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ENERGY RESOURCES CONSERVATION AND
DEVELOPMENT COMMISSION

In the Matter of:	)	
	)	Docket No. 04-AFC-1
Application for Certification	)	
For the San Francisco Electric	)	
Reliability Project	)	

STAFF REQUEST TO FILE
REPLY BRIEF

Staff of the California Energy Commission respectfully requests permission to file its **Commission Staff Reply Brief** one day after the Committee's due date of July 10, 2006, established at the May 31, 2006 evidentiary hearing. (May 31 RT 269.) Staff apologizes for the inconvenience this late filing may cause the Committee, Hearing Officer, and other parties. With all due respect to everyone's expectation and need to receive filings in a timely manner, Staff nevertheless respectfully requests the Committee's allowance of Staff's late filing in the interest of ensuring a complete record of all parties' responses to issues raised at the evidentiary hearings and in opening briefs.

Staff acknowledges the importance of adhering to the Committee's schedule of due dates. In this one instance, however, circumstances were such that vacations, the recent interim departure of Staff Counsel in the case, and other pressing assignments resulted in a regrettable oversight of not filing the brief on July 10, 2006. In this one instance, Staff requests dispensation for its Reply Brief and, in exchange, offers a suggestion--that other parties be allowed to file comments (by a date to be determined by the Committee) in response to Staff's Reply Brief, should the Committee allow Staff's late filing.

Dated: July 11, 2006

Respectfully submitted,

ARLENE L. ICHIEN
Assistant Chief Counsel

ENERGY RESOURCES CONSERVATION AND DEVELOPMENT COMMISSION

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COMMISSION STAFF REPLY BRIEF

I. I.INTRODUCTION

This Reply Brief is the Energy Commission Staff's ("Staff's") response to issues raised in the opening briefs of intervenors CARE and Bob Sarvey. Many of the substantive issues raised in those briefs have already been adequately addressed in Staff's Opening Brief, and to that extent are not further addressed here. Mr. Sarvey's comments were largely substantive, and are addressed separately first. CARE's comments are for the most part legal and procedural, so their issues are separately addressed afterwards.

II. SARVEY ISSUES

A. Air Quality

At the outset it should be noted that Sarvey relies heavily on the Southern Waterfront SEIR, or "SEIR" (Exhs. 92, 92A, 92B, and 92C), of which the Committee has recently informed the parties it is taking "administrative" (or official) notice. (See Tentative Exhibit List, Revised June 23, 2006.) This document, which has not been available to Staff in hard copy, and which no party (with the possible exception of the City) possessed during the hearings except Sarvey, is not a document subject to either judicial or official notice. (*Edna Valley Ass'n v. San Luis Obispo Cty., etc.* (1977) 67 Cal.App.3d 444, 449-450 [136 Cal.Rptr. 665, 667]; Cal. Code Regs., tit. 20, § 1213; see California Administrative Hearing Practice (Cont.Ed.Bar 2d ed. 2005) Official Notice, § 7.83, p. 386.) Thus, the document is not properly a part of the evidence of record.

Staff respectfully requests, pursuant to Commission regulations (Cal. Code Regs., tit. 20, § 1748(f)), that the Committee rescind such official notice, which was never the subject of notice and objection by the parties. However, whether the Committee rescinds or not, the document cannot be officially noticed under California law and is thus not part of the evidentiary record; it is no more than a docketed government document that cannot alone support any finding or conclusion. (Cal. Code Regs., tit. 20, § 1702(h).) Staff also notes that this document was never served on parties other than in electronic form; if Sarvey intended to rely on this document he should have been required to serve it in hard copy on the parties. (*See*, Cal. Code Regs., tit. 20, §§ 1209, 1210.) This would have allowed all parties to avoid the hardship of being cross-examined on a document that no one (except Sarvey) had in physical possession, requiring the passing around of excerpted portions at the hearing. Even as this is written, Staff counsel has not been able to obtain either a hard copy or electronic copy of the SEIR. Even so, the following is written in an attempt to respond to points raised by Sarvey that pertain to the SEIR.

Sarvey contends that the cumulative air impact analysis is inadequate because certain local land use projects were not included in the cumulative analysis. (Sarvey Brief, p. 2.) This argument has been addressed at length in Staff's Opening Brief, at pages 14-16, so Staff will not repeat itself here. However, Staff's cumulative analysis was complete, and included a "summary of projections" analysis in addition to a "list" analysis, either of which is sufficient under the CEQA Guidelines. (CEQA Guidelines, Cal. Code Regs., tit. 14, § 15130(b)(1).) In addition, many of the projects listed in the somewhat dated SEIR (the original EIR was compiled in 1999) referenced by Sarvey have presumably already been built, and their emissions (if any) are part of the existing ambient background. Other projects mentioned by Sarvey are only the source of construction emissions (e.g., the Illinois Bridge project and MUNI project), which are temporary in nature, and in some cases have already occurred. Any stationary "point source" emissions that are not temporary and have any magnitude are required to obtain an Air District permit and provide programmatic mitigation proportional to the project impact. So it is quite unlikely that any stationary source large enough to matter was not covered by the Air District (and City) "list"

of projects.[1] The magnitude of any impact, even if all SEIR projects are included, is less than significant. (May 31 RT 33-34.)

The City's analysis relied on the Air District's inventory of current and foreseeable projects. (May 22 RT 230, 285, 287.) This is the most reliable source for finding foreseeable project information, and is much more recent than the SEIR. The City used a dispersion model for large stationary source emissions such as those from the Potrero units to determine overlapping cumulative contribution to emissions from the project. (Exh. 46, p. 4.1-28.) This is an "extra credit" exercise required by the Commission, but not required by the Air District or by CEQA.

Most important, Staff concluded that the cumulative impact was significant for particulate matter and required mitigation proportional to the impact. Thus, the conclusion regarding significance would not change if one or two smaller sources, which Sarvey contends were left out of the "list" of foreseeable projects, were added to the analysis.

Sarvey's contentions regarding the Arkansas Street monitoring station have been adequately addressed in Staff's Opening Brief, at page 8.

Sarvey's contention that enhanced street sweeping is not effective because there can be rain in winter is not supported by any evidence. The testimony is to the contrary. (May 22 RT 251-252.)

Sarvey contends that offsets are not designed to mitigate local impacts, and that woodstove offsets are thus preferable to the alternative woodstove program. (Sarvey Brief, p. 6.) Staff agrees inasmuch as it also prefers to mitigate air impacts, and particularly PM impacts, locally where possible. The woodstove programs that Staff has proposed in various siting cases, including SFERP, are indicative of that concern. Staff hopes that the City will get the necessary public participation to achieve wood smoke PM reductions contemplated by AQSC-11.

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[1] The other projects listed by Sarvey (e.g., Bode Gravel, Mission Valley Rock, Hanson Aggregates) are sand and gravel facilities that principally generate dust, an impact which is in part mitigated by prevailing winds and weather, but also mitigated by extensive dust control measures and monitoring imposed by the City Port Authority. (See *Southern Waterfront Port Tenant Dust Monitoring Summary*, Port of San Francisco, March 2004.) This document is discussed further below.

However, Staff's experience in the Los Esteros power plant proceedings was that it is difficult to achieve wood smoke reductions for a power plant in an urban area that are sufficient to cover all PM emissions. If the City finds that it cannot implement the woodstove program in a manner that provides the required reduction of AQSC-11, Staff wants to assure that there is at least offset mitigation to cover PM emissions. AQSC-12 serves that purpose. Staff does not support redirecting the community benefits funds (which include indoor air improvements) to the woodstove program, as Mr. Sarvey suggests, and notes that other intervenors and community groups have expressed strong opposition to such a proposal.

Sarvey's reference to Mr. Bateman's testimony that offset requirements are not meant to mitigate "local impacts" is inapposite. Offset programs are the cornerstone of stationary source emissions mitigation, but such programs cannot feasibly be required to mitigate "local impacts" in some theoretical targeted impact area. Offsets address the issue regionally and over time. Although PM impacts can be local, they are largely regional in the Bay Area, as evidenced by the relatively uniform measurements for PM10 throughout the Bay Area regions. (Exh. 46, p. 4.1-25.) This is true both in terms of the number of times the 24-hour standard is exceeded, as well as the degree by which the standard is exceeded and the annual average measurements. (*Ibid.*)

Curiously, Sarvey (like CARE) indicates his preference to keep the Potrero units running in place of SFERP as an environmental justice consideration for the minority community. (Sarvey Brief, pp. 6-7.) His support for this is the claim that the average annual emission rate for Potrero Unit 3 is lower than the worst-case emission calculation for SFERP. (*Ibid.*) Even if Sarvey's figures are accurate (and he has offered no testimony to that effect), this would be an "apples to oranges" comparison, as the City's witness pointed out during his cross-examination. SFERP will have lower emissions than Potrero Unit 3. (May 31 RT 29.) Actual emissions of a facility are always lower (and often substantially lower) than the maximum allowed emission rates in a facility air permit. (May 22 RT 272.) This fact is supported not only by expert witness testimony (*ibid.*), but by logic itself. Nor does Sarvey's calculation, however he may have done it, include the emissions effect of the other Potrero units that burn distillate fuel when they operate, with no emission controls and relatively high periodic local air pollution consequences. It is hardly surprising that the groups that normally champion environmental justice in San

Francisco are not supporting the CARE and Sarvey position that the Potrero units are preferable to SFERP.

B. Biology

Sarvey contends that ERCs are not mitigation for the cumulative nitrogen deposition impacts on the soil of San Bruno Mountain. (Sarvey Brief, p. 7-8.) His evidence for this is the Air District's response to cross-examination to the effect that ERCs are not intended to address local nitrogen deposition impacts. (*Ibid.*) But nitrogen emissions are a regional problem and are addressed by the Air District programmatically, as that is the only way they can be addressed in an air emissions context. Offsets and New Source Review programs have been very successful in reducing nitrogen levels in the Bay Area, and the trend in annual emissions is consistently downward. (May 31 RT 128-130.). In fact, CARB's measurements of total Bay Area nitrogen emissions over the years indicates that nitrogen levels have been reduced by two-thirds over the past 30 years of air pollution efforts despite local growth and increases in traffic mileage, as indicated in the CARB document the City's witness cited. (May 31 RT 128; *2004 Califonrnia Almanac of Emissions and Air Quality*, CARB, p. 148, Table 4-11.) No testimony supports Sarvey's added assertion that ammonia slip contributes significantly to nitrogen deposition. The testimony indicates the contrary, as discussed in Staff's Opening Brief regarding Air Quality. Finally, it should not be ignored that the principal purpose of SFERP is the closure of the Potrero units, which would result in a significant net reduction in nitrogen emissions emanating from southeast San Francisco, to the betterment of San Bruno Mountain habitat.

C. Public Health

Sarvey contends that neither Staff nor the City did a cumulative impact assessment for public health. (Sarvey Brief, p. 8.) Again relying on the Southern Waterfront SEIR regarding projects that were predicted some six years ago, Sarvey claims cumulative risk is a significant effect. He further claims that neither Staff nor the City did a cumulative assessment.

Contrary to Sarvey's assertion, both City and Staff did extensive cumulative public health assessments. Staff's comprehensive assessment, using the most modern modeling tools available, is detailed in Staff's Opening Brief at pages 16-18. As discussed under air quality

above, many of the projects listed in the SEIR have apparently already been built, or involve only construction impacts (such as the Illinois Street Bridge project). They would thus not likely be cumulative to SFERP. However, even if one accepts uncritically the cancer risk numbers stated in Sarvey's brief, such cumulative numbers (the highest being 8.96 in one million), *even when added to project risk numbers* (0.073 in a million worst-case impact, east of the facility, in the industrial area; 0.0014 in one million at the nearest residence), would not toll the generally accepted significance criteria used for *single* projects--ten in one million. (See Exh. 46, p. 4.7-17, 21.) Thus, Sarvey's conclusion regarding cumulative impact significance is unsupported even if his numbers are accepted.

Staff's cumulative analysis far exceeded that which was performed for the SEIR, because it has access to the latest methods rather than a mere "list." It used modeling tools to examine the overlap of the major area sources of toxic air contaminants. The vanishingly small toxic emissions from SFERP did not overlap with other area toxic emissions. (May 22 RT 300-302.)

The remainder of Sarvey's arguments are difficult to categorize. There are extensive excerpts from comments on other environmental documents by a City witness related to environmental justice concerns. It is not clear whether such argument is intended to impeach the credibility of that witness. There are various contentions regarding reliability which suggest his preference for maintaining the Potrero units for reliability rather than building SFERP. Finally, there is a discussion of Hazardous Materials impacts regarding aqueous ammonia spills. This issue is thoroughly covered in Staff's Opening Brief at pages 21-27.

III. CARE ISSUES.

CARE makes a lengthy and confusing argument that the California Independent System Operator ("ISO") cannot "approve" the SFERP project without first consulting with the San Francisco Regional Water Quality Control Board ("Regional Board"). (CARE Brief, pp. 1-7.) Apart from misinterpreting provisions in the Public Utilities Code, the CARE argument seems to conveniently forget that it is the Commission, not the ISO, which grants the sole approval for this project.

CARE also states that there is "no demonstrated need" for the project, citing its "Alternatives" testimony. The problems with that testimony have been addressed in Staff's Opening Brief at pages 37-38, and need not be addressed again here. CARE's lengthy explication of the hearsay rule and why the Committee should not disallow transcript testimony by an unavailable witness in another case is interesting, but entirely misses the more fundamental point that the testimony in question was irrelevant to the SFERP alternatives discussion. Hearsay evidence may be admissible in Commission proceedings, but it is still subject to the underlying requirement of relevance. Irrelevant material remains irrelevant whether or not its hearsay.

CARE also asserts (correctly) that the Staff has signed a Memorandum of Understanding ("MOU") with the Regional Board, but then, in a puzzling non-sequitur, concludes that the Commission cannot approve SFERP unless there is "a similar memorandum signed by the CA ISO and the RWQCB." (CARE Brief, p. 7.) Staff is unsure how to respond to this argument, other than to point out that it is not grounded on any applicable statutory or regulatory provision.

CARE next asserts, in a lengthy discussion of largely irrelevant material, that its due process has been violated in various ways, and claims that this mistreatment occurs as retaliation for an administrative civil rights complaint CARE filed with the U.S. Department of Energy in 2003. (CARE Brief, pp. 13-19.)[2] In support of this claim CARE argues that "the Hearing Officer disallowed testimony on alternative mitigation offered up by the Commission Staff Air Quality Witness Tuan Ngo," referring to woodstove PM10 reduction measures considered by Staff. (*Id.*, at 14.) In fact, all of the testimony from Staff's Mr. Ngo was admitted into evidence. Apparently CARE is referring to Sarvey's attempt to cross-examine witnesses regarding an unsuccessful settlement discussion Staff held with the City, CARE, and Sarvey in which CARE/Sarvey argued that money should be shifted from other mitigation to wood stove PM10 reduction mitigation. The City objected to cross-examination on this issue because the

[2] CARE's 2003 complaint was principally against the ISO for activities related to the San Francisco Action Plan. Its allegations with regard to the Commission and City were as follows: "To the degree that the Energy Commission (CEC) and /or the City and County of San Francisco (CCSF), are or have acted in concert with the Cal ISO in the siting of new generation in San Francisco, they are also parties to this complaint." (CARE U.S. DOE complaint, June 21, 2003.) This kind of generalized complaint does not meet DOE's requirements for a sufficient complaint, as it does not provide the "what, when, and where" nature of the alleged discriminatory activity.

discussions were in the nature of a "settlement conference" to see whether the parties could agree on PM mitigation prior to the evidentiary hearings. (May 31 RT 51-60.) The Committee sustained the City's objection to cross-examination on settlement discussions that are not part of any filed testimony. (*Ibid.*) In any case, there was no "testimony," admitted or otherwise, from any party regarding those unsuccessful settlement efforts. Moreover, contrary to implications from CARE/Sarvey, Staff never supported any proposal to shift funds from other mitigation programs, including "community benefit" and indoor air improvement programs,

CARE claims further unfair treatment in the Committee's conduct of the hearing, and as evidence alleges that the Hearing Advisor allowed the City to redirect its air quality witness at the following hearing, after the City has previously indicated that it was finished at the end of the preceding hearing day. (CARE Brief, p. 15-16.) CARE claims further mistreatment because the Committee could not provide CARE with last-minute conference call phone participation at one of the evidentiary hearings. (*Id.* 17-18.) These claims are silly. First, the purpose of the redirect of the City's air quality witness was to give a more complete answer to cross-examination questions from Sarvey regarding the cumulative impact of various projects that were listed in the unavailable Southern Waterfront SEIR. Assuming that cross-examination is not merely a game of "gotcha," but is to elicit complete information about impacts, the Hearing Advisor's decision was sensible. Second, the unavailability of the conference call hearing participation was due to the untimeliness of CARE's request to the Commission's Public Advisor, which has explained to CARE that logistically it can only arrange this kind of service when it is requested at least an hour in advance. This issue has been briefed previously in Staff's May 4 "Response to CARE's Objections and Protest Regarding the May 1, 2006, Evidentiary Hearing." Any fair-minded person who bothers to read the hearing transcripts will see that the Committee and Hearing Advisor were indulgent with CARE rather than punishing.

CARE next contends that the MOU between Staff and the Regional Board staff (regarding their collaboration on site remediation measures) violates the Open Meetings Act. (CARE Brief, pp. 19-23.) It does not. The staff-to-staff MOU provides that Staff will collaborate with the Regional Board staff to make certain that Staff's health-protective performance standards are met when the Regional Board requires any site remediation activities. Agreements between agency staffs are not subject to the Open Meetings Act, and the legal

authority cited by CARE is not on point, as it deals with closed sessions of a City Council, a deliberative decision-making body. Of course, CARE can comment on the MOU at any time, as it is a public document. But CARE has not done so; its only real interest in the MOU is based on the erroneous assumption that the MOU somehow violates CARE's rights.

Finally, CARE complains that the Staff is deferring CEQA mitigation by requiring the HRA, ERA, and SCP later in the process. (CARE Brief, pp. 24-25.) Staff has not deferred mitigation. Rather, as discussed more fully in the Staff Opening Brief, Staff has required complete characterization of the pollution at the site and proposed health protective performance standards for any subsequent remediation activity. In addition, based on the site characterization, it has provided a "menu" of possible remediation measures. It has collaborated with the Regional Board staff to get agreement that the Regional Board, which determines site remediation in its role as the Administering Agency, will make sure that Staff's health-protective performance standards are met in any subsequent site cleanup. Finally, Staff has entered into an MOU to collaborate with the Regional Board to make sure that the Staff performance standards are observed during cleanup.

Of course, the HRA, ERA, and SCP documents that are soon forthcoming will be public documents subject to public comment in the Regional Board's forum. CARE can comment then, and in fact will probably be able to comment to the Commission on the same documents during this proceeding. However, it is notable that CARE had little interest in the evidence on site cleanup that it already could comment on, such as the site sampling survey, the Staff's proposed health-based performance standards, or the "menu" of cleanup measures that staff has identified and explained. Again, CARE's interest does not appear to be substantive, but merely intended to raise procedural and legal issues. But these issues are groundless and are directed at a very conscientious Staff effort to assure the efficacy of its health-protective performance standards.

IV. OFFICIAL NOTICE

As mentioned in "I" above, the Committee gave official notice to the Southern Waterfront SEIR, as well as various excerpts from the same document. (Exhs. 92, 92A, 92B, and 92C.) The use of this document for cross-examination has posed difficulties for Staff, as the document is not recent and is not readily available in hard copy. Moreover, the document has

still not been provided in hard copy to the Committee's Hearing Advisor, and Staff still does not have a copy.

Although Staff could not find the SEIR on the web, it was able to find the San Francisco Port Authority's "Southern Waterfront Port Tenant Dust Monitoring Summary"["Summary"], dated March 2004. This document, which derives from the mitigation and monitoring subsequently required for the SEIR, describes many of the sources for (dust) emissions from facilities mentioned by Sarvey in his Opening Brief, the nature of the activities and emissions, the mitigating meteorology, and the stringent dust mitigation conditions being imposed by the Port Authority. This document, unlike the SEIR itself that Sarvey relies on, is easily found on the web using the document name with any common search engine.

Staff is docketing the Summary and attaching it to this Reply Brief. (See Attachment A.) Although Staff believes that the Summary is ineligible for official notice for the same reasons that the SEIR is ineligible, it will appropriately have the same weight as the SEIR as a docketed government document. Should the Committee disagree with Staff and not rescind its official notice of the SEIR, Staff requests that official notice of this document also be taken to better round out the evidence regarding local cumulative impacts apparently described in the SEIR.

The Summary reports that the dust emissions from the Southern Waterfront projects are subject to Air District regulation. (Summary, p. 2.) Most of the activities at the Port's Southern Waterfront property "are construction-related industrial operations which involve large areas of exposed soil or aggregate materials, with varying degrees of crushing, processing, and transport of these materials." (*Ibid.*) This generates dust, much of which is larger than PM10, but some of which is smaller, including PM2.5. (*Id.* at 2-3.) Bode Concrete, Mission Valley Rock, Specialty Crushing, and Hanson Aggregates are specifically discussed. Bode Concrete and Specialty Crushing operate under Air District permits, while Mission Valley Rock (which reclaims sand from the Bay) and Hanson Aggregates (importing rock and gravel) are exempt from such permits because of the high moisture content of the materials handled. (*Id.* at 2-3.)

Two new concrete batch facilities, Pacific Cement, and RMC Pacific Materials, had not (in 2004) constructed their facilities, but are subject to "facility-specific permit conditions and

requirements." (Summary, p. 3.) In addition to applicable Air District regulations, all of the above operations are subject to extensive mitigation measures. (Summary, p. 4, and Appendix A-1.) This mitigation has been monitored and inspected, and "visible dust" from the operations is prohibited. (Summary, p. 4.) The document describes well-implemented mitigation with additional proposed "corrective actions" that had immediately been brought to the attention of operation managers, plus recommended plans for additional road paving (and other measures) to reduce dust. (Summary, p. 5.)

The Air District and U.S EPA have compiled data to confirm the air quality analysis and mitigation effectiveness discussed in the Southern Waterfront SEIR. (Summary, p. 5.) The main purpose of this further analysis was to see whether dust is "migrating" off-property and into surrounding neighborhoods. (*Ibid.*) This led to an extensive meteorological investigation involving data gathered from numerous meteorological sources, both governmental and private. (*Ibid.*) The prevailing wind is generally from west to east approximately 81 percent of the time; winds blow in different directions "during the rainy months," when it is a slower moving wind. (*Ibid.*) The wind rose model indicates that dust is not transported toward the Bayview Hunters Point community, but rather in the direction of the Bay. (Summary, p. 6.) Any dispersion to Bayview Hunters Point of airborne dust "is very low." (*Ibid.*) An additional report conducted by the Desert Research Institute indicates that most of the dust is within one to two meters above ground, and that "neither nuisance dust (larger than PM10) nor smaller particles (PM10 to PM2.5 particles) travel in significant volumes off Port property." (*Ibid.*) Based on the above data, and ongoing monitoring, the Summary concludes that the operations of these facilities are making no significant contribution to area dust. (*Ibid.*)

Thus, the most significant sources of air emissions (dust) discussed in the Southern Waterfront SEIR (and raised as cumulative impact issues by Sarvey) have subsequently been monitored and determined to have little impact, cumulative or otherwise, on the Bayview Hunters Point community.

CONCLUSION

CARE and Sarvey have labored hard to contend that the SFERP project will have adverse environmental and public health impacts to the Bay Area and its citizens. The evidence of

record, however, clearly indicates the opposite. The purpose of SFERP is to allow eventual closure of the Potrero units in southeastern San Francisco, which is consistent with the objective of community environmental justice groups. If this goal is achieved—and it is foreseeable that it will be if SFERP is built—local air emissions will be significantly lower than they are now. This would clearly be a benefit to public health.

SFERP as the Potrero replacement would also be a benefit to the general environment, in the form of less damage to the Bay from the once-through cooling used by Potrero Unit 3, and in the form of (slightly) lower nitrogen emissions on San Bruno Mountain. In addition, the "cleanup" necessary for the SFERP site will reduce long term health risks in the community and alleviate any existing contribution to pollution of the Bay migrating in underground water from the site. It is ironic that Staff's attempts to facilitate such "cleanup" remediation through its interaction with the Regional Board staff results in such strident opposition from CARE. However, the SFERP project has now committed CARE and the Regional Board to a course that will lead to appropriate cleanup measures. These benefits are perhaps small and incremental in their scale, but they are nevertheless benefits that should be acknowledged by the Commission.

Dated: July 11, 2006

Respectfully submitted,

Arlene L. Ichien for

RICHARD C. RATLIFF
Senior Staff Counsel

Attachment A

SOUTHERN WATERFRONT
PORT TENANT
DUST MONITORING SUMMARY

March 2004

Overview

The Port of San Francisco has a number of industrial activities located on Southern Waterfront lands under the Port's jurisdiction in San Francisco. They are primarily located south of Islais Creek on Piers 92-94, and include concrete batch plants, aggregate facilities including, aggregate importers, Bay sand reclamation and processing facilities, and solid waste and concrete recycling facilities. Each of these types of uses has the potential to create dust if proper mitigation and operating procedures are not adhered to.

Each of the Port's tenants is responsible for carrying out several mitigation measures to reduce or avoid dust emissions. These measures were derived from the Southern Waterfront Supplemental Environmental Impact Report (SEIR) completed in 2001, which analyzes the environmental impacts of various possible land uses developed in the Southern Waterfront, including the construction-related businesses above. The mitigation measures are required conditions under each tenant's lease agreement with the Port.

Port staff began to conduct field inspections in early 2003 to confirm that its tenants were complying with their respective dust mitigation requirements. This is of interest to several members of the community, who are particularly concerned that construction material- related businesses on Port property might be the source of dust in the Bayview Hunters Point community off Port property. In response, Port staff coordinated with other regulating agencies and specialists, to assess the potential for tenants' operations to create dust that may be effecting the adjacent community.

This report summarizes the following dust-related issues:

1) The types of dust of concern to community health;
2) Sources of dust on Port Southern Waterfront lands, and types of required permits; Required tenant mitigation measures;
3) Field inspections to monitor tenant compliance with dust mitigation measures;
4) A technical data summary of Southern Waterfront dust dispersion patterns; and
5) Conclusions and next steps

Dust Characteristics and Sources

Dust or particulate matter includes a wide range of solid and liquid particles within a certain size range. Depending on the size of the particles, particulate matter emissions can pose a nuisance or contribute to unhealthful air quality conditions. Large particles (greater than 10 microns in diameter) typically settle out quickly and, if present in the breathing zone, are filtered out by one's respiratory system before reaching the lungs. These larger sized particles are sometimes referred to as "nuisance dust", because they are generally not considered a public health concern and are not regulated as one of the criteria air pollutants. However, nuisance dust does contribute to soiling, visibility reduction and nuisance conditions. The Bay Area Air Quality Management District (BAAQMD) regulates visibility reduction caused by these larger particulates through Regulation 6. Regulation 6 establishes limits on emission rates, concentration, visible emissions and opacity to reduce volumes of visible nuisance dust. The regulation indicates that "a person shall not emit particles from any operation in sufficient number to cause annoyance to any other person . . ." and applies "if such particles fall on real property other than that of the person responsible for the emission."

Smaller particles travel further and are more likely to reach the part of the lungs where health impacts may result. Particles smaller than 10 microns in diameter (four ten-thousandths of an inch) are known as PM_{10}, and even smaller particles, less than 2.5 microns in diameter (one ten-thousandths of an inch) are known as $PM_{2.5}$. Because of their greater potential impact on human health, PM10 and PM2.5 emissions are more strictly regulated and more likely to trigger the imposition of mitigation measures through the environmental review process. EPA states that the source characteristics and health effects of fine and coarse particles are noticeably different. EPA's Fact Sheet states as follows:

- PM_{10} come from sources such as windblown dust from the desert or agricultural fields, and dust kicked up on unpaved roads by vehicle traffic. Thirty to forty percent of PM_{10} derives from mechanical breakdown of rock or soil. PM_{10}can accumulate in the respiratory system and aggravate existing health problems such as asthma.
- $PM_{2.5}$ are generally emitted from activities such as industrial and residential combustion and from vehicle exhaust. $PM_{2.5}$are also formed in the atmosphere when gases such as sulfur dioxide, nitrogen oxides, and volatile organic compounds, emitted by combustion activities, are transformed by chemical reactions in the air. Less than two percent of $PM_{2.5}$ derives from soil breakdown. $PM_{2.5}$, which penetrate deeply into the lungs, are more likely than coarse particles to contribute to upper respiratory and other adverse health effects.

Sources of Dust from Port Property

Most of the industrial uses of concern on Port Southern Waterfront property are construction-related industrial operations which involve large areas of exposed soil or aggregate materials, with varying degrees of crushing, processing, and transport of these materials. In addition, many of the operations are conducted outdoors and thus are extensively exposed to wind blown erosion. Dust generated by construction materials handling operations include larger diameter particles (greater than PM10) that settle out on roads, parked cars, or other horizontal surfaces, as

well as smaller diameter particles (PM_{10} to $PM_{2.5}$) that take longer to settle out of the air than larger particulates. Construction-related dust typically ranges in size from 3 to 100 microns in diameter, and sand ranges in size from 20-200 microns in diameter. These operations are subject to applicable BAAQMD regulations and permit requirements to minimize nuisance dust, and reduce, to the greatest extent feasible, PM10 and PM2.5 emissions. Sources of dust include:

- **Bode Concrete**, a ready-mix concrete manufacturer which operates under a BAAQMD permit that regulates emissions from numerous sources (storage piles, bins and silos, conveyors, mixing and batching equipment, loading equipment) and associated emissions abatement equipment (water spray, baghouses). Permit conditions require proper operation and maintenance of all equipment and annual testing to verify proper operation and efficacy of emissions controls. The permit limits total annual throughput (amount of material stored and processed per unit time) through various pieces of equipment. The throughput limit is calculated to limit PM_{10} emissions to approximately six tons/year, or 175 lbs/day.

- **Mission Valley Rock**, a joint tenant with Bode that reclaims sand from the Bay which is used in producing concrete and construction materials, as well as other uses. Mission Valley Rock's operations include sand washing, screening, and storage. These activities are exempt from the requirement for a BAAQMD permit because the material stored and handled has a 5% or greater moisture content

- **Specialty Crushing** receives and crushes concrete and building materials reclaimed from construction sites, and operates under a BAAQMD permit for storage, crushing and screening equipment, conveyors, and concrete batching equipment, and associated abatement equipment (water spray, baghouses). Permit conditions require proper operation and maintenance of equipment and maintenance of 4% or greater moisture in storage stockpiles. The permit limits total annual throughput to a rate calculated to limit PM_{10} emissions to 9.4 lbs/day.

- **Hanson Aggregates**, reclaims and processes Bay sand at Pier 92, and imports aggregates (rock and gravel) by ship at the Pier 94 marine terminal. Both operations are exempt from BAAQMD permit requirements because the material stored and handled has a 5% or greater moisture content.

- **Unpaved Roads and Driveways** in the Pier 92 area and adjacent Pier 90-94 Backlands are used by trucks and vehicles accessing Port tenant businesses, particularly along the Amador Street corridor. Dirt that is kicked up by truck tires produces a substantial amount of dust in the area.

Two other concrete batch facility businesses, Pacific Cement and RMC Pacific Materials, have approved Port leases, but have not constructed their facilities. Like Bode, they will also be subject to facility-specific permit conditions and requirements.

Dust Suppression Mitigations

In addition to BAAQMD permit requirements which reduce dust of their operations, Port tenants have incorporated business practices and/or comply with required mitigation measures to minimize dust impacts, including the following:

- Installation of truck wheel-washing systems at plant exits Install Best Available Control Technologies (BACT) such as overhead sprays on construction material piles and unpaved roadways to maintain moisture content that prevent particles from becoming airborne.
- Limit the production of concrete or asphalt material produced to levels that do not result in truck travel volumes or operational emissions that exceed the levels analyzed in the Southern Waterfront SEIR.
- Conduct ongoing street sweeping operations
- Requirements for good faith efforts for tenants to engage in operational practices sensitive to the environment by investigating and implementing, where feasible, measures to reduce diesel emissions. The Port offers economic incentive to this objective by contributing towards the cost differential of alternative or low-emission fuels, or vehicles and/or engine technologies. Several of the Port's tenants, such as Bode and Hansen, use a low emission diesel fuel such as Lubrizol. Others have upgraded their trucks to newer, lower-emission models (RMC Pacific Materials). Another Port tenant, Sanitary Fill, which runs a recycling facility at Pier 96, employs Liquefied Natural Gas (LNG) vehicles.

A detailed list of the air quality mitigations required to help mitigate against dust and outlined in the SEIR are included in Appendix.A-1.

Field Inspections Process and Corrective Measures

Inspection Procedures:
The Port of San Francisco began inspecting certain facilities with significant potential to generate dust in May 2003. Inspections include visual observation of dust emissions, wind speed measurement, and checking for compliance with mitigation measures outlined in the SEIR and/or required by the leases for the subject facilities. Each inspection is an unannounced 30-minute observation. Inspections are conducted at varied times of day to evaluate different wind and traffic conditions.

The Port is monitoring facilities that may generate dust during certain operations, such as loading/unloading or processing materials, or by wind or traffic generating dust from stockpiles or unpaved surfaces. BAAQMD regulations limit dust emissions to specific concentrations, measured by a specialized method of visual observation and/or by instruments that measure particulate matter in air. However, the regulations also prohibit generation of dust from any facility or operation in sufficient quantity that dust can be seen emanating beyond the property line of the facility, if the dust falls on adjacent property. This general prohibition does not rely on a quantitative measurement, but rather prohibits discharge of dust visible to the naked eye. For the purposes of the Port's monitoring effort, if any visible dust was observed, within or emanating from the facility, that observation was recorded as a "dust observation".

Summary of Conclusions:

During the Port's initial inspections, Port staff observed that Port tenants were generally implementing required dust mitigation measures. This included sweeping the leasehold area and adjacent streets, watering un-paved roadways, covering or keeping aggregate and material stockpiles moist, and keeping vehicle speeds to 10 m.p.h. The Port did observe some potential corrective actions that would improve dust control measures, such as insuring that the street sweepers used sufficient water, increasing the use of water on stock piles, and increasing the frequency in which un-paved roadways were being watered. These corrective actions were immediately brought to the attention of the tenants' operational managers, and have been carried out. Port staff have observed in follow-up inspections that corrective actions needed and identified were taking place.

Observations indicated that significant additional benefits would be seen if currently unpaved roadways were paved, reducing the potential for dust to be re-suspended into the air from truck tires. While paving of unpaved roadways would improve air quality within the Port's property, it was not concluded that the air quality benefits would extend significantly into adjacent non-Port areas, because most of the dust volumes stay in the immediate area regardless. The Port is planning improvements to unpaved roadways, including paving Amador Street between Piers 90-92 and 94-96 and the access way between Bode Gravel and the future RMC Pacific Concrete Batch Plant.

The Port sent memos summarizing the applicable findings of the field inspections to each tenant, and followed up to ensure that tenants received the documents and were taking necessary corrective actions. The Port will continue to monitor and enforce tenants' implementation of the mitigation measures required by their leases.

Technical Data effecting Dust Dispersion

Port staff, working with staff and information from the BAAQMD and U.S. Environmental Protection Agency (EPA) have compiled data which confirm the air quality analysis and mitigation measures contained in the Southern Waterfront SEIR. This information was gathered to re-examine whether the Port's tenants operations are causing dust to migrate off Port property into the surrounding neighborhoods.

Air quality experts first recommended that meteorological data be compiled to summarize prevailing wind speeds and directions. The Port gathered data from several sources including PUC's Southeast Water Treatment Facility, PG&E's Hunters Point power plant, Hunters Point Naval Shipyard, San Francisco International Airport and the San Francisco Bay Wind Archives operated by United States Geological Service (USGS) in conjunction with the National Oceanic and Atmospheric Administration (NOAA). The PG&E Hunters Point Power Plant weather station provided the most consistent baseline database, and the data is consistent with that from the other sources. Appendix A-2 contains Wind Rose models from the PUC Southeast Treatment Facility, the Hunters Point Naval Shipyard and San Francisco International Airport. *Figure 1*, a *Wind Rose Model for the Southern Waterfront Area,* illustrates average wind speed and direction for a 12-month period. This model indicates that the prevailing winds in the Port area blow from the west to the east, which occurs during about 45% of the time over the course of a year. Winds blow in an easterly direction for a total of approximately 81% of the time. Winds blow in various other directions typically during the rainy months, when dust sources are naturally wetted. The model further illustrates that when the wind is blowing in other than the prevailing direction, it is a slower moving wind.

Figure 2: Southern Waterfront Port Tenant Setting illustrates the location of each of the construction-related industries and their location relative to the Bayview Hunters Point community. Overlapping the wind rose model on this exhibit shows that if the wind were to carry dust particulates off of Port property, it would be in the direction of the Bay and not towards the Bayview Hunters Point community.

Air quality experts from the BAAQMD stated that the climate conditions (including prevailing wind direction, wind speed and humidity levels), reported from nearby meteorological stations indicate that the potential for airborne dust to be dispersed from Port property to Bayview Hunters Point is very low. In addition, information from the EPA, including a report conducted by the Desert Research Institute states that "Available data shows that ~75% of suspended PM_{10} remains within 1 to 2 meters above the ground." This information suggests that neither nuisance dust (larger than PM_{10}) nor smaller particulates (PM_{10} to $PM_{2.5}$ particles) travel in significant volumes off Port property.

The Desert Research Institute report also reviews current BACT measures designed to mitigate and limit the potential impacts from aggregate facilities such as those on the Port's Southern Waterfront. BACT measures outlined in the report are the same measures identified in the SEIR, which are required in each of the tenants leases.

A one-year pilot project sponsored by the City's Department of Environment, the BAAQMD, the California Air Resource Board, the USEPA, and Literacy for Environmental Justice titled "BayCAMP" is currently in the process of being established. This program will be monitoring air quality in the Bayview Hunters Point community and will also be tracking meteorological data. The monitoring device is planned to be located just off of Whitney Young Circle on "the Hill", within the community adjacent to Port Property. Information gathered from this project will allow the Port to continue to track pertinent meteorological data and other information including sampling data gathered.

Conclusion and Next Steps

The Port's research, in conjunction with field inspections of Port tenant operations, conclude that Port tenants' operations are not significantly contributing to dust which has been observed off of Port lands and in the surrounding community. Also, with proper implementation of the mitigation measures in place, dust is unlikely to pose a nuisance or potential health risk.

To ensure that Port tenants continue to comply with the mitigation measures outlined in the SEIR and as required in their leases, the Port will continue unannounced field inspections and coordination with its tenants to ensure operating procedures are followed. The Port will also continue to monitor information gathered from the BayCAMP project to determine if new information gathered reflects a potential need for Port tenants to adjust operating procedures to minimize potential dust impacts to the surrounding community. The Port will also continue to pursue the construction and improvements to unpaved surfaces such as Amador Street or the access driveway to Mission Valley Rock off of Amador Street

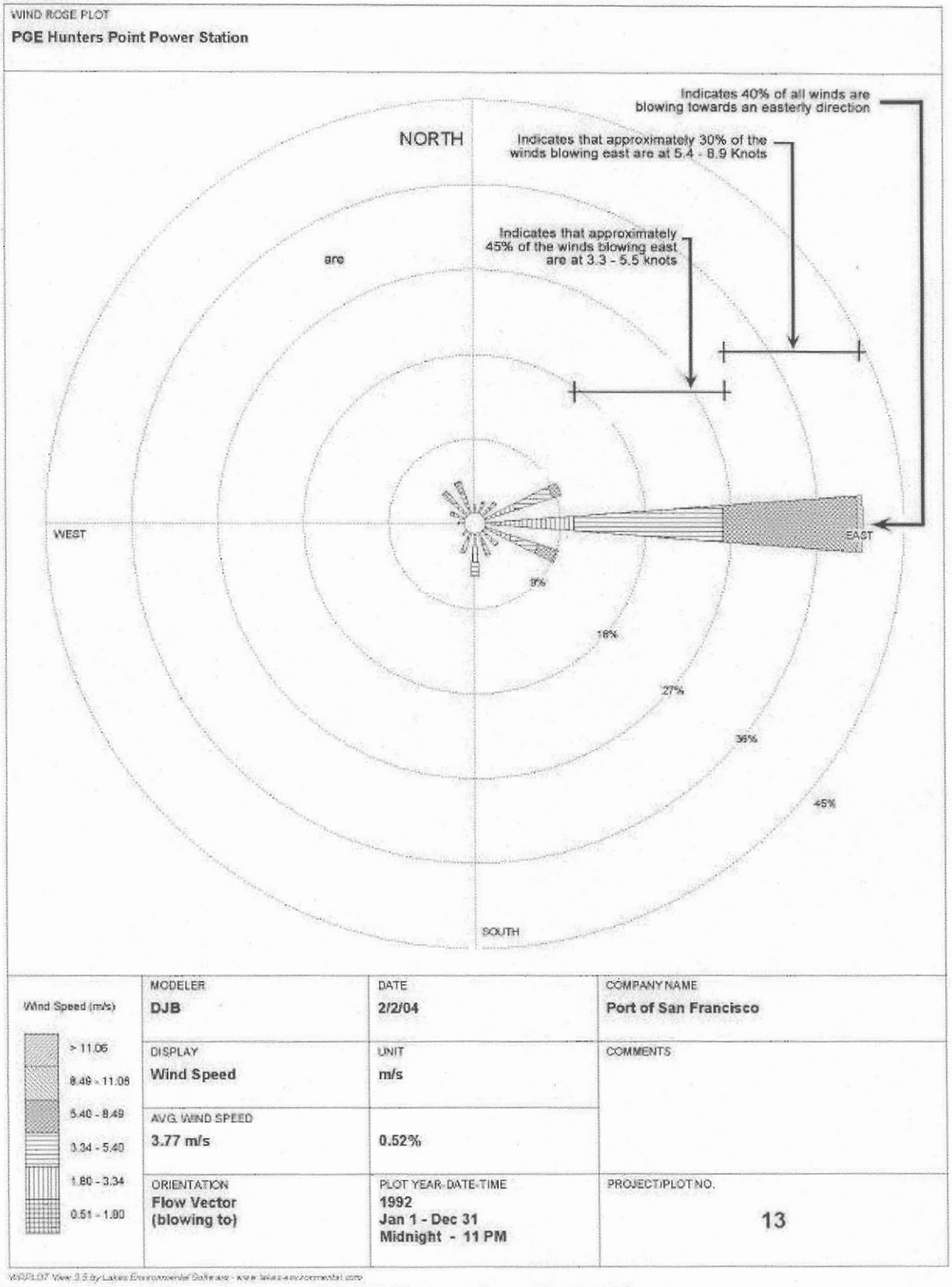


Figure 1 –Wind Rose Diagram, PG&E Hunters Point Power Plant

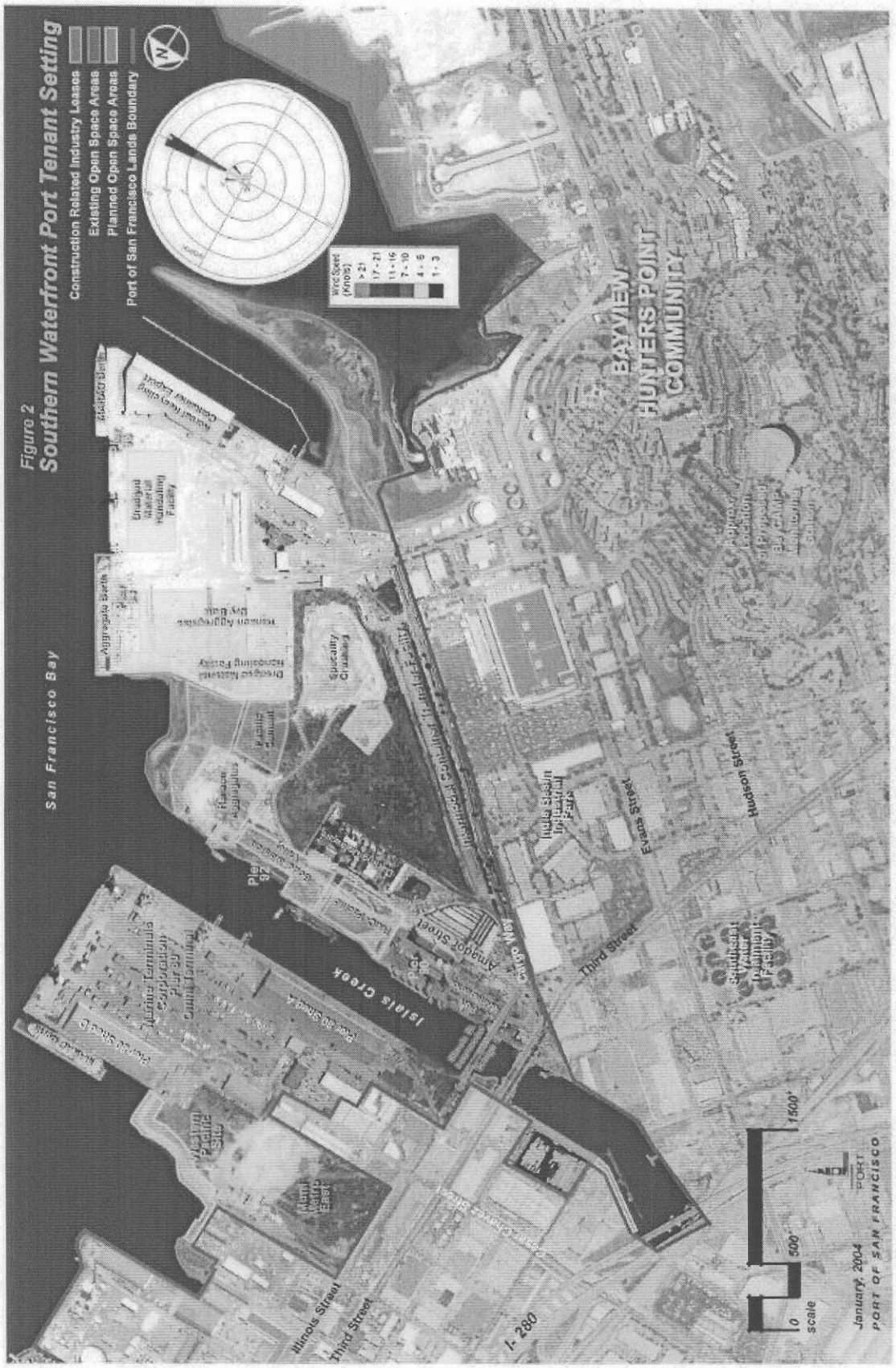


Figure 2
Southern Waterfront Port Tenant Setting
Construction Related Industry Leases
Existing Open Space Areas
Planned Open Space Areas
Port of San Francisco Lands Boundary
San Francisco Bay
BAYVIEW HUNTERS POINT COMMUNITY
Islais Creek
Third Street
Evans Street
Hudson Street
Illinois Street
I- 280
0
500'
1500'
scale
January, 2004
PORT OF SAN FRANCISCO

APPENDIX A-1

Southern Waterfront SEIR Dust Mitigation Measures

The following is a list of the mitigation measures identified in the Southern Waterfront Supplemental EIR, numbered to correspond with the SEIR

C.1 Each of the Industry Group construction aggregate industry project components, which would represent "stationary sources" of particulate emissions, shall include "best available control technology" (BACT) to control emissions, consistent with current regulations. For aggregate-handling operations (Bode Gravel, Mission Valley Rock, RMC Pacific, British Pacific Aggregates), this includes maintaining a moisture content in the aggregate that is high enough to eliminate PM-10 "fugitive" emissions (wind-blown dust that could otherwise escape into the surrounding air). A water spray system shall be installed at each aggregate-handling facility, including Bode Gravel, Mission Valley Rock, RMC Pacific, and British Pacific Aggregates. Fine aggregate material (sand) shall be maintained with a moisture content of approximately 5 percent, because such material with a moisture content of 4.5 percent or more produces virtually no fugitive emissions. Coarse aggregate (gravel) shall be kept damp on the surface, which would also effectively eliminate fugitive dust. Aggregate shall be stored in bunkers at ready-mix and asphalt plants, rather than open piles, with water spray (including the use of surfactants, as necessary, to bind the water and dust to the aggregate) applied to maintain adequate moisture content to control emissions at both production and shipping/storage operations. ISG Resources, which would handle fly ash, a finer, more powdery material than aggregate, shall install BACT dust collection equipment to accommodate truck and rail transport and shall use pneumatic equipment to control dust emissions during the transfer of fly ash.

C.3 Consistent with the City's Clean Air Program (established by Ordinance 258-99, adopted October 15, 1999), it is City policy to "foster, promote, and encourage the use of low emission [alternative fuel vehicles] and [zero emission vehicles] by developing infrastructures to support the use of these vehicles." Under the ordinance, the City is to (1) assess the need for a network of natural gas fueling stations accessible to the public; (2) site and develop at least five such facilities, by public and/or private entities; (3) install 50 publicly accessible electric vehicle charging stations in City garages, lots, or other sites; (4) develop a plan for additional charging stations and related infrastructure; (5) buy and lease ultra-low and zero emission vehicles for City department use; (6) identify and convert diesel bus lines to electric service; (7) develop a plan to phase out older diesel buses; (8) develop a plan and incentives to encourage larger private vehicle fleets to convert their fleets to very low or zero emission vehicles; and (9) develop a car sharing program in high density neighborhoods.

Consistent with the City's Clean Air Program, the Port shall require that all tenants make a good faith effort to engage in operational practices sensitive to the environment and the neighboring community. In furtherance of this, the Port shall require that tenants operating a fleet of vehicles investigate the potential for use of low- or zero emission vehicles and implement measures to reduce vehicle emissions to the maximum feasible extent. Options may include, but not necessarily be limited to, the use of low-emission diesel fuel (including low-sulfur diesel); the use of catalytic particulate traps for diesel-powered engines that are currently under study by the California Air Resources Board; the use of other emerging technologies to reduce diesel particulate emissions; and use of electric vehicles. The Port shall also require that tenants operating diesel-powered stationary equipment investigate similar options. Tenants shall investigate retrofitting existing engines and purchase of new engines. The Port shall further require that tenants who work with independent trucking contractors encourage those contractors to make similar efforts, including, if reasonably feasible, providing such truckers with economic incentives to retrofit equipment or take other measures as may be necessary to use low-emission fuels. As an economic incentive to minimize

diesel emissions from Port property, the Port shall contribute towards the incremental costs incurred by its tenants for Port-approved equipment and improvements in furtherance of this measure. Finally, the Port shall establish a schedule by which tenants described above shall report to the Port on progress in investigating reduced-emission engines.

C.4 At such time as specific mixed-use or other non-industrial projects generating more than 100 daily vehicle trips are approved and occupied at the Pier 70 Mixed-Use Opportunity Area and the Pier 90-94 backlands, the Port shall develop a Transportation Systems Management (TSM) Plan, and potentially a Transportation Management Agency (TMA) that would consist of Port staff, Port tenants, property owners, and project occupants. The goals of the TSM Plan and the TMA shall be to reduce, to the maximum feasible extent, the use of single-occupancy automobile traffic and encourage other forms of travel to and from work, including transit, carpooling and ridesharing, bicycle, walking, and other means.

C.4A To regulate the production of concrete or asphalt material consistent with the volumes analyzed in the Southern Waterfront SEIR, any lease for concrete or asphalt batching operations on Port property shall include a provision setting forth the maximum production volume allowed under the lease, such that the cumulative total of production volumes of such batching operation leases shall not exceed the volumes assumed and analyzed in the SEIR.

To monitor production volumes that may occur on Port property, the Port shall require as a condition of each lease that each tenant provide annually an audited account of the concrete and/or asphalt production volumes provided by each concrete or asphalt production business. The Port shall incorporate this information in an annual report to the Port Commission.

Should any existing tenants propose to increase production above the amounts stipulated in the lease, such change would require an amendment to the lease, and would be subject to further environmental review by the San Francisco Planning Department's Major Environmental Assessment (MEA) division. In determining whether further environmental impact analysis will be required, MEA will consider the production levels cited in the Port's report and any emission-reducing improvements that may have been incorporated into the on-site operations (stationary sources), and trucks and other vehicles associated with the operations (mobile sources).

REVISED MEASURE FROM THE 1997 WATERFRONT PLAN FEIR, AS APPROVED BY THE PORT COMMISSION, JUNE 1997

C.5 The Port shall require that project sponsors direct construction contractors to implement a dust abatement program to reduce the contribution of project construction to local PM-10 concentrations. Elements of this program, which is currently applied to all Port tenants, include the following:

- Water internal roadways and unpaved construction areas just prior to the morning and evening peak traffic periods (to limit the potential for major roadway traffic to entrain dust), limit speeds to 10 mph, and sweep paved internal roads after the evening peak period.

- In addition, water active sites (e.g., where demolition, excavation or other earth work is underway) at least twice per day. Increase the frequency of watering when wind speeds exceed 15 miles per hour. Suspend all excavating and grading operation when instantaneous gusts exceed 25 miles per hour.

- Replace ground cover in disturbed areas as quickly as possible.

- Enclose, cover, water twice daily, or apply soil binders to exposed stockpiles of sand, gravel, and dirt.

- Install gravel at construction equipment entrances to unpaved areas to prevent tracking of dirt and mud onto streets.

- Sweep paved access roads, parking areas, and construction staging areas, at the end of day (with water sweepers), and sweep adjacent City streets if any visible soil material is carried over to these streets.

- Cover all trucks hauling dirt, sand, soil, or other loose materials. Maintain at least six inches of freeboard between the top of the load and the top of the trailer.

- Sweep up dirt or debris spilled onto paved surfaces immediately to reduce resuspension of particulate matter through vehicle movement over these surfaces.

- Designate a person or persons to oversee the implementation of a comprehensive dust control program and to increase watering, as necessary.

- Maintain and operate construction equipment so as to minimize particulates from exhaust emissions. During construction, require contractors to operate trucks and equipment only when necessary. Equipment should be kept in good condition and well-tuned, to minimize exhaust emissions.

Ordinance 175-91, passed by the Board of Supervisors on May 6, 1991, requires that non-potable water be used for dust control activities. Therefore, the project sponsor shall require that the contractor(s) obtain reclaimed water from the Clean Water Program for this purpose.

This mitigation measure also would reduce demolition-related impacts regarding lead paint chips/lead dust. The project sponsor shall also be required to comply with Chapter 36 of the San Francisco Building Code, Work Practices for Exterior Lead-Based Paint, enforced by the San Francisco Department of Building Inspection.

C.6 Consistent with the construction-period dust abatement program described in Mitigation Measure C.5, the Port shall require that Industry Group components and other aggregate-related tenants employ dust abatement procedures including, but not necessarily limited to, the following:

- installation and operation of truck wheel-washing systems at the plant exits;

- daily street sweeping on streets surrounding aggregate-related facilities; and

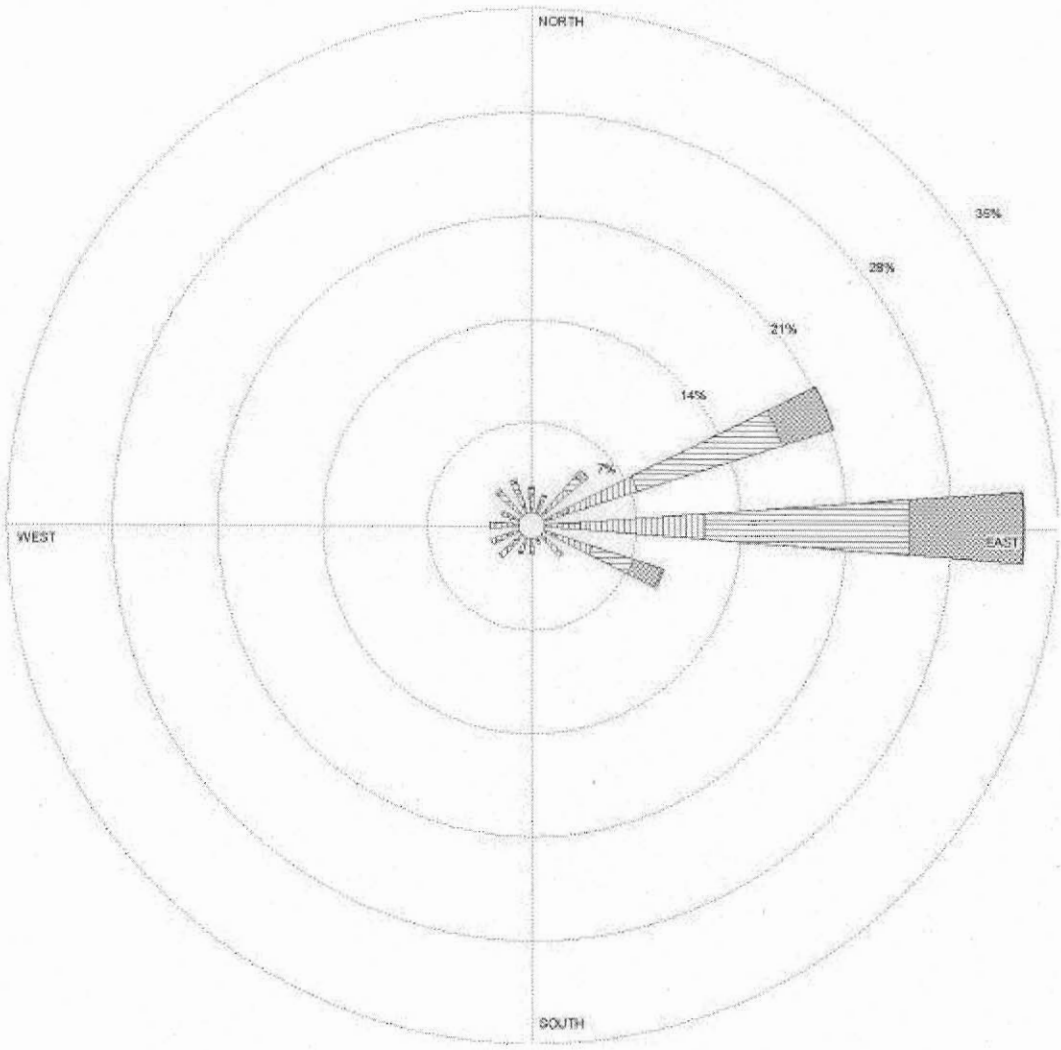
- clearly posting on the exterior wall or fence of such facilities a company telephone number for citizens to call with dust, noise, or other operational complaints, and designation of a Port staff contact for same.

No other feasible mitigation measures have been identified that would reduce the project's total regional emissions to a level below Bay Area Air Quality Management District thresholds, or eliminate the project's contribution to potentially significant cumulative impacts from all existing (unquantified) and future (unknown) emissions sources.

APPENDIX A-2 Other Wind Data – Rose Models

WIND ROSE PLOT

San Francisco PUC Southeast WaterTreatment Facility

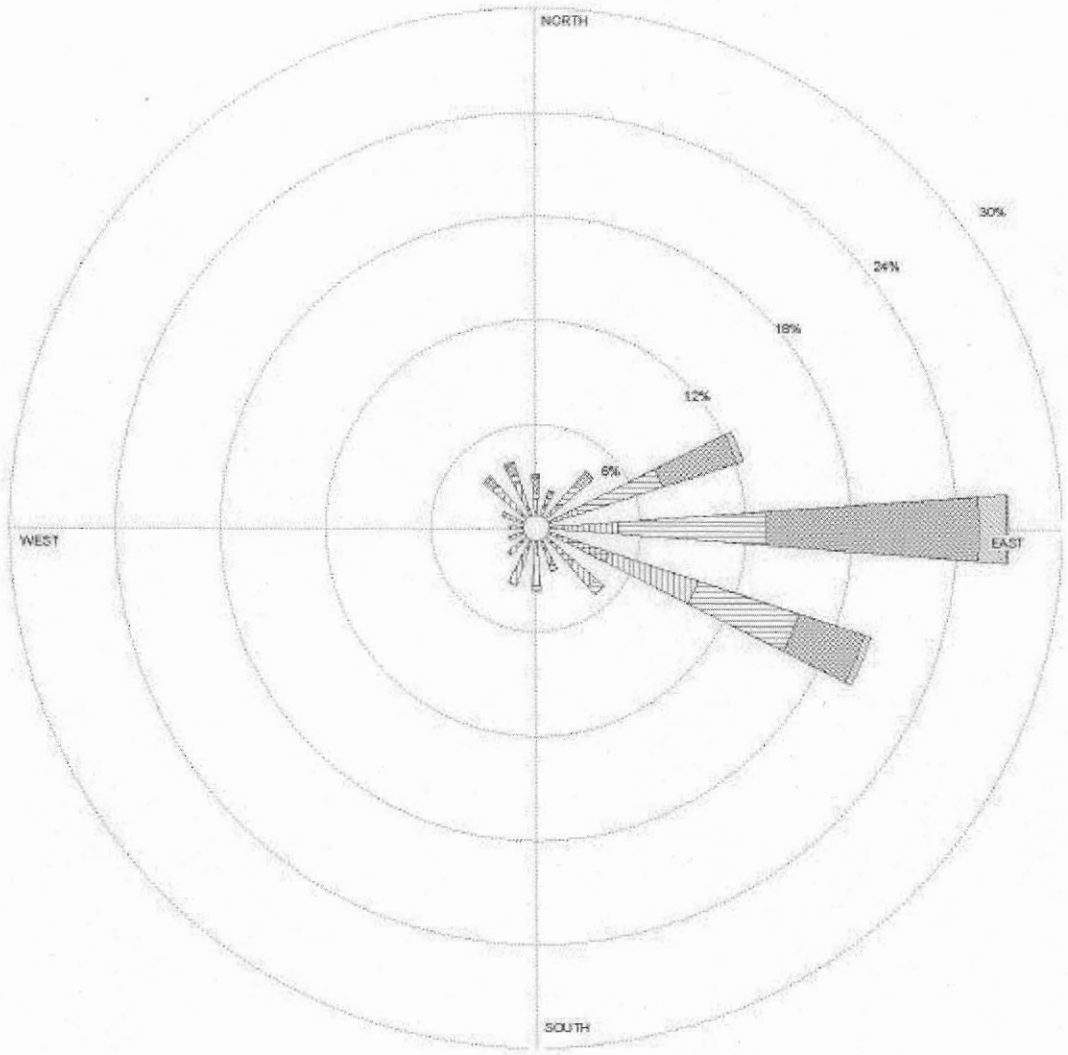


Wind Speed (Knots)	MODELER	DATE	COMPANY NAME
	DJB	**2/2/04**	**Port of San Francisco**
> 21 17 - 21 11 - 16 7 - 10 4 - 6 1 - 3	DISPLAY **Wind Speed**	UNIT **Knots**	COMMENTS
	AVG. WIND SPEED **6.57 Knots**	**1.29%**	
	ORIENTATION **Flow Vector (blowing to)**	PLOT YEAR-DATE-TIME **2002** **Jan 1 - Dec 31** **Midnight - 11 PM**	PROJECT/PLOT NO. **13**

WRPLOT View 3.5 by Lakes Environmental Software - www.lakes-environmental.com

WIND ROSE PLOT

Hunters Point Ship Yard

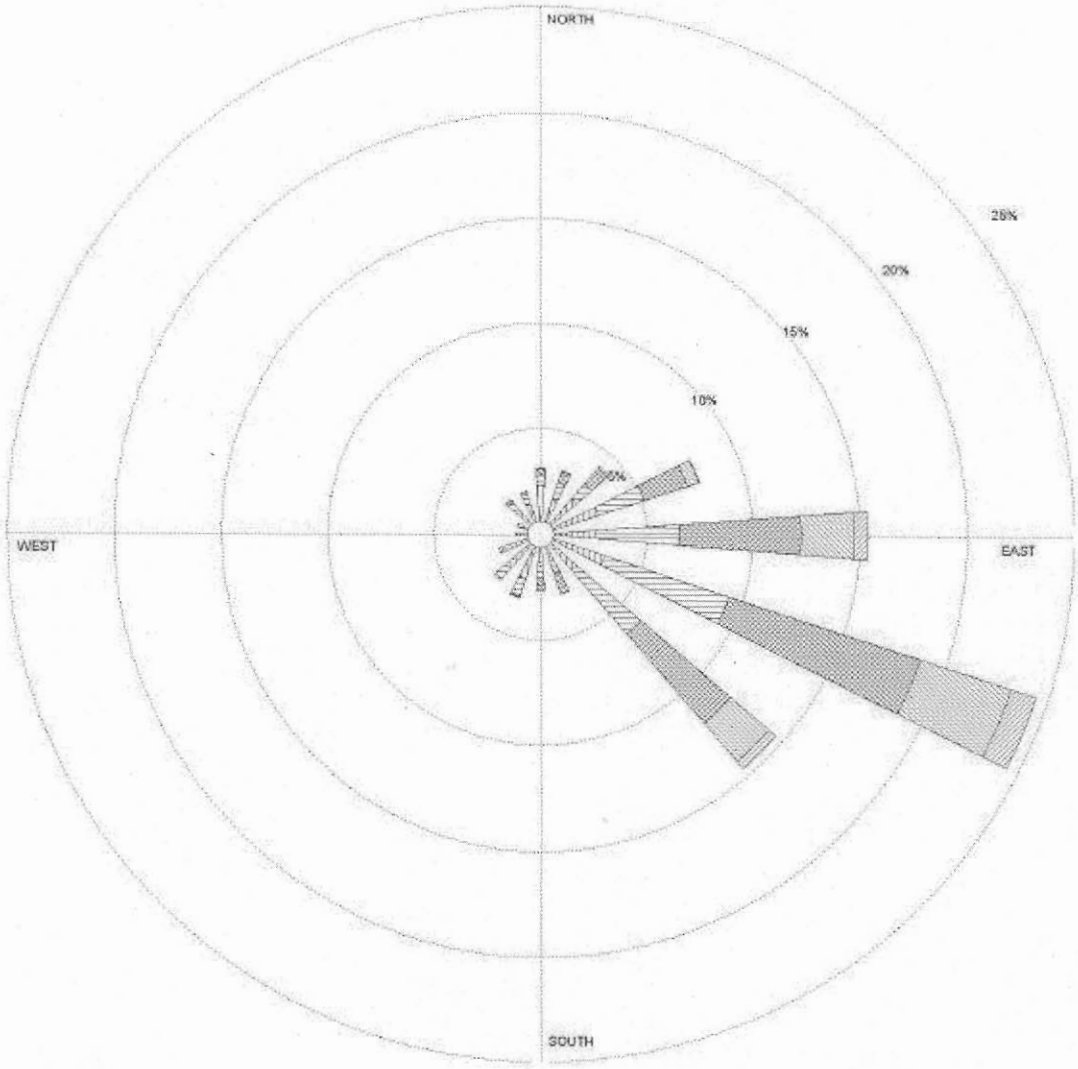


Wind Speed (m/s)	MODELER	DATE	COMPANY NAME
	DJB	2/2/04	Port of San Francisco
> 11.06 8.49 - 11.06 5.40 - 8.49 3.34 - 5.40 1.80 - 3.34 0.51 - 1.80	DISPLAY Wind Speed	UNIT m/s	COMMENTS
	AVG. WIND SPEED 3.92 m/s	0.08%	
	ORIENTATION Flow Vector (blowing to)	PLOT YEAR-DATE-TIME 2002 Jan 1 - Dec 31 Midnight - 11 PM	PROJECT/PLOT NO. 13

WRPLOT View 3.5 by Lakes Environmental Software - www.lakes-environmental.com

WIND ROSE PLOT

Station #23234 - SAN FRANCISCO/INT'L ARPT, CA



Wind Speed (m/s) > 11.06 8.49 - 11.06 5.40 - 8.49 3.34 - 5.40 1.80 - 3.34 0.51 - 1.80	MODELER **DJB**	DATE **2/2/04**	COMPANY NAME **Port of San Francisco**
	DISPLAY **Wind Speed**	UNIT **m/s**	COMMENTS
	AVG. WIND SPEED **5.26 m/s**	**6.79%**	
	ORIENTATION **Flow Vector (blowing to)**	PLOT YEAR-DATE-TIME **1990** **Jan 1 - Dec 31** **Midnight - 11 PM**	PROJECT/PLOT NO. **13**

WRPLOT View 3.5 by Lakes Environmental Software - www.lakes-environmental.com

List of Acronyms

BAAQMD	Bay Area Air Quality Management District
BACT	Best Available Control Technologies (Dust Control)
NOAA	National Oceanic and Atmospheric Administration
PM	Particulate Matter
PUC	Public Utilities Commission
SEIR	Southern Waterfront Environmental Impact Report
USEPA	United States Environmental Protection Agency
USGS	United States Geological Service

REFRENCES

- U.S. EPA, Office of Air and Radiation, Office of Air Quality Planning and Standards, Fact Sheet, November 1996. Information is also available on the California Air Resources Board Web site (www.arb.ca.gov).
- Desert Research Institute Paper Reconciling Urban Fugitive Dust Emissions Inventory and Ambient Source Contributions Estimates – Summary of Current Knowledge and Needed Research, May, 2000)
- Characteristics of Particles and Particle Dispersion, Courtesy of Royco Instruments, provided by Ron Meyers USEPA, Emission Measurement Center
- Meteorological Data provided by, Bay Area Air Quality Management District, Dick Duker

G/southern waterfront/environmental mitigation issues/dyo 3-16-04 dust summary

BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT COMMISSION OF THE STATE OF CALIFORNIA

APPLICATION FOR CERTIFICATION FOR THE SAN FRANCISCO ELECTRIC RELIABILITY PROJECT	**Docket No. 04-AFC-01** **PROOF OF SERVICE** ***Revised 7/05/06**

INSTRUCTIONS: All parties shall 1) send an original signed document plus 12 copies OR 2) mail one original signed copy AND e-mail the document to the web address below, AND 3) all parties shall also send a printed OR electronic copy of the documents that shall include a proof of service declaration to each of the individuals on the proof of service:

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Attn: Docket No. 04-AFC-01
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DECLARATION OF SERVICE

I, Julie Mumme, declare that on July 11, 2006, I deposited copies of the attached **STAFF REQUEST TO FILE REPLY BRIEF and COMMISSION STAFF REPLY BRIEF**, in the United States mail at Sacramento, CA with first-class postage thereon fully prepaid and addressed to those identified on the Proof of Service list above.

OR

Transmission via electronic mail was consistent with the requirements of California Code of Regulations, title 20, sections 1209, 1209.5, and 1210. Electronic copies were sent to all those identified on the Proof of Service list above.

I declare under penalty of perjury that the foregoing is true and correct.

[signature]