administered by the agency with the primary responsibility and expertise for protecting water quality, the SFRWQCB.

CEC Staff witnesses testified that with the conditions of certification, there would be no significant impacts on water quality. 5/22/06 RT (Lindley) at 143: 23. In arriving at this conclusion, CEC soil and water witnesses also made reference to conditions of certification that will address soil erosion, including use of best management practices. 5/22/06 RT (Lindley) at 160: 2-23.

Moreover, as Mr. Ratliff explained, any impacts on the Bay from contaminated soil would arise from pre-existing conditions and would not be caused by the project. 5/22/06 RT at 93:6-24; see also 5/31/06 RT (Gallardo) at 131: 2-5.

2. CEQA Caselaw Supports the City's Reliance on Mitigation Based on Compliance with Applicable Laws and Regulatory Programs, as Well as the Conditions of Certification, to Conclude that There Will Be No Significant Impacts from the Project.

As described above, the proposed conditions of certification provide for the City to continue its efforts, begun in 2000, to address the contamination on site pursuant in accordance with the AB 2061 process. They also incorporate compliance with Article 22A. Thus, in addressing the contamination on site, as in most other disciplines, the proposed SFERP site has been and will continue to be subject to numerous existing regulatory programs and environmental laws that will, in combination with the project-specific conditions of certification, guarantee that the project will not result in any

significant impacts to the environment. Reliance on environmental laws and regulatory programs as mitigation of environmental impacts is well supported by CEQA caselaw.

For example, *Sundstrom v. County of Mendocino* (1988) 202 Cal.App.3d 296, 308, concerned a negative declaration for a private sewage treatment plant, which required that the project receive approvals from and comply with the regulations of the local Regional Water Quality Control Board, the Department of Public Health, and the regulations of the Air Pollution Control Board. Id.at 301. The court upheld certain mitigation measures—specifically compliance with air and water quality standards—holding that conditions requiring compliance with environmental laws and standards are "common and reasonable" mitigation measures. Id. at 308. Where the lead agency possesses "meaningful information reasonably justifying an expectation of compliance . . . [and] compliance would indeed avoid significant environmental effects, the conditions [are] proper." Id. at 308-309 (internal citations and quotation marks omitted).

Likewise, the court in *Leonoff v. Monterey County Bd. of Supervisors* (1990) 222 Cal.App. 3d 1337, 1355, followed *Sundstrom* to hold that mitigation measures requiring compliance with environmental regulations are proper where the public agency has evidence "reasonably justifying an expectation of mitigation." Id. In *Leonoff*, the court upheld a negative declaration for a contractor's service center located in an area zoned for commercial uses that included, among other mitigation measures, a requirement that the project comply with environmental laws on registering hazardous materials and monitoring underground tanks for leaks. Id. at 1356-1357.

Accordingly, the fact that the proposed SFERP facility will comply with a myriad of existing environmental laws and regulatory programs regarding soil contamination, as

well as air and water quality, hazardous materials handling and storage, and worker health and safety, to name a few, as well as the conditions of certification imposed on the project by Staff and agreed to by the City, is substantial evidence that any environmental impacts that might arise from the project will be mitigated to a less than significant level.

D. INTERVENORS ARGUMENTS THAT THE CONTAMINATION ON THE SITE PRECLUDES LICENSING OF THE SFERP AT THIS TIME ARE MISPLACED.

Intervenors have tried to characterize routine, well-understood environmental conditions on the site as an intractable problem that raises characterization, public input, and cumulative impacts concerns. These charges are unfounded.

1. The City is Not Improperly Deferring the Identification of Mitigation Measures to Address the Contamination on the Site.

Intervenors contend that the City is inappropriately postponing the identification of mitigation measures to the post-certification phase and suggest that the City purposefully delayed in preparing a health risk and screening level ecological assessments. These claims are contrary to the law and the record. The proposed conditions of certification are consistent with CEQA. Moreover, the record evidences a concerted effort by the City to address the concerns of the one party that engaged the contamination issues substantively, CEC Staff.

a. The proposed mitigation measures are consistent with CEQA.

Numerous cases have held that, where an agency has identified feasible mitigation measures and committed itself to mitigation of potential significant impacts, specific mitigation measures to be used may be selected after the project has been approved.

CEQA requires agencies to adopt feasible mitigation measures to substantially lessen or avoid otherwise significant adverse environmental impacts. Cal. Pub. Res. Code § 21002. Environmental impact reports ("EIR") must describe feasible mitigation

measures for each significant environmental impact identified in the EIR. Cal. Pub. Res. Code § 21100(b)(3), 14 Cal. Code Regs. § 15126.4. Regarding the timing of determining the appropriate mitigation measures, CEQA Guidelines Section 15126.4(a)(1)(B) states that "formulation of mitigation measures should not be deferred until some future time." 14 Cal. Code Regs. § 15126.4(a)(1)(B). However, the Section also states that for situations in which multiple measures may be available to mitigate a particular type of harm"measures *may specify performance standards* which would mitigate the significant effect of the project and which may be accomplished in *more than one specified way*." Id.; emphasis added.

CEQA case law supports agency decisions to approve projects that provide for after project approval of the specific control measures to be used. A seminal case, *Sacramento Old City Assn. v. City Council* (1991) 229 Cal. App. 3d 1011, explained that "for the kinds of impacts for which mitigation is known to be feasible, but where practical considerations prohibit devising such measures early in the planning process . . . the agency can commit itself to eventually devising measures that will satisfy specific performance criteria articulated at the time of project approval. Where future action to carry a project forward is contingent on devising means to satisfy such criteria, the agency should be able to rely on its commitment as evidence that significant impacts will in fact be mitigated." *Sacramento, supra*, 229 Cal. App. 3d at 1028-30.

In *Sacramento*, the court upheld approval of a major project for which an EIR had been prepared, without identification of the particular mitigation measures that would be utilized to address an identified parking problem. The Court explained that seven alternative measures were identified and that the seriousness of the problem was

recognized in the EIR. The court ruled that the EIR was sufficient. The court distinguished an earlier case, *Sundstrom, supra,* 202 Cal. App.3d 296, discussed further below, on the grounds that 1) *Sundstrom* involved a negative declaration where the potentially serious environmental problems were not recognized; and 2) the county in *Sundstrom* approved the project without considering or addressing *any* mitigation measures.

Several cases rely on *Sacramento* to come to a similar conclusion. In *Endangered Habitats League, Inc. v. County of Orange* (2005) 131 Cal. App. 4th 777, 793-796, for example, the court ruled on a challenge to an EIR by an environmental group on the grounds that mitigation measures were inappropriately deferred. The Court agreed with the environmental group that the proposed mitigation measures for construction noise and related impacts were inadequate. As to that subject, the Court explained: "this mitigation measure does no more than require a report be prepared and followed, or allow approval by a county department without setting any standards." Id. at 793.

However, the Court upheld the following mitigation measures against the challenge that mitigation was improperly deferred:

- a construction vehicle plan had to be developed and approved prior to issuing grading permits, and the EIR provided that the plan must assure public safety, restrict the number of daily trips and limit or avoid them during peak hours, set up clearly marked no passing zones, and use flaggers at site entrances.

- a fuel modification plan had to be prepared that complied with Orange County Fire Authority guidelines for such plans, and that required approval by the Orange County Fire Authority.

- mitigation of gnatcatcher habitat from the impacts of construction activities because the EIR set out the possibilities for mitigation: on-site or off-site preservation of similar habitat at a ratio of at least 2:1, or one of several possible habitat loss permits from relevant agencies.

- a tree loss mitigation measure that required a tree restoration, maintenance, and monitoring plan to be prepared and approved prior to issuing grading permits. The plans was required to detail long-term maintenance and monitoring, include requirements for replacing procedures, and include a contract with a certified arborist for at least ten years. The arborist must make reports throughout the year and must be given decision-making power over tree care and maintenance.

- the preparation of a project water quality plan to reduce discharge of storm water runoff that was required to incorporate best management practices to address contaminated runoff from the project.

Id. at 794-797; see also *Defend the Bay v. City of Irvine* (2004) 119 Cal. App. 4th 1261, 1275; and *Rio Vista Farm Bureau Ctr. v. County of Solano* (1992) 5 Cal. App. 4th 351, 377.

In the instant case, every one of the witnesses who testified agreed that, based on the site characterization undertaken to date, it is possible to conclude that the contamination on-site contains nothing extraordinary and that there are known and effective mitigation measures available to protect the public health and the environment. As in *Sacramento*, the importance of the issue has been identified and the particular mitigation measures that are available and must be analyzed going forward are identified.

As in *Endangered Habitants League*, which involved a concern about contaminated run-off similar to the instant case, the City must prepare a Drainage, Erosion and Sedimentation Control Plan (DESCP) that ensures protection of water quality and soil resources and all linear facilities for both the construction and operational phases of the project. Exh. 46 at 4.9-36, Soil & Water-1. The DESCP must include Best Management Practices (BMPs), including

> measures designed to prevent wind and water erosion in areas with existing soil contamination. Treatment control BMPs utilized during construction should enable testing of stormwater runoff prior to discharge to San Francisco Bay. If

> runoff has unacceptable levels of contaminants including metals, TPH, or PAH constituents, the runoff must be treated to acceptable levels prior to discharge to the Bay, which include multiple tank media filtration or other BMPs. The maintenance schedule should include post-construction maintenance of erosion control BMPs applied to disturbed areas following construction.

Id. at 4.9-37.

In fact, the City has committed to more in this case than the relevant entities did in either *Sacramento* or *Endangered Habitats League*. The City proposed conditions of certification include a specific health-based standard for on-site workers and the off-site public. Moreover, the City has subjected itself to the approvals of both the CEC, in its capacity as leading agency under CEQA, and the SFRWQCB, in its capacity as administering agency and the agency responsible for assuring water quality in the Bay. Further, site mobilization cannot begin before key assessments have been undertaken and specific mitigation measures are identified to ensure that site mobilization is undertaken safely, and the SFERP cannot commence long-term operations unless the specific measures to address potential long-term risks are in place.

Moreover, Dr. Greenberg explained some of the rationale for conducting site specific work after licensing as follows: "A [sic] applicant sometimes needs to know whether they have a project in order to go forward, which can be very expensive, depending on the site activities. It would not be prudent, certainly, to go forward if there was no project. So first there really should be a project." 5/22/06 RT (Greenberg) at 124: 11-18.

Intervenors may attempt to rely on pre-*Sacramento* cases such as *Sundstrom, supra,* 202 Cal. App. 3d at 306, to argue that deferral of the selection of mitigation measures until after project approval is inappropriate. In *Sundstrom*, the applicant was

required as a condition of its permit to prepare a hydrological study evaluating the project's potential environmental effects and proposing any necessary mitigation measures. Mitigation measures recommended by the study were to be incorporated as requirements of the use permit. Id. The Court determined that this scheme constituted inappropriate deferral of the identification of mitigation measures.

However, the City's SFERP project is easily distinguishable from *Sundstrom*. Unlike the case in *Sundstrom*, the site has been very well characterized and the existence of contamination has been thoroughly detailed and acknowledged. In addition, every expert to address the topic has testified that there are well-known and effective mitigation measures to address the contamination on the site. These mitigation measures have been described by City, CEC Staff, and SFRWQCB witnesses. In addition, the City has committed to pre-established health-based performance standards.

b. The City Has Not Sought to Delay Addressing the On-Site Contamination but, Rather, Has Cooperated with Staff to Address the Matter.

The insinuation that the City purposely delayed undertaking site characterization is also unfounded. Until after the FSA workshop, it was the City's position that the site had already been adequately characterized and that a valid health and ecological risk assessment existed for the site. Exh. 15 at 8.9-10-13; 8.12-17 and 8.12-26; 8.13-7-9, 8.13-16-17 and 8.13-24; and 8.14-18-20; exh. 19, response 184; exh. 27, response 1-17. This position was not unreasonable. After all, a site characterization and a public health and ecological risk assessment were recently undertaken for a parcel that included the proposed SFERP site and had been approved by the administering agency for the parcel, the SFRWQCB.

Given the various requests by CEC Staff and intervenors, the City did agree early on to undertake some additional analysis of samples taken during a geotechnical investigation and provide the results. However, it was only after the PSA workshop, after the results of the analysis of the geotechnical borings became available, and then again at the FSA workshop, that the City became aware of Staff's firm position that the prior work was insufficient. Once the position of Staff became clear, the City worked with Staff and the SFRWQCB to undertake substantial additional sampling, giving intervenors several opportunities to comment on the proposed sampling plan. Thus, the City did not purposefully delay undertaking additional studies. Rather, after it was unable to persuade Staff that reliance on the prior work would suffice, the City, with input from Staff and the SFRWQCB, developed a mutually acceptable plan to address the contamination on site.

2. The Sampling Was Extensive and Well-Planned.

Intervenors suggested through their cross examination that the sampling undertaken by the City under the aegis of the SFRWQCB and Staff was inadequate. They argue that a random grid sampling plan would have been preferable and that a focus on subsurface soil was inappropriate. These claims are contrary to the record.

Dr. Greenberg explained why a random grid sampling plan was not appropriate for the site:

> [I]t was not necessary to put a grid down and sample on 100-foot or great [sic] grids because there was already some preliminary data from the soil borings that were taken in August of 2005 for soil characterization for construction. And those were analyzed as both some discrete samples and some composites.
>
> So, we already had some existing site information and one of the tenets of site characterization is to utilize that data to determine where you want to place additional samples. So, it's known as directed sampling as opposed to a random sampling.

> And we wanted to make sure we had groundwater sampled that would be down-gradient of the site, and we wanted to make sure that we had some other samples near some previously identified spots, and we wanted to make sure we had samples in the southern portion of the site where soil borings for construction purposes had not been obtained.
>
> So I think it's a very well characterized site.

5/22/06 RT (Greenberg) at 128-129.

Intervenors suggested through their cross examination that the sampling did not adequately address surface soil conditions, particularly in light of the existence of the cement batch plant,[13] because the uppermost samples were taken at six inches rather than directly on the surface. City witnesses and Dr. Greenberg explained why the sampling was appropriate:

> Typically when you do a sampling program and I don't know the specifics of the proteocols [sic] that were used on this sampling program, but when you take your sample it's from zero to six inches. Or, you know, maybe it's from two to eight inches, or something like that.
>
> And that is intended to give an idea of what the conditions are in the surface soil It doesn't necessarily mean it's right at that, you know air-to-surface interface.
>
> And when you're going through and you're doing site construction activities, you know, typically you need to grade the site. You are going to be, you know, moving that top six inches of soil.
>
> So to represent it in that soil column is appropriate.

[13] Intervenors have also suggested that the City attempted to purposefully hide the existence of contamination on the site because it did not, in its May 1 testimony, describe litigation against the cement batch plant owner that alleges that the owner has polluted the existing site, adjacent properties and the San Francisco Bay. However, the May 1 testimony does not detail the history of activities on the site that resulted in contamination; instead it discusses the efforts to date to characterize and assess risks on the site and proposes a process and conditions of certification to address the issue going forward. Exh. 88. The existence of the cement batch plant is mentioned in the May 1 testimony. Exh. 88 at 3. Moreover, the complaint was filed in July 2005. Exh. 90. This means that any contamination resulting from the allegations was included in the results of the sampling undertaken in February 2006. See Exh. 42. Finally, the very exhibit introduced by Mr. Sarvey includes a press release from the City Attorney from the time that the complaint was filed. Exh. 90. It is absurd to say that the City is trying to hide a fact that it sought to publicize in a press release, which is in fact still posted on the website of the City Attorney.

> Hearing Officer Fay: So, you anticipate that information about that soil will be available prior to soil disturbance.
>
> Ms. Gallardo: The information about that soil is already available based on the sampling program that was conducted.

5/22/06 RT (Gallardo) at 75-76.

In fact, the final field sampling report provides regarding the uppermost sample: "The first sample will be collected just below the surface at approximately 6-inches." Exh. 44 at 3. This description is consistent with Ms. Gallardo's description of surface soil sampling practices.

Further, Dr. Greenberg explained why a focus on subsurface soil was appropriate:

> I would like to reassure the public that when doing site characterization sometimes you do sample at the surface and sometimes you don't. This is a clear case where you don't.
>
> Because I did inspect the site. I was there several times, and I was there during the initial first day of sampling.
>
> We know what's on the surface. It's cement dust, old cement dust and it's, in fact, there's lots of it there and there's piles of it there. It would serve no useful purpose to analyze the surface because we already know what's there, and it has to be dealt with.
>
> What we wanted to know was what was below that artificial layer.

5/22/06 RT. (Greenberg) at 120-121.

3. The SFRWQCB Testimony Supports the Conclusion that the Site Has Been Adequately Characterized.

Intervenors also used a document filed by the SFRWQCB in opposition to their subpoena as evidence that the site has not be adequately characterized. The response states that the SFRWQCB had only received "raw data that are inadequate to allow any determination about corrective action measures" and that testimony regarding cleanup at

this point would be "purely speculative." Objection to Request for Subpoena of Nancy Katyl California Regional Water Quality Control Board at 2 (Objection).

The Objection is not sworn testimony but rather an advocacy document seeking to avoid the necessity by the SFRWQCB for presenting a witness. Ultimately, notwithstanding the statements in the Objection, a witness for the SFRWQCB did appear. Moreover, although he indicated that more information is required to identify the particular mitigation measures that would be appropriate to use on the SFERP site, Mr. Hill was able to describe the types of mitigation measures that could be used. 5/31/06 RT (Hill) at 14-15. In addition, Mr. Hill was able to discuss the degree of contamination on the site. 5/31/-6 RT (Hill) at 23-4.

Moreover, asked directly with reference to the Objection whether his testimony was speculative, Dr. Greenberg explained that it was not:

> Mr. Boyd: … Dr. Greenberg, is your testimony also purely speculative?
>
> Dr. Greenberg: Mr. Boyd, no, it is not. . . . [F]irst of all, Mr. Boyd, the Regional Board is entitled to its own opinion on this. And sometimes the Commission Staff will disagree . . . Right now I am testifying, and I specifically took 30 seconds out in the beginning to talk about my experience and training to point out that it's my years of training that allow me to make this – to give this testimony. And it is not speculative unless I come out and say that I feel that it would be speculation.
>
> This is not an unusual site, Mr. Boyd. There is nothing here that is so special. The contaminant levels are not extraordinarily high, certainly when you compare them to other sites that I have been involved in.

5/22-06 RT (Greenberg) at 135-137.

The City's public health witness, who has over 25 years experience assessing the potential for adverse effects to human health associated with chemical contaminants in

the environment, 5/31/06 RT (Lowe) at 78: 21-24, also stressed that his conclusion that public health can be protected is not speculative:

> MR. BOYD: Without this isn't any testimony on the impacts on public health speculative at this time?
>
> MR. LOWE: I've reviewed the data for the SFERP site as presented in the 2006 field investigation report; and based on that information, based on the information from the adjoining Muni site, and taking into consideration a wide range of brownfield sites I was able to come to the conclusion that there would be no significant impacts to the public health either offsite or for workers when looking at the nature and distribution of that contamination, and the mitigation measures that have been proposed and are agreed to by the City.

5/31/06 RT at 111-112.

The bottom line is that, pleadings and arguments by the attorneys aside, the expert testimony in this case is remarkably consistent: the site has been adequately characterized; there are known mitigation measures that can address the contamination that exists on the site; and the process and performance standards incorporated in the conditions of certification will ensure that public health and the environment are protected.

4. The Process Has and Will Continue to Provide for Adequate Public Participation.

Intervenors suggest that the process in the proposed conditions of certification will not provide for adequate public participation. This concern is also unwarranted. Intervenors cast this concern in the first instance as a CEQA problem. The consistency between the proposed conditions of certification and CEQA are discussed above. As to the facts, the reality is that intervenors have had an ample opportunity for public participation during the on-going licensing proceedings, and intervenors will have three levels of opportunity for public participation during the compliance phase.

a. Intervenors Have Had Ample Opportunities to Address the Contamination On-Site in the Licensing Proceedings

As Dr. Greenberg testified, intervenors have had ample opportunity for public participation during the current evidentiary process: "there has been ample opportunity for the public to participate in this process through staff workshops, through the posting of the sampling and analysis plan on the Commission's website." 5/22/06 RT (Greenberg) at 124-125.

In fact, the opportunity for the public to participate began well before the workshops and has been extensive throughout the CEC process. The City in Supplement A, described the contamination on the site, and its initial position to rely on existing analyses and the MUNI Metro East RMP/SMP to address it. See. Exh. 15 at 8.9-10-13; 8.12-17 and 8.12-26; 8.13-7-9, 8.13-16-17 and 8.13-24; and 8.14-18-20. This position was reiterated in several data responses. See Exh. 19, response 184; exh. 27, response 1-17. The MUNI Metro East RMP/SMP, which the City intended to use for the SFERP site, was provided as part of Supplement A. See Exh. 15, Volume 2, appendix 8.13. The Final Site Characterization/Corrective Measure Study and Article 22A Soil Characterization Report for the MUNI Metro East Site was provided in response to a CEC data request in June of 2005. Exh. 19, response 184. The results of soil analysis undertaken in conjunction with the geotechnical investigation were provided in October 2005. Exh. 32 and 33. The health and ecological risk assessment for the Port site, which includes the SFERP site, was provided in November 2005. Exh. 41.

After the initial difference of opinion between the City and CEC Staff was identified at the PSA workshop, intervenors had ample opportunity for public input through the comment process, in the final staff assessment workshop and at the

evidentiary hearings. Contemporaneous with providing the drafts to the regulatory agencies, the City circulated to the service list and filed with the Commission no less than three drafts of the field sampling plan on December 20, 2005, December 23, 2005, and January 24, 2006, before a final sampling plan was also circulated to the service list and docketed on February 14, 2006. The intervenors never indicated any dissatisfaction with the draft plans. Parties were given the opportunity to submit additional testimony on contamination after the results of the additional sampling was undertaken and after CEC Staff submitted supplemental testimony on the matter. Intervenors again failed to avail themselves of that opportunity even when their deadline was extended by ten days. Finally, intervenors declined to bring their witnesses to the evidentiary hearings.

Intervenors claimed during the hearing that there was insufficient information for their experts to testify about the contamination on the site. This claim is specious. Even if, in fact, there had been inadequate information to form conclusions about the condition of site, nothing precluded intervenors from putting on expert witnesses to so testify. Moreover, this self-serving claim is directly at odds with the testimony of both City and Staff experts. It is also at odds with the significant amount of information that was provided during the proceedings during the past two years.

The fact that intervenors failed to use the myriad of opportunities to engage substantively the issue of contamination in the proceedings to date does not provide a basis to conclude that they could not. In contrast to intervenors, CEC Staff energetically engaged the City to address substantive issues and persuaded the City to undertake substantial additional work and devote substantial additional resources to address their concerns.

b. Intervenors Will Have Opportunities for Input At Three Levels Post Licensing.

As Mr. Feldman explained, three levels of future public input will be available: before the CEC, before the SFRWQCB, and before the City. 5/22/06 RT (Feldman) at 35-37. The compliance phase of CEC proceedings includes the public filing of key documents on the CEC website. In addition, as Hearing Officer Fay explained, intervenors have the opportunity to file challenges to the work being done by the compliance Staff. 5/22/06 Tr (Fay) at 40:2-4.

Mr. Hill for the SFRWQCB explained the opportunities for public input available before his agency. Mr. Hill explained that under recently-developed public participation tools, the SFRWQCB tailors the public participation process to the level of interest and severity of contamination associated with a particular site. 5/31/06 RT (Hill) at 9-10. Mr. Hill explained that opportunities for public participation include initial notices, thirty-day public comment periods for key reports, fact sheets, information reports, and responsiveness summaries if the public does submit comments. Id.

Last, but not least, the applicant in this case is not a private developer, but rather the City and County of San Francisco. The City must obtain approval for its actions in a myriad of public forums depending on the nature and degree of the activity in question. Further, the City is subject to very broad public access requirements, including the San Francisco Sunshine Ordinance. San Francisco Administrative Code, Chapter 67. Thus, the intervenors' suggestions that the approach to address soil contamination proposed by the City will not provide for adequate input by the public is unfounded.

5. There is No Evidence That the Contamination on Site will Result in Cummulative Impacts.

Intervenors suggest that the assessment of the contamination on-site does not include an adequate cumulative impact analysis. This suggestion also lacks merit. Intervenors never clearly articulated what kinds of cumulative impacts should have been, but were not, addressed. The two areas that have the potential to result in cumulative impacts are air quality/public health impacts from airborne contaminants during construction and water quality/biological impacts from erosion of contaminants during construction.

As to air quality/public health impacts, the City's public health panel testified conclusively that there would be no significant cumulative impacts:

> Mr. Lowe: . . . there would be no cumulative impact between the chemicals detected in soil and diesel emissions.
>
> . . .
>
> Mr. Sarvey: if you're speaking about soil contamination that was detected in the field sampling program that was conducted February 2006, yes, I have reviewed that document.
>
> Mr. Sarvey: And you're confident that there will be no impacts to the offsite public?
>
> Mr. Lowe: Yes, I am.
>
> . . .
>
> Mr. Sarvey: . .. Did you prepare a cumulative public – or analysis of impacts from all the sources in the area for health risks?
>
> Mr. Lowe: I reviewed the cumulative impact analysis produced by the Energy Commission, and I concur with its findings. In addition, I also looked at the potential impacts from the SFERP facility in light of that analysis, in light of the information concerning potential risks from existing sources of toxic air contaminants, principally mobile sources.

5/31/06 RT (Lowe) at 96-99.

With regard to water quality/biology impacts during construction, CEC Staff explained:

> And to mitigate for any potential impacts from soil migrating from the site, we've also asked and included in our conditions of certification that the project employ a treatment control BMP that would be at the downstream end of the site that would allow for samples to be collected; and to determine whether or not there are any adverse impacts to that water before it's released to San Francisco Bay.
>
> So that's how we covered the potential for if some soil leaves the site, it would be captured in this ultimate treatment control BMP. And we're thinking of like a medium filtration type BMP, or potentially a sediment basin that would only discharge to the Bay and under some kind of a pumping condition.
>
> Mr. Sarvey: The Muni metro site that's adjacent to the SFERP, and construction will be occurring at the same time as the SFERP. Have you done a cumulative analysis to determine impacts to water quality from both of these projects together?
>
> . . . .
>
> Dr. Greenberg: Mr. Sarvey, you haven't directed it to anyone here, so there may be multiple answers. But my information is that there will not be concurrent site mobilization and soil movement; that the Muni site will be done with their site preparation activities and soil movement by the end of the summer. And then it will be just building construction on the site. And that certainly site mobilization or any remediation prior to site mobilization on the SFERP site will be months after that. So there will not be concurrent soil disruptions on the sites.

5/22/06 RT (Lindley and Greenberg) 160-1.

Moreover, as Mr. Franck explained, potential cumulative impacts on water quality were evaluated qualitatively in Supplement A. Moreover, the City is complying with the requirements of the Port's stormwater program, which are designed to minimize the incremental projects taking place on Port properties:

> Mr. Sarvey: Have you done a cumulative analysis to assess the impacts from this increased runoff for water contamination or any other environmental concern?
>
> Mr. Franck: We have evaluated cumulative effects in section 8.14-9 of the supplement A, which is exhibit 15. The analysis was qualitative. We looked at the effects on stormwater as referred to in the question, our project along with other

> reasonably potential future projects in the area, which includes other development of the Port.
>
> We are following the Port's stormwater program, because we are part of Port property. We don't expect individual cumulative stormwater impacts for this particular project because we discharge stormwater to the vegetative swale. And our impacts are not necessarily cumulative along with these other projects that are discussed.
>
> I do want to mention that the Port stormwater program is designed to minimize the incremental, what might be small effects from all of the individual projects going on at the Port. And by participating in that, I believe that we are participating in a mitigation measure for cumulative impacts.

5/22/06 RT (Franck) at 188-9:.

This record shows that there will be no cumulative impacts on water quality/biology because there are measures in place to ensure that the SFERP construction and operation does not result in significant impacts on water quality and because there are no projects in the vicinity that will undertake site mobilization at the same time as the SFERP.

VIII. Both the CEC Staff and the City Have Concluded That the Transportation, Use, Handling, and Storage of Hazardous Materials Will Not Present a Significant Impact.

Staff and City witnesses agree that, with the conditions of certification set forth in the FSA including minor modifications suggested by the City and accepted by Staff, the transportation, use, handling, and storage of hazardous materials will not present a significant impact.

The FSA sets forth the Commission Staff's overall conclusion on the acceptability of the SFERP's use of hazardous materials as follows:

> Staff's evaluation of the proposed project (with staff proposed mitigation measures) indicates that hazardous materials used would not present a significant impact to the public. With adoption of the proposed conditions of certification, the proposed project will comply with all applicable laws, ordinances, regulations and standards.

Exh. 46 at 4.4-1.

The Commission Staff expert on Hazardous Materials, Dr. Alvin Greenberg, testified that the risk of the entire process of utilizing all hazardous materials at the proposed SFERP would be without significant risk to either the workers at the proposed power plant or the general public.

> … My conclusion is that the City complies – implements, rather, their proposed mitigation measures and accepts and do (sic.) adopt the conditions of certification proposed by staff, the use, storage and transportation of hazardous materials at this proposed power plant would be without a significant risk to workers or the public.

4/27/06 RT (Greenberg) at 187: 16-23.

Likewise the City's expert witness Ms. Parker sponsored evidence which concludes that the use of hazardous materials at SFERP would have insignificant impacts on the environment and the public.

> With construction in accordance with applicable laws and regulations, provision of secondary containment for storage and loading facilities, preparation of a HMBP, preparation of a SPCC plan, and preparation of an RMP, discussed in Subsections 8.12.8.2.1 through 8.12.8.2.3, potential public health and environmental impacts related to the use of hazardous materials and regulated substances are mitigated to a less than significant level.

Exh. 15 at 8.12-27.

A. PROJECT HAZARDOUS MATERIALS.

A maximum of approximately 38,815 gallons and 100 pounds of hazardous materials and regulated substances will be stored and used at the SFERP. Most of the hazardous materials that will be used for the project are required for treatment and laboratory analysis of the cooling water, facility maintenance, wastewater treatment, and lubrication of equipment or will be contained within transformers and electrical switches. The largest quantity, 21,000 gallons, is Mineral Transformer Insulating Oil. Exhibit 15 Table 8.12-4. This substance is "mineral oil. But it is far less hazardous and it's not

consumed in the process, so it is not expected to contribute much to the transportation risks, due to both its lack of hazardous characteristics and the infrequency of delivery." 4/27/06 RT (Parker) at 173: 7-15.

The only regulated substance that will be used for the project is aqueous ammonia.[14] There will be no more than 10,000 gallons of aqueous ammonia on site at any given time. Exh. 15 at 8.12-17. The use of hazardous materials is regulated by federal, state, and local governments by means of a thorough and integrated regulatory process that addresses transportation, transfer, storage, utilization, and emergency management phases. Exh. 15 Table 8.12-1. The regulatory process involves some 14 federal, state, and local statutes, rules and ordinances.

The City and Staff agree on all nine conditions of certification set forth in the FSA, which provide the mitigation to reduce any potentially significant impact from the utilization of hazardous materials to insignificance.

B. BOTH STAFF AND THE CITY HAVE CONCLUDED THAT THE USE OF THE ONLY REGULATED SUBSTANCE, AQUEOUS AMMONIA, WILL BE ACCOMPLISHED WITH INSIGNIFICANT RISK TO THE PUBLIC EVEN IN THE EVENT OF AN OFF-SITE ACCIDENTAL RELEASE.

The conclusions of Staff and City regarding the insignificant risk to the environment and public on the utilization of aqueous ammonia at the SFERP are the result of a comprehensive review of the on-site use and potential off-site release of aqueous ammonia; the possibility of the cumulative impacts between the use of aqueous

[14] Aqueous ammonia (29 percent ammonia in aqueous solution) is the only acutely hazardous material proposed to be used or stored at the SFERP in quantities exceeding the reportable amounts defined in the California Health and Safety Code, section 25532(j). Aqueous ammonia will be used for controlling oxides of nitrogen (NOx) emissions through selective catalytic reduction. The use of aqueous ammonia significantly reduces the risk that would otherwise be associated with use of the more hazardous anhydrous from of ammonia. Exh. 46 at.4.4-1.

ammonia at the SFERP and use of other hazardous materials in the surrounding area of the SFERP; and the transportation of aqueous ammonia to the site.

1. The SFERP Utilization and Storage of Aqueous Ammonia on Site Will Not Result in a Significant Impact.

Based on conservative off-site consequence analyses, City and Staff witnesses agreed that the utilization of aqueous ammonia on the SFERP will not pose a significant risk because even in the event of a worst case catastrophic failure, there would be no significant impacts on the public.

The FSA sets forth Staff's general conclusion that the impact of utilizing aqueous ammonia at SFERP has an insignificant impact to the environment and insignificant risk to the public:

> staff concurs with the applicant's modeling and conclusions and believes that due to the engineering controls proposed by the applicant and those required by staff for the storage and transfer of aqueous ammonia, any accidental release of aqueous ammonia at the project site will not cause a significant impact. Therefore staff concludes that the use, storage, and handling of aqueous ammonia proposed for this project will not represent a significant risk to the public.

Exh. 46 at 4.4-13.

Dr. Greenberg expanded on this conclusion on the stand:

> According to these modeling results, the Energy Commission's level of significance (75 ppm) would not be reached at any off-site location. Since the lowest odor threshold for ammonia is about 5 ppm, it is doubtful that any odor would be noticed by any residential receptor should an accidental release occur. Therefore staff concurs with the applicant's modeling and conclusions and believes that due to the engineering controls proposed by the applicant and those required by staff for the storage and transfer of aqueous ammonia, any accidental release of aqueous ammonia at the project site will not cause a significant impact. Therefore staff concludes that the use, storage, and handling of aqueous ammonia proposed for this project will not represent a significant risk to the public.

Id.

The City's analysis also showed that even in a worst case accident, there would be no significant impact to the public:

> Based on this conservative modeling analysis, the worst case accident is not expected to result in an offsite release greater than 5 ppm to the north, south, or east of the site. Thus offsite concentrations in publicly accessible areas will be below 5 ppm. Offsite concentrations of greater than 2,000 ppm could occur to the west of the site approximately 35 feet onto the proposed MUNI Maintenance and Operations Center, which will not be accessible by the public. Since the general public will not be exposed to ammonia concentrations above 5 ppm during a worst-case release scenario, the storage of aqueous ammonia onsite will not pose a significant risk to the public. The Applicant will install ammonia sensors to activate audible alarms and flashing lights to alert MUNI and SFERP personnel should a spill occur.
>
> Since the general public will not be exposed to ammonia concentrations above 5 ppm during a worst-case release scenario, the storage of aqueous ammonia will not pose a significant risk to the public.

Exhibit 15 at 8.12-26.

The City's Hazardous Materials expert Ms. Parker testified to the meaning of the results of the analytical mathematical model used for Off-Site Consequences Analysis (OCA), concluding that the ammonia concentration would have no negative health impacts on the public and that the risk to the public is insignificant.

> In support of the application for certification an offsite consequence analysis, OCA for short, was performed to assess the potential impacts of a catastrophic release of ammonia on the public. The OCA used modeling to simulate air dispersion of a plume of ammonia from a worst case release event. Worst case would be release of the full volume of the ammonia storage tank. With the concurrent failure of a secondary containment system designed to hold the release. The nature of the OCA was conservative. The results of this conservative OCA indicate that even in the event of a catastrophic release at the fencelines for areas accessible to the public, ammonia concentration levels will be below 5 parts per million.
>
> These results indicate that even with the use of 29 percent aqueous ammonia, in the event of a catastrophic release, the ammonia plume would not impact public receptors. And that the risk posed to the local community from storage of aqueous ammonia at the site is insignificant.

5/27/06 RT (Parker) at 165-6.

The City's witness on potential public health impacts of the SFERP explained further the extremely conservative nature of the off-site consequence analysis undertaken by the City and also provided his expert conclusion concerning the insignificant impact to the public on the use of aqueous ammonia. The potential off-site consequences for the

storage and use of ammonia at the facility were analyzed using highly conservative assumptions. For example, emissions were based on a constant, unchanging evaporation rate of ammonia from a spilled pool of 29 percent ammonia solution occurring during night time, under the worst case atmospheric stability conditions, but also during the maximum air temperature of 97 degrees Fahrenheit, which would occur only during daylight conditions. This represents a combination of conditions that is unlikely ever to occur. Based on these conservative assumptions this worse case release is not expected to result in an off-site concentration of ammonia greater than 5 ppm in air in areas accessible to the public to the north and south or east of the site. 5/31/06 RT (Lowe) at 88-89. Moreover, as Staff pointed out, the City's OCA did not model mitigation to which the City agreed. See 4/27/06 RT (Greenberg) at 19: 7-9.

Intervenor Sarvey's testimony details that southeast San Francisco "has a disproportionate burden of toxic and hazardous waste facilities and sites in San Francisco" but contains no evidence to suggest that a worst case release at the SFERP site will result in impacts to the public more severe than those testified to by City and Staff witnesses. Exh. 11. Mr. Sarvey levels a number of other critiques with regards to hazardous materials that are discussed in more detail below.

Thus, all the evidence in the case supports a conclusion that there will be no significant impacts from the use and storage of aqueous ammonia on site.

2. The Use and Storage of Hazardous Materials on the SFERP Site Will Not Result in Significant Cumulative Impacts.

The record also clearly establishes that there will be no significant cumulative impacts from the use and storage of hazardous material at the SFERP site. The City undertook an analysis of potential cumulative impacts from the use of aqueous ammonia

at the SFERP and the one other user of very large quantities of aqueous ammonia in the project vicinity, the Potrero Power Plant. This analysis showed that the cumulative impacts of a simultaneous worst case accident at both the Potrero Power Plant and the SFERP would not create a significant impact as follows:

> Regardless, the combination of the Potrero PP ammonia plume with the SFERP plume would not impact residential receptors (the SFERP ammonia plume is confined to the project site and the adjacent MUNI site). Therefore, the cumulative impacts associated with a release of ammonia from the SFERP and Potrero PP are insignificant.

Exh. 15 at 8.12-31.

This result was confirmed by a first-of-its-kind extensive cumulative impacts analysis undertaken by Staff. Dr. Greenberg described this exceptional effort on the stand, which demonstrated that there are no significant cumulative impacts:

> One of the unique aspects of staff's assessment was this was the first time that we conducted a thorough review of the cumulative impacts of hazardous materials use in a neighborhood surrounding a proposed power plant.…
>
> We looked at RMPs, we looked at hazardous materials business plan filings, and there is a list of more than 30 facilities that I decided to review in depth…
>
> After looking at these 32 or 33 in greater depth it was determined that really there was only one facility that stored hazardous materials that we thought was worthy of a quantitative assessment to see whether or not a concurrent release of hazardous materials at the SFERP facility and this other facility could possibly have plumes that commingled at a significant level of risk so that there would be additive effects.
>
> And, of course, we looked at aqueous ammonia from the SFERP facility, and we looked at the aqueous ammonia at the Mirant Potrero facility. We used the new HARP model….In this case we just looked at two….And this is the circle for the 75 parts per million; and here's the one from Mirant. And as you can see, even larger areas of lower concentrations do not overlap.
>
> There were not other facilities that we thought the plumes could overlap at a significant level. These don't, at all overlap at any level of significance. They would overlap at perhaps maybe .1 or .2 parts per million, which is even below the odor threshold. So, even if there were a release and wind just happened to be blowing in the direction of this way, and then all of a sudden it shifted and blew that plume that way, which is almost an impossibility, you wouldn't even be able to smell ammonia from either one of these….Nevertheless, this is a demonstration not only of the utility of the HARP model, but also the level of effort that we went

> through to assess cumulative impacts. And we found that there would not be cumulative impacts.
>
> What we found is something that we has assumed and had used qualitatively in previous siting cases, and that was the impacts from a hazardous materials release, with a very few exceptions, are very very close in. And even with aqueous ammonia, the distance here is still measured in a matter of feet, you know 56 feet, to be specific, as opposed to yard or hundreds of feet or thousands of feet.
>
> So you'd have to have another facility literally with another tank right next to it for there to be any type of significant cumulative impact.

4/27/06 RT (Greenberg) at 189-192.

This evidence clearly establishes that there are no significant cumulative impacts from the storage and use of aqueous ammonia on the SFERP site.

3. Transportation of Aqueous Ammonia to the SFERP Site Will Not Result in an Individual or Cumulative Significant Impact.

City and Staff witnesses also agree that the transportation of aqueous ammonia to the SFERP site will not result in any significant individual or cumulative impact. These conclusions are based on assessments by the City and Staff of the risk of an accident from the freeway to the site and on a review of actual data regarding accidents in California.

The City's transportation analysis was provided in response to a data request by Intervenor Sarvey. Exh. 27 at 10, Data Response 1-9. That study quantitatively assessed the risk of transporting aqueous ammonia from the freeways to the SFERP site as follows:

> The CEC uses a significance threshold of 1 in 100,000 (or 10 in 1,000,000) for a risk of 10 fatalities and a threshold of 1 in 1,000,000 for a risk of 100 fatalities. Both of the project's estimates (0.28 and .04 in one million) are at least 25 times below these thresholds. Therefore, the risk of exposure to aqueous ammonia during transport to the plant site is not significant. In fact, data from the US Department of Transportation show that the actual risk of a fatality over the past 5 years from all modes of hazardous material transportation (rail, air, boat, and truck) was approximately .01 in one million.

Id. (Footnotes omitted.)

Based on the study, City witness Ms. Parker testified that the risk of transporting aqueous ammonia to the SFERP site is insignificant: "The results of the [aqueous ammonia] transportation study were compared to the significant thresholds used by the California Energy Commission for fatalities and were determined to be well below the thresholds." 4/27/06 RT (Parker) at 173: 21-35.

Dr. Greenberg testified, based on analyses conducted by Staff, that the risk to the public of transporting aqueous ammonia to the SFERP is insignificant. Importantly Dr. Greenberg's analysis included not only modeling the probabilities of accidents and their impacts but a focused review of actual data compiled by responsible federal authorities.

> In addition, staff used a Transportation Risk Assessment model developed by staff in order to calculate the risk of an upset associated with aqueous ammonia delivery from the freeway to the facility. Results show a risk of 0.25 in one million for one trip and a risk of 1.72 in a million per year for 14 deliveries. This risk was calculated using accident rates on various types of roads (urban, one lane and two-land) with distances traveled on each type of road computed separately. Although it is an extremely conservative model, the results show the risk of a transportation accident to be insignificant.
>
> Staff therefore believes the risk of exposure to significant concentrations of aqueous ammonia during transportation to the facility are insignificant because of the remote possibility of accidental release of a sufficient quantity to present a danger to the public. The transportation of similar volumes of hazardous materials on the nation's highways is not unique nor an infrequent occurrence. Staff's analysis of the transportation of aqueous ammonia to the propose facility (along with data from U. S. DOT demonstrates that the risk of accident and exposure is less than significant."

Exh. 46 at 4.4-20.

Staff also conducted an analysis of the cumulative impacts associated with the transportation of aqueous ammonia and concluded in its written analysis sponsored by Dr. Greenberg that cumulative transportation impacts are insignificant.

> In order to assess the cumulative impacts associated with the transportation of aqueous ammonia staff used the Transportation Risk Assessment model developed by staff to calculate the risk from aqueous ammonia deliveries to both the SFERP and the Potrero Power Plant. Mirant staff provided an estimate of truck deliveries per year (28 deliveries) which were add to the risk calculation for the SFERP ammonia deliveries. The results show a risk of 5.15 in a million per

> year for travel from the freeway to the facilities. Staff concludes that the risk of exposure to significant concentrations of aqueous ammonia during transportation to both facilities is insignificant because of the remote possibility of accidental release of a sufficient quantity to present a danger to the public. Staff's conclusion is based upon its own assessment of transportation of aqueous ammonia to both facilities and on data from the U. S. DOT."

Exh. 46 at 4.4-23.

In response to questioning by Staff Counsel, Dr. Greenberg elaborated on his basis for concluding that the transportation of aqueous ammonia to the SFERP site will not result in any significant impact, including a significant cumulative impact:

> Mr. Ratliff: One of the statements made in Mr. Sarvey's testimony is that there is no analysis of cumulative transportation risks. Could you address that issue for me, please.
>
> Dr Greenberg: I'd be happy to. First of all, just as the City had conducted a transportation risk assessment, I conducted a transportation risk assessment and I focused on aqueous ammonia because in my experience that was the substance that could possibly cause injuries or death, should there be a release during a transportation incident.
>
> We essentially did it three different ways. We looked at some approaches that others had used in the past. We looked at our own approach using the Harwood data that the City's expert had alluded to, which looked at actual accidents that resulted in releases from hazardous materials trucks. And we also looked at the real data, the real life experience.
>
> . . .
>
> The third approach was to look at the actual data. And the National Response Center, NRC. Which is actually an arm of the Coast Guard, has data since 1991 on the actual incidences. And just about everybody complies with reporting requirements. I mean it's a very good data bank.
>
> Which shows in the past 16 years in California we have had one accident involving aqueous ammonia. That was in 1995. There have been a number of accidents involving other hazardous materials. And there have been a number involving anhydrous ammonia. But there was just one in 16 years. And that happened to be in the Bay Area in Fremont. And 500 gallons of aqueous ammonia were released.
>
> Interestingly, no one has died as a result of a release of aqueous ammonia or anhydrous ammonia in California. About five or six years ago there was an upset on Interstate 5 at the Los Banos turnoff there, highway 152, and close the highway for a number of hours. And the driver died. He did not die of exposure to ammonia. He died of the physical impacts of the accident.

> And basically that's what we see when people get injured in hazmat accidents. The tanks are not ruptured because of the very strict criteria they have to be built to. And instead, there's a loss of life or there's injury because of the actual physical damage to the body that an accident causes.
>
> So when we look at our transportation risk assessment and come up with a figure of about 1.1 times 10 to the minus 6, one in a million for this project of 14 trips a year, that's really an over-estimation. Because we compare that to reality.
>
> So three different ways and we come up with the same answer. The risk is insignificant. It's below a level of significance. And I so stated in my testimony.

4/27/06 RT (Greenberg) at 194-196.

Intervenor Sarvey introduced testimony critiquing the transportation risk analyses undertaken by the City and Staff. Mr. Sarvey complained that: 1) the analysis did not consider serious injuries or hospitalizations; 2) the analysis did not consider ammonia transportation for Potrero Unit 3; 3) the analysis did not consider risks from transportation of other hazardous materials; and 4) the analysis did not consider cumulative transportation risks. Mr. Sarvey's claim that the impacts from transportation of aqueous ammonia to the Potrero 3 were not considered is simply inaccurate. As noted above, Staff did indeed undertake a quantitative assessment of the cumulative impacts of transporting aqueous ammonia to both Potrero 3 and the SFERP and concluded based on that assessment that the cumulative impacts were insignificant.

Mr. Sarvey's other concerns were addressed by Dr. Greenberg's testimony on the stand. As Dr. Greenberg testified, actual data shows that there has been only one accident from the transportation of aqueous ammonia in California, and that the fatality in that accident was caused by the accident itself and not by a release of ammonia. Thus, actual data shows that there is no significant cumulative impact.

Also, in the FSA, expert Commission Staff explains that "[b]ased on environmental mobility, toxicity, quantities present at the site and frequency of delivery,

it is Staff's opinion that aqueous ammonia poses the predominate risk associated with hazardous materials transportation and use at the proposed facility. Staff concludes that the risk associated with transportation of other hazardous materials to the proposed facility does not significantly increase the risk of impact beyond that associated with ammonia transportation. Exh. 46 at 4.4-21.

Finally, both Staff and the City properly rely on "the extensive regulatory program that applies to the shipment of hazardous materials on California Highways to ensure safe handing in general transportation." Exh. 46 at 4.4-19; Exh. 27 at 8, Data Response 1-9. *Leonoff, supra,* 222 Cal.App.3d at 1355 (upholding reliance on compliance with existing regulatory programs and environmental laws as mitigations in a negative declaration); see also *Sundstrom, supra,* 202 Cal.App.3d at 308.

In sum, the expert testimony in this case documents conclusively that there will be no significant impacts from the transportation of hazardous materials to the SFERP site.

C. THE ISSUES AND CONCERNS OF INTERVENOR SARVEY REGARDING THE ANALYSIS OR UTILIZATION OF HAZARDOUS MATERIALS ARE UNFOUNDED.

1. Intervenor Sarvey's Proposal to Reduce the Amount of Ammonia in Aqueous Ammonia from 29 percent to 20 percent is Not Justified in This Case.

Intervenor Sarvey's testimony on hazardous materials contains a number of additional proposed conditions of certification, including a requirement that if used, aqueous ammonia concentrations should be reduced from 29 percent to no more than 20 percent by volume. Exh. 11 at 2. City witness Parker explained why, in the case of the SFERP, this suggestion is not appropriate:

> the applicant has proposed the use of 29 percent solution of aqueous ammonia at the SFERP for air pollution control purposes.

> In support of the application for certification an offsite consequence analysis, OCA for short, was performed to assess the potential impacts of a catastrophic release of ammonia on the public. The OCA used modeling to simulate air dispersion of plume of ammonia from a worst case release event. Worst case would be release of the full volume of the ammonia storage tank. With the concurrent failure of a secondary containment system designed to hold the release.
>
> The nature of the OCA was conservative. The results of this conservative OCA indicate that even in the event of a catastrophic release at the fencelines for areas accessible to the public ammonia concentration levels will be below 5 parts per million.
>
> These results indicate that even with the use of 29 percent aqueous ammonia, in the event of a catastrophic release, the ammonia plume would not impact public receptors. And that the risk posed to the local community from storage of aqueous ammonia at the site is insignificant
>
> The offsite consequence of a release of 19 percent aqueous ammonia would not be significantly less than those of a release of 29 percent ammonia.
>
> Comparisons between the use of 29 percent and 19 percent aqueous ammonia have been made at other power plants in the distance at which a significant impact has been measured at 19 percent ammonia, has been reduced by only a few feet.
>
> Furthermore, the quantity of ammonia that will be needed for operation will not be reduced by a change in concentration of aqueous solution. In other words, a larger quantity of lower concentration of the solution will be needed to achieve the same effect on the process.

4/22/06 RT(Parker) at 165–7.

Thus, Mr. Sarvey's proposed condition of certification requiring use of ammonia concentrations of 20 percent is not justified in this case.

2. Intervernor Sarvey's Proposal to Mandate a Standard of 35 ppm Ammonia Concentration at the Fence-line is Unnecessary.

Intervenor Sarvey's testimony proposes a condition of certification that ammonia concentrations will not exceed 35ppm at the fence-line of the project. Exh. 11 at 2. This condition is unnecessary as there is little risk that the public will be exposed to concentrations above 5ppm. As Ms. Parker, expert witness for the City explained, ammonia concentrations at the fence-line accessible to the public are projected to be below 5 ppm even in a worst case catastrophic release. 4/27/06 RT (Parker) at 167: 22-

25. These very low results are the product of a highly conservative modeling exercise as is described in this brief above. Importantly, that the analysis undertaken by the City did not include passive engineered mitigation, such as the sump below the aqueous ammonia tank. 4/27/06 RT (Greenberg) at 198: 7-14.

Ammonia concentration levels at the western fence-line could be well above 5 ppm. However, the western fence-line borders the MUNI Metro-East Facility, a City facility. This facility will not be accessible to the public. 5/31/06 RT (Lowe) at 89 : 13-14.

The Commission Staff has also pointed out in its analysis that the public is at insignificant risk.

> According to these modeling results, the Energy Commission's level of significance (75 ppm) would not be reached at any off-site location. Since the lowest odor threshold for ammonia is about 5 ppm, it is doubtful that any odor would be noticed by any residential receptor should an accidental release occur. Therefore staff concurs with the applicant's modeling and conclusions and believes that due to the engineering controls proposed by the applicant and those required by staff for the storage and transfer of aqueous ammonia, any accidental release of aqueous ammonia at the project site will not cause a significant impact. Therefore staff concludes that the use, storage, and handling of aqueous ammonia proposed for this project will not represent a significant risk to the public.

Exh. 47 at 4.4-13; emphasis supplied.

Mr. Sarvey provides in his testimony that, "The CCSF DPH LORS require a design guideline for ammonia exposure of 35ppm at the fence line." However, there is no such legal requirement, and there is no evidence in the record to suggest that there is.[15]

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[15] Mr. Sarvey purports to rely on pre-filed testimony filed by the City in the Potrero Unit 7 case several years ago. That testimony was not made a part of the evidentiary record of this case, although Mr. Sarvey has argued that it has.

> Hearing Officer Fay: Okay. Mr. Sarvey, if you find that you can cite to a place in the evidentiary record where they're found, do so in your brief. But we're not going to argue about that now.
>
> Mr. Sarvey: Okay, well, they're listed on the project description, engineering and natural gas supply under see prior filings, applicant response to Community Power data requests. So they're already in the evidentiary record.

Mr. Sarvey asked the City in a data request to "provide CCSF recommended lowest level of concern for ammonia exposure." The City responded:

> For this application and other proposed power plants in San Francisco, the San Francisco Department of Public Health (DPH) requested that plume modeling be conducted to determine locations that might exceed 25 ppm. This level of 25 ppm is equivalent to the Emergency Response Planning Guideline 1 (ERPG-1) for ammonia. The ERPG-1 levels are defined as the "Maximum airborne concentration below which nearly all individuals could be exposed to up to 1 hour without experiencing other than mild transient adverse health effects". The DPH requested this level to be evaluated because even though the health effects may not occur at this level, significant discomfort and irritation may occur to members of the general public.
>
> Please note that in the Risk Management Plan (RMP) process that the DPH administers for businesses that store extremely hazardous materials, they use ERPG 2 for ammonia (equivalent to 200 ppm). This was adopted from the EPA/Cal-ARP toxic endpoint.

Exh. 27 at 11, Data Response 1-12. A recommended level is not the same as a legally required level.

The fact that there is no legal requirement as suggested by Mr. Sarvey was confirmed during Mr. Sarvey's cross of Ms. Parker:

4/22/06 RT (Sarvey) at 220: 5-15. This statement by Intervenor Sarvey is inaccurate. The only data responses to SF Community Power admitted into the evidentiary record of this case were those provided on 8/18/04 in response to Data Requests 2, 3, 8, and 9. These were admitted into the evidentiary record on April 27, 2006 and May 31, 2006.

The City pre-filed testimony in the Potrero 7 case was provided in response to Data Request 5 subject to Applicant's Objections and Notices of Need for Additional Time in Response to Community Power Cooperative Data Requests 7/26/2004, which continuing objection was noted in the San Francisco Community Power Data Responses Set 1 8/18/2004**.** Data Request 5 is not in the evidentiary record of this case. The objection of the City was as follows:

> Data Request 5: The City objects to the request on a number of grounds. First, the documents requested are publicly available at the California Energy Commission. Second, the City does not concede that its testimony on Potrero 7, a plant several times larger than the SFERP, and of a different configuration, is relevant to the SFERP. Notwithstanding these objections, the City will as a courtesy provide to the Community Power Cooperative, a copy of its prefiled testimony in the Potrero 7 case.

Applicant's Objections and Notices of Need for Additional Time in Response to Community Power Cooperative Data Requests dated July 26, 2004**.**

> Mr. Sarvey:. "The Department of Health has a standard for risk management plans that all new risk management plans must have a design guideline of 35 ppm for ammonia at the fenceline. That's my understanding. I mean if the public's not present that doesn't apply or?
>
> Ms. Parker: A. "I'm not aware of this requirement.

4/22/06 RT (Parker) at 175: 16-23.

Intervenor Sarvey suggested through his cross examination of the City's hazardous materials witness that the San Francisco Department of Public Health requires the use of the RMP*Comp model to undertake a risk assessment for facilities. However, there is no evidence to support any requirement for use of the RMP*Comp model to undertake a risk assessment for the purposes of an off-site consequence analysis performed at the licensing stage.[16] Instead, as is described in Appendix 8.12A to Supplement A (which documents the off-site consequence analysis prepared by the City), the San Francisco Department of Public Health Hazardous Materials Unified Program Agency's, "Regulated Substance Program Guidance" encourages (but does not require) use of the RMP*Comp model for the purposes of preparing a Risk Management Plan (RMP). Exh. 15, Volume 2, Appendix 8.12A at 5. As Ms. Parker testified, the RMP has not yet been prepared; this phase of the proceedings does not involve preparation of the RMP. 5/22/06 RT (Parker) at 178: 10-15.

The Applicant and Staff have agreed on a Condition of Certification that requires the City to provide an RMP related to the storage and use of ammonia on site to the San Francisco Department of Public Health, the U. S. Environmental Protection Agency and to the Commissions Compliance Manager. The requirement is to engage in a process that is set forth in the San Francisco Department of Public Health Hazardous Materials

[16] Again, Mr. Sarvey purports to rely on pre-filed testimony of the City filed several years ago regarding the proposed Potrero Unit 7 which is not part of the evidentiary record in this case.

Unified Program Agency‘s, “Regulated Substance Program Guidance”. This Guidance provides in part that: 1) the choice of computer model is up to the SS and 2) passive mitigation may be applied in the model.

> CHAPTER 6. HAZARD ASSESSMENT REQUIREMENTS
> 6.2 OFFSITE CONSEQUENCES ANALYSIS (OSCA),
> 6.2.2 Selecting a Computer Model
> The choice of computer model is up to the SS, subject to certain conditions. …HMUPA strongly encourages the SS to use RP.Comp for the worst-case release scenario…HMUPA may require a comparison analysis between RMP. Comp and any other model the SS chooses for the worst case release analysis.[P. 6-2] [Emphasis supplied]
> 6.2.6 Some Parameter Considerations.
> 4 Only passive mitigation (e. g. secondary containment, structures, etc.) can be considered in a worst-case release scenario. …

Emphasis supplied.

Moreover, Appendix 8.12A explains the difference in results between RMP*Comp and other models, such as the SLAB model used by the City for its OCA, by citing to the EPA's Frequently Asked Questions on the RMP*Comp website:

> The results you obtain using RMP*Comp may not closely match the results you obtain running the same release scenario in a more sophisticated air dispersion model such as ALOHA or DEGADIS. That's because of a fundamental difference in purpose between those models and RMP*Comp. RMP*Comp is a planning tool, designed to help you to easily identify high-priority hazards at your facility. It makes simple, generalized calculations. In contrast, models like ALOHA and DEGADIS are intended to give you as accurate an estimate as possible of the extent and location of the area that might be place at risk by a particular chemical release.

Exh. 15, Volume 2, Appendix 8.12A at 5. This explanation is consistent with the FSA which provides, "the RMP*Comp model is considered a planning tool that makes general estimates and therefore the SLAB modeling presents a more plausible scenario for the worst case accidental release of ammonia. Exh. 46 at 4.4-13.

In sum, Mr. Sarvey's proposed condition of certification regarding a 35ppm "design criteria" is not necessary to protect the public in this case.

3. The SFERP Will Not Create An Undue Risk for Workers at the MUNI Metro East Facility.

Mr. Sarvey's cross examination of City and Staff witnesses suggested that the SFERP will create an undue risk to workers at the MUNI Metro East Facility. This suggestion is based on the fact that the City's modeling shows ammonia concentrations of 2000 ppm extending some 35 feet into the MUNI Metro East Facility. Exh. 15 at 8.12-28. Ammonia concentrations of 2000 ppm can be fatal. 4/27/06 RT (Greenberg) at 197.

However, the MUNI Metro East Facility will be occupied by a department of the City rather than some independent third entity. As Mr. Lowe, the City's public health witness, explained:

> Muni is a department of the City, and the City is committed to assuring protection of all of its employees, including those on the SFERP site and on the Muni site from potential consequences associated with a release from the proposed project.
>
> In addition, as a condition of certification, a safety management plan will be developed containing mitigation measures to alert employees and to provide for appropriate spill response in the event of an ammonia release.

5/31/06 RT (Lowe) at 89: 18-25.

Moreover, as explained above, the modeling undertaken by the City for the off-site consequence analysis was extremely conservative and did not include mitigation to which the City has committed. Dr. Greenberg explained, based on Staff's modeling, that the concentrations of ammonia crossing into the MUNI Metro East Facility in the event of a worst case accident can be expected to be well below 2,000 ppm:

> Mr. Ratliff: … Mr. Sarvey states that in the event of a catastrophic ammonia release the project will expose employees at the Muni maintenance center to ammonia concentrations as high as 2000 ppm, which is a fatal dose.
>
> Do you agree or disagree with this statement? And please tell us why.
>
> Dr. Greenberg: Well, the only part that I agree with is that 2000 parts per million would be a fatal dose. But, no, they would not be exposed to that. What the City did in its modeling is follow the procedure of using the RMP comp model. And that is a model that quite frankly staff does not agree with. It’s used for planning purposes. We don’t use that model.

> The proper model to use would either be SLAB or HARP or Screen III. This is a volatile substance. I wouldn't even use SLAB for it SLAB is much better for dense gas modeling as opposed to buoyant plumes.
>
> I modeled it two ways. I used EPA'S screen III and I used the HARP model. I came up with the same distance. The 75 parts per million would be exceeded offsite only 10 to 13 feet. And that's only because the aqueous ammonia tank and containment system are close to that fenceline. If it had been moved one place or another, it would not at all go offsite.
>
> So, in reality you're not going to get 2000 parts per million. <u>And what I failed to mention is that they modeled—the City modeled without mitigation.</u>
>
> So, if there was no mitigation and there was no containment that drained down into a subsurface sump, instead it sat there around 650 square feet pool, on a very hot day, and using that model you'd get 2000 parts per million.
>
> However, I modeled with mitigation. The City has committed, of course, to put in mitigation. They would have to put in mitigation, and we require that they put in mitigation. So I modeled it with mitigation and you do not get 2000 parts per million.
>
> You get at the most, a couple hundred parts per million right there, you know if you stood right over the containment, the secondary containment berm. But at the fenceline you're going to get—at the western fenceline, that is, you'll have slightly in excess of 75. And then you'll drop below 75 once you're either 10 or 13 feet beyond there.

4/27/06 RT (Greenberg) at 197-199, emphases supplied.

This evidences shows that MUNI Metro East Workers will not be faced with undue risk as a result of the SFERP.

4. Intervenor Sarvey's Proposal to Decrease the Likelihood or Impact of Accidental Ammonia Release by a Double Walled or Buried Ammonia Tank Will Do Neither.

Mr. Sarvey's testimony proposes as a condition of certification, that the City be required to utilize a double-walled ammonia storage tank or an underground storage tank in the event that aqueous ammonia is used. Exh. 11 at 3. City witness Mr. Brock explained that use of a doubled-walled tank would not alter the results of the offsite consequence analysis as follows:

> The worst case assumption regarding ammonia release is a complete rupture of the tank, whether single- or double-walled. Typically double-wall tanks are

> employed to catch minor leaks from the main storage tank, or the volume enter the space in between the two walls, and to detect this leakage so that appropriate mitigation can be taken.
>
> This is the most commonly utilized for the protection of the environment for underground storage tanks of hazardous materials, where a leak would not otherwise be detected. And that the plant can respond to the leakage from the inner tank.
>
> The use of – I am not aware of the use of a double-wall tank material in the outer shell to forestall the complete rupture of an air-wall tank.
>
> The use of an underground tank would require the utilization of a double-wall tank, as discussed above. In addition, a separate containment system would have to be utilized to contain the release of ammonia during the unloading procedure. The volume of this containment system would only be slightly smaller than the containment system for the above ground tank.

4/22/06 RT (Brock) at 170-171.

5. Intervenor Sarvey's Further Concerns About the Worst Case Analysis Undertaken by the City and Staff are Effectively Dispelled by Dr. Greenberg's Testimony.

Mr. Sarvey's cross examination of Dr. Greenberg suggests a concern that the analysis of City and Staff does not present the worst case scenarios, for example in the event of an earthquake or a simultaneous tank and delivery truck accident. Dr. Greenberg's response indicates that, to the contrary, the City and Staff properly and conservatively analyzed the worst case consequence from an accident involving ammonia:

> Mr. Sarvey: And would you agree that the most likely chance of ammonia rupture would be probably during an earthquake with electrical failure following as well?
>
> Dr. Greenberg: No, I wouldn’t. If you look in the hazardous materials testimony you’ll see a discussion on seismic safety. And I have looked at the results of the Kobe earthquake, the Northridge earthquake, the Loma Prieta earthquake, and Nisqually earthquake in Washington State.
>
> The newer hazardous materials storage tanks designed to these types of standards did not rupture at all during the Nisqually quake. Some of he older ones did rupture, and these were few and far between. I think there was only five or six of them at the Northridge quake.
>
> So I am not concerned that there would be a rupture of these storage tanks.

4/27/06 RT (Greenberg) at 210.

> Mr. Sarvey: . … You were talking about the impacts to the Muni maintenance people in response to Commissioner Geesman's question: And in your consequence analysis did you include the complete failure of the tank and a truck that would be offloading onto the –
>
> Dr. Greenberg: Interestingly, Mr. Sarvey, the failure of the truck resulted in a much lower concentration than the failure of the tank. And it's really not so much volume dependent because the source term is not depleted in my analysis which, of course, in reality it would be.
>
> But rather it's the surface area of the pool that's open to the atmosphere. And so it really doesn't matter whether you've got 100 gallons there or you've got 100,000 gallons. It's just a deeper pool.
>
> But I considered the mitigation. And that's really the difference, once [sic] of the major differences. And, of course I used two different models than they used. But when you consider the mitigation, which will be there, then you get a much different result.

4/27/06 RT (Greenberg) at 211-212.

In sum, the testimony of qualified and experienced City and Staff witnesses concurs that there will be no significant individual or cumulative impacts from the transportation, use, handling, or storage of hazardous materials at the SFERP and that the conditions of certification included in the FSA are adequate to protect the public.

IX. The City and Staff Witnesses Agree that the Worker Safety and Fire Protection for the SFERP Will Ensure Adequate Levels of Industrial Safety and Will Not Have Significant Impacts on Local Fire Protection Services.

The objective of the worker health and safety discipline is to identify potential hazards and plan for compliance with extensive regulatory requirements that provide for the health and safety of the construction and operation work force. The City's experts Ms. Madams and Mr. Bushnell in their written testimony explained:

> During this project, workers will be exposed to construction safety hazards and plant operation safety hazards. To evaluate these hazards and assess control measures, a hazard analysis has been prepared. The analysis identifies the hazards anticipated during construction and operation, and indicates which safety programs should be developed and implemented <u>to mitigate and appropriately manage those hazards</u>.

Exh. 15 at 8.7-6 – 8.7-7; emphasis supplied.

Upon review of the City' hazard analysis, Commission Staff concluded that if the City "provides a Project Construction Safety and Health Program and a Project Operations and Maintenance Safety and Health Program as required by Conditions of Certification WORKER SAFETY –1, -2, -3, -4, -5, the project would incorporate sufficient measures to ensure adequate levels of industrial safety and comply with applicable laws, ordinances, regulations, and standards." Exh. 46 at. 4.14-1. Staff also concluded that "the proposed project would not have significant impacts on local fire protection services." Id.

Commission Staff expert on worker safety and fire protection, Dr. Alvin Greenberg, summarized the Staff's conclusion in his sworn testimony.

> My conclusion is very straight forward, and that is that the applicant has demonstrated a sufficient knowledge of their requirements to protect workers during all phases of construction and operation. And to provide adequate onsite fire protection. And to insure that offsite fire protection is, indeed, provided, and will not have an impact on the local fire department."

4/27/06 RT (Greenberg) at 134: 4-12.

A. THE RECORD DEMONSTRATES THAT WORKER HEALTH AND SAFETY WILL BE ASSURED.

The worker health and safety analysis focuses on an administrative review of the necessary actions that need to be taken in planning before construction commences to ensure compliance with a plethora of regulatory requirements, including OSHA and Cal OSHA worker safety and fire protection requirements.[17] The City can rely on these to show no significant impact under CEQA. *Leonoff, supra,* 222 Cal.App.3d at 1355 (upholding reliance on compliance with existing regulatory programs and environmental

[17] For example Commission Staff identifies some ten major areas of LORS to support Worker Safety and Fire Protection, Exh. 46 at 4.14-2- 14.2-3, and the City identifies more than eighty separate LORS with the bulk of them standards for the same purpose. Exh. 15. at. 8.7-2 to P. 8.7-6.

laws as mitigations in a negative declaration); see also *Sundstrom, supra,* 202 Cal.App.3d at 308.

The myriad of regulatory requirements, however, fit into a concise structure as pointed out by the Commission Staff expert Dr. Greenberg:

> The applicant's mitigation involves worker safety and fire protection plans, the construction safety and health program and an operations ands maintenance safety and health program.

4/22/06 (Greenberg) at 135: 1-5.

A construction plan is used to develop a set of subsidiary state-of-the-art Cal OSHA type heath and safety plans that unfold with a high degree of detail.[18] An insight into the process was set forth in this exchange between Hearing Officer Fay and the City's expert Mr. Bushnell.

> Hearing Officer Fay: And do the conditions of certification that applicant has agreed to contain a provision to analyze the kind of dust suppression that may be necessary to protect workers, and then a path to implement that?
>
> Mr. Bushnell: The specific items that will take place on the site, I do not believe, to the best of my knowledge, have been established yet. Establishing those protections for individual workers is part of the preparing the plans and going through the health and safety process that is explained in the testimony."

4/27/06 RT (Fay, Bushnell at 126-127.[19]

Many worker health and safety requirements are set forth in Cal OSHA and include direct, comprehensive, and hands-on requirements from the planning to the field operational stages. As such, planning requires identification of areas where standards, processes, coordination, and field emergency practices, both micro and macro, are applied.[20]

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[18] See for example Exhibit 15 Table 8.7-5 Construction Hazard Analysis, at 8.7-7.

[19] Conditions of Certification set forth in the Air Quality section of the FSA do include specific and stringent requirements for construction fugitive dust control that would need to be incorporated into any plans. See Exh. 46 at 4.1-34, AQ-SC3.

[20] See the conditions of certification Worker Safety 1 through 4, Exhibit 46 at 4.14-15-16.

Based on this approach, the City's expert Mr. Bushnell concluded:

> Ms. Solé: Is it your understanding, then, that there are mitigation measures that would address the risks to workers, and that the applicant will implement those measures, as necessary, to protect workers?
>
> Mr. Bushnell: Yes.

4/27/06 RT (Bushnell) at 127: 13-18.

The Staff expert Dr. Greenberg spent some time on cross examination explaining the difference between the more nuanced environmental analysis and the analysis that is undertaken for worker health and safety:

> Dr. Greenberg: And so we, sometimes we do this balancing act between what is called a specification [SIC] condition of certification or a performance. And we prefer to go with the performance standard, or condition of certification.
>
> You have to comply with these LORS to protect our workers, whether it's a site or a linear. And here's all the steps you have to go through. But we don't come right out and say, do A, B, C or D. They have to comply with the laws that say do A, B, C or D. So I feel that the workers are adequately protected. That it it's not necessary to do a health risk assessment or take soil samples.

4/22/06 RT (Greenberg) at 140: 14-22.

Mr. Sarvey through his cross examination suggests that workers may be exposed to unduly high levels of particulates and dust. This concern is laid to rest by Dr. Greenberg's testimony which explains that no visible dust will be tolerated on-site:

> Mr. Sarvey: Okay, So did you assess the air quality impacts to construction workers for PM10 an PM2.5 levels that will occur during construction of the project?
>
> Dr. Greenberg: A. No, I did not. There is a condition of certification that will assess [SIC] while it's happening and mitigate it while it's happening.

4/27/06 RT (Sarvey, Greenberg) at. 143:. 10–16.

> Mr. Sarvey: But you don't have any idea what kind of maximum PM levels that these construction workers would be encountering during their job?
>
> Dr. Greenberg: Is that with or without mitigation?
>
> Mr. Sarvey: Either way.
>
> Dr. Greenberg: Oh, I would have an idea [sic] both.

> Mr. Sarvey:: And what is it with mitigation?
>
> Dr. Greenberg: With mitigation? Oh, I believe that the PM10 levels, and even the PM2.5 levels can be kept well below 10mcg/cubic meter.
>
> Mr. Sarvey: And what level would you consider unsafe?
>
> Dr. Greenberg: Well, there is no OSHA standard for PM10 or PM2.5. There is only a nuisance dust standard. Certainly we are directing the applicant to protect worker to a standard far below the OSHA standard.
>
> Mr. Sarvey: So, I asked you did you have a minimum PM level that you evaluated for worker safety?
>
> Dr. Greenberg: No. Mr. Sarvey, let me be clear that it's not a minimum level. *We don't want to see any.*

4/27/06 RT (Greenberg) at 144: 4 –25); emphasis supplied.[21] At a later date, Dr. Greenberg testified that, with control measures, there would be negligible particulates emissions and that these would be immediately addressed. 5/22/06 RT (Greenberg) at 154.

Moreover, the City and Staff provided substantial specific analysis and testimony on the relevant environmental impacts in their respective fields, such as air quality, toxic contamination and public health, to satisfy CEQA requirements and demonstrate that the SFERP will not result in undue health and safety risks to workers.

As an example of this multi-disciplined approach, the City's expert on Public Health when given the opportunity to testify opined that workers as well as the public's health will be protected. 5/31/06 RT. (Lowe) at 92: 23.

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[21] The City did prepare an estimate of emissions due to the construction phase of the project, including an assessment of emissions from vehicle and equipment exhaust and fugitive dust generated from material handling. Exh. 15 at 8.1-47. While these estimates show maximum 24-hour average PM10 impacts at 14.2 μg/m3, this analysis is conservative because the modeled PM_{10} concentrations from construction operations are overpredicted by the model. Exh. 15, Volume 2, Appendix 8.1D at D-6-7. Moreover, consistent with Dr. Greenberg's testimony, City Air Quality and Public Health witness, Mr. Rubenstein testified that with control measures, fugitive dust and particulate emissions from construction could be expected to be lower than the estimates provided. 5/31/06 RT (Rubenstein) at 97-98.

B. THE CRITICISM SET FORTH IN A COMMUNICATION FROM THE DEPARTMENT OF TOXIC SUBSTANCES CONTROL IS EASILY EXPLAINED AND DISMISSED BY DR. GREENBERG.

Intervenor Sarvey provided a letter from the Regional Office of the California Department of Toxics Substances Control (DTSC), Exh. 84, setting forth its comments on a project modification of the water supply lateral route, which indicated that the City should prepare a health risk assessment along a realigned lateral. The City's witness was not familiar with the letter,[22] but Dr. Greenberg, when given an opportunity, indicated that the letter was from an inexperienced individual with DTSC. 4/27/06 RT (Greenberg) at 138: 1-21.

Dr. Greenberg noted that for Worker Health and Safety purposes, the Commission's approach is to assume and prepare for hazardous materials along all laterals, with immediate action to protect workers. Id. Dr. Greenberg explained that, the City, as the project owner, will have to comply with worker safety-1 (which requires the preparation of a project construction safety and health program) and worker safety-2 (which requires the preparation of a project operations and maintenance safety and health program), and that the City's health and safety plans will have to address the specific issue. Id.

In addition, Dr. Greenberg reminded Mr. Sarvey that there is a condition of certification in the Waste discipline that

> says that you have to have a professional, a registered geologist, an engineer, somebody very well versed in encountering hazardous waste in soils, on hand when there is soil movement and excavation occurring. So that if something comes to light, you encounter something, you can stop work. He or she will order appropriate investigation and testing and make sure that everybody is protected.

Id. at 139.

[22] 4/27/06 RT (Bushnell) at 125: 20 –21.

Dr. Greenberg pointed out that this approach is consistent with the approach taken by the Commission in other cases, including one in the Sacramento area that involved a 35 mile long pipeline. Id. at 141: 5 –12. Dr. Greenberg stressed that requiring more for a 2600 foot linear would be unreasonable, particularly where the general conditions are known and conditions of certification require measures to be taken to protect workers. Id. at 141:13-21.

In sum, the City and the Staff have demonstrated with uncontroverted evidence that the SFERP will meet all the requirements to provide worker health and safety and fire protection.

X. The City and Staff Agree on All Conditions of Certification.

Ultimately, the City and Staff have agreed on all conditions of certification as follows:

1. General Conditions:

The FSA recommends that 15 Conditions of Certification be adopted to address general conditions including compliance monitoring and closure plan issues: COMPLIANCE-1 through COMPLIANCE-15. These are acceptable. The FSA for the project filed by the CEC recommends that 20 Conditions of Certification be adopted to address facility design issues: GEN-1 through GEN-8, CIVIL-1 through CIVIL-4, STRUC-1 through STRUC-4, MECH-1 through MECH-3, and ELECT-1. These are acceptable. There are no Conditions of Certification addressing power plant efficiency or power plant reliability.

2. Transmission line safety and nuisance and transmission system engineering:

The FSA recommends that 1 Condition of Certification be adopted to address transmission line safety and nuisance issues: TLSN-1. The FSA also recommends that 8

Conditions of Certification be adopted to address transmission system engineering issues: TSE-1 through TSE-8. These are acceptable.

3. Air Quality:

The Air Quality section of the FSA recommends that 12 Conditions of Certification be adopted to address air quality issues: AQ-SC1 to AQ-SC12. The Air Quality section of the FSA also recommends that 42 Conditions of Certification be adopted to meet air quality permitting requirements: AQ-1 to AQ-42. The errata to the FSA Air Quality section filed on April 14, 2006 contains corrections to the following Conditions of Certification: AQ-SC3, AQ-SC11, AQ-SC12, AQ-12, AQ-18, and AQ-21. With the corrections in the errata, the FSA Conditions of Certification in the Air Quality section are acceptable.

4. Biology:

There are no Conditions of Certification addressing biological resource issues directly.

5. Cultural Resources:

The Cultural Resources section of the FSA recommends that 8 Conditions of Certification be adopted to address cultural resource issues: Conditions CUL-1through CUL-8. The errata to the FSA Cultural Resources section filed on April 14, 2006 contains a correction to Condition of Certification CUL-6. With the correction in the errata, the FSA Conditions of Certification in the Cultural Resources section are acceptable.

6. Land Use:

The FSA recommends that 3 Conditions of Certification be adopted to address land use issues: LAND-1 through LAND-3. These are acceptable.

7. Noise and Vibration:

The FSA recommends that 6 Conditions of Certification be adopted to address noise and vibration issues: NOISE-1 through NOISE-6. Although the City initially sought a clarification to NOISE-4, it indicated at the hearings that it would accept the Conditions of Certification as set forth in the FSA. See 4/27/06 RT (Solé) at 73: 2-6.

8. Public Health:

The FSA recommends that 1 Condition of Certification be adopted to address public health issues: PUBLIC HEALTH-1. It is acceptable.

9. Worker Health and Safety:

The FSA recommends that 5 Conditions of Certification be adopted to address worker safety and fire protection issues: WORKER SAFETY-1 through WORKER SAFETY-5. These are acceptable.

10. Socioeconomics:

The FSA does not recommend Conditions of Certification to address socioeconomic resource issues.

11. Traffic and Transportation:

The FSA recommends that 6 Conditions of Certification be adopted to address traffic and transportation issues: TRANS-1 through TRANS-6. These are acceptable.

12. Visual Resources:

The FSA recommends that 5 Conditions of Certification be adopted to address visual resource issues: VIS-1 through VIS-5. These are acceptable.

13. Hazardous Materials Handling:

The FSA recommends that 9 Conditions of Certification be adopted to address hazardous materials management issues: HAZ-1 through HAZ-9. HAZ-1 through HAZ-8

are acceptable. During the evidentiary hearings, the City and staff agreed to two changes as follows to HAZ-9:

HAZ-9, item 10:

10. Additional measures to ensure adequate perimeter security consisting of either:

A. Security guards present 24 hours per day, 7 days per week. or

B. ~~Power plant personnel on-site 24 hours per day, 7 days a week and~~ all of the following:

> 1. The CCTV monitoring system required in number 9 above shall include cameras that are able to pan, tilt, and zoom (PTZ), have lowlight capability, are recordable, and are able to view 100 percent of the perimeter fence, the ammonia storage tank, the outside entrance to the control room, and the front gate from a monitor in the power plant control room; and
>
> 2. Perimeter breach detector or on-site motion detectors; and
>
> 3. A person monitoring the CCTV monitoring system 24-hours a day seven days a week. Such person may be at a remote location.

HAZ-9: Verification: At least 30 days prior to receiving any hazardous material on site for commissioning or operations, ~~prior to the initial receipt of hazardous materials on-site,~~ the project owner shall notify the CPM that a site-specific Vulnerability Assessment and Operations Site Security Plan are available for review and approval.

14. Waste Management:

The FSA recommends that 8 Conditions of Certification be adopted to address waste management issues: WASTE-1 through WASTE-8. In supplemental testimony filed by CEC staff on April 10, 2006, FSA WASTE-6 was withdrawn and a new WASTE-6 was proposed to replace WASTE-7. Conditions of Certification WASTE-1 though WASTE-5 and WASTE-8 as set forth in the FSA are acceptable. The City proposed new SOIL&WATER 6/WASTE 6, SOIL&WATER 7/WASTE 7, and SOIL&WATER 13/WASTE 9 in its May 1, 2006, supplemental testimony, Exh. 88. The City understands that these are generally acceptable to Staff. Staff waste witness Dr. Greenberg testified that he is generally comfortable with the conditions of certification proposed by the City in its May 1 testimony on contamination. 5/22/06 RT (Greenberg)

at 104-105. Mr. Greenberg indicated that he would have some slight corrections to add. These have not yet been communicated to the City. In addition, Staff water witness Lindley testified that he is comfortable with the conditions of certification proposed by the City. 5/22/06 RT (Lindley) at 116:1-24.

15. Soil and Water Resources:

The FSA recommends that 12 Conditions of Certification be adopted to address soil, and water resource issues: SOIL&WATER-1 through 12. In supplemental testimony filed by CEC Staff on April 10, 2006, an additional Condition of Certification SOIL&WATER 13 was proposed. Conditions of Certification SOIL&WATER 1 though SOIL&WATER 5 and SOIL&WATER 8 through SOIL&WATER 12 are acceptable. . The City proposed new SOIL&WATER 6/WASTE 6, SOIL&WATER 7/WASTE 7, and SOIL&WATER 13/WASTE 9 in its May 1, 2006, supplemental testimony, Exh. 88. The City understands that these are generally acceptable to Staff.

16. Geologic Resources:

The FSA does not recommend Conditions of Certification in the geologic resources section.

17. Paleontological Resources:

The FSA recommends that 7 Conditions of Certification be adopted to address paleontological issues: PAL-1 through PAL-7. The City accepted PAL-1, and PAL-5 through PAL-7 without changes. The City requested slight clarifications to PAL-2 through PAL-4 which CEC Staff agreed to during the evidentiary hearings. 4/27/06 RT (Pilling) at 116: 13-18. The City understands the changes to be as follows:

PAL-2: The project owner shall provide to the PRS and the CPM, for approval, maps and drawings showing the footprint of the power plant, construction laydown areas, and all related facilities. Maps shall identify all areas of the project where ground disturbance is anticipated <u>in previously undisturbed sediments</u>. If the PRS requests enlargements or strip

maps for linear facility routes, the project owner shall provide copies to the PRS and CPM. The site grading plan and the plan and profile drawings for the utility lines would be acceptable for this purpose. The plan drawings should show the location, depth, and extent of all ground disturbances and can be at a scale of 1 inch = 40 feet to 1 inch = 100 feet range. If the footprint of the power plant or linear facility changes, then the project owner shall provide maps and drawings reflecting these changes to the PRS and CPM.

PAL-3, Item 5:
5. A discussion of where undisturbed sediment is likely to be encountered during excavations and ~~the locations of~~ where the monitoring of project construction activities is deemed necessary, and a proposed plan for the monitoring and sampling; As described previously, please limit monitoring to undisturbed soils.

PAL-4: Prior to ground disturbance and for the duration of construction in native sediment, the project owner and the PRS shall prepare and conduct weekly CPM-approved training for all recently employed project managers, construction supervisors and workers who are involved with or operate ground-disturbing equipment or tools in previously undisturbed soils. Workers . . .

18 Alternatives:

There are no Conditions of Certification related to Alternatives.

XI. Conclusion.

The City and Staff agree that, with the proposed conditions of certification, the SFERP will meet all applicable LORS and will not cause significant impacts on the environment or public health. The City and Staff agree on all proposed conditions of certification as detailed in section ten of this brief. The Commission should grant the City's application for certification.

Dated: June 26, 2006

Respectfully submitted:

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SAN FRANCISCO ELECTRIC RELIABILITY PROJECT
APPLICATION FOR CERTIFICATION,
DOCKET NO. 04-AFC-1

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I declare that I transmitted the foregoing document via e-mail, or as indicated by first class postal mail, to the above named on the date indicated thereby. I declare under penalty of perjury that the foregoing is true and correct.

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