Responses to Public Comments on the Draft EIR

I. Piecemealing/Cumulative Impacts

Comment: Rules 11-18, 12-16, and 13-1 are part of the Air District's Refinery Strategy and the DEIR should contain a cumulative analysis reflecting the overall "Refinery Strategy" Project to avoid piecemealing. CEQA prohibits such a piecemeal approach and requires review of the projects as a whole, including any other existing and foreseeable future regulations affecting refineries. The DEIR should also include a discussion of the limitations on discussion of environmental impacts specific to those factors not known or beyond the scope of the rule(s) proposed.

CCEEB, Chevron, Phillips 66, Shell, WSPA

Response: Insofar as the comment suggests that a cumulative impact analysis is appropriate for adoption of Rule 12-16, the Air District agrees and has included such an analysis in the EIR for the rule. However, the Air District disagrees that a failure to review all rules that have been considered for implementation of the Refinery Strategy constitutes segmentation or "piecemealing" for CEQA purposes.

The Air District believes the manner in which it has considered and adopted rules implementing the Board of Directors' October 2014 Refinery Strategy Resolution does not constitute piecemealing for two primary reasons. First, because the Refinery Strategy Resolution was not itself a CEQA project, it follows that rules implementing it are not susceptible to being piecemealed as part of a larger CEQA project. Second, under established judicial precedent, because each rule implementing the Refinery Strategy Resolution has independent utility, analyzing these rules separately is appropriate, and does not constitute piecemealing.

Comments advancing the piecemealing argument characterize the Refinery Strategy as qualitatively different from the Air District's historic approach to regulating refinery emissions. The Air District's approach to rulemaking and the methodologies used are no different than in the past, and the rules themselves have the same independent utility as rules pre-dating the Refinery Strategy. The difference in rulemaking activity undertaken pursuant to the Refinery Strategy is at most quantitative over a given period of time, but there is no qualitative difference that would the larger policy effort referred to as the "Refinery Strategy" is itself a CEQA project.

For almost 50 years, virtually since its inception as an agency, the Air District has been adopting rules applicable to Bay Area refineries. Prior to 2015, at least 22 rules developed, adopted, and from time to time amended by the Air District were applicable to refineries. Notwithstanding this extensive historical effort, regulation of refinery emissions was neither complete nor static prior to the Board of Director's 2014 adoption of the Refinery Strategy. This is evident, for instance, in the 2010 Clean Air Plan. The Clean Air Plan is a scoping document for rulemaking efforts the Air District anticipates over the next few years. The 2010 Clean Air Plan Stationary Source Measure 8 –

addressing reduction of SO_2 from petroleum coke calcining – was later identified as a component of the Refinery Strategy and was ultimately adopted as Rule 9-14. Stationary Source Measure 18 -- "Revisions to the Hot Spots Air Toxics Program" -- was described in the 2010 Clean Air Plan as an enhancement of the Air District's hot spots program similar to draft Rule 11-18 that is currently under consideration for refineries as well as other stationary sources. Rule 12-15 -- adopted in 2016 and requiring enhanced emissions information from refineries -- was not identified in the 2010 Plan, but was included as "Action Item 4" in the Air District's 2012 Work Plan (a list, required pursuant to Health & Safety Code Section 40923 of regulations planned for adoption in the coming year).

The overlap between the 2010 Clean Air Plan, the 2012 Work Plan, and the Air District's efforts to implement the Refinery Strategy effort demonstrates the continuity of the Air District's efforts to reduce refinery emissions before and after the Board of Director's 2014 adoption of the Refinery Strategy. It could not reasonably be argued that the cumulative historic effort to regulate refinery emissions is a unified CEQA project such that evaluating each rule separately constitutes piecemealing. Such an argument would advocate for the impossible, namely, that the Air District should have at some point in the past foreseen and analyzed under CEQA the future of refinery regulation. The piecemealing argument posits a qualitative break in this historical continuity marked by the October 2014 Board Resolution. This begs the question: what distinguishes activity implementing the Refinery Strategy from the decades of continual regulatory development that preceded it?

The Air District's legal analysis starts with the proposition that if the Board Resolution was not itself a CEQA project, then it has no implication for what constitutes the "whole of the action" under CEQA. Put another way, if the 2014 Board Resolution has no significance under CEQA, then it did not have potential to change the CEQA significance of anything else, including the rules identified as making progress towards the policy goal announced in the resolution.

The 2014 Board Resolution was a statement by the Air District Board of Directors setting an aspirational goal to achieve a certain degree of emissions reductions from refineries within a certain period of time. A resolution is the expression by the members of the Air District governing board of a position or sense. It has no regulatory effect, and is neither a necessary nor sufficient basis for any subsequent action that might have regulatory effect.

A "project," for CEQA purposes, is "an activity which may cause either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment." The Refinery Strategy Board Resolution fails to meet this definition because it is not an "activity" at all. Unlike a general plan for land development or an agreement to allocate funds, the Refinery Strategy Board resolution is not a legal or functional prerequisite to further rulemaking.

The commenters may be arguing that, although the 2014 Refinery Strategy Board Resolution is not itself a project, it was reasonably foreseeable that rules implementing it would be adopted, and that this foreseeability is enough to create a larger CEQA project corresponding to the Refinery Strategy effort. However, as explained above, it was foreseeable that additional rules regulating refinery emissions would be developed by the Air District even without the Board Resolution. Such rules were in development prior to the Board Resolution, and some of these rules later became identified as part of the Refinery Strategy. Put another way, there is nothing in the record to suggest that, with State air quality goals still unattained, the refineries (as among the largest stationary sources of air pollution in the Air District) would not have been subject to future regulation but for the Refinery Strategy.

Separate CEQA analysis of the rules implementing the Refinery Strategy is proper because each rule has independent utility. See, e.g., *Del Mar Terrace Conservancy, Inc. v. City Council of the City of San Diego,* 10 Cal. App. 4th 712 (1992). Air District rules generally have independent utility because each operates independently of the others to reduce emissions from a specific operation, and because the emissions reduction from each rule advances the goal of reducing emissions regardless of whether another rule is adopted. This is generally true of the rules implementing the Refinery Strategy.

A prior version of Rule 12-16 was proposed for adoption in late 2015 contemporaneously with a prior version of 12-15. The Air District at the time judged the two rules to be functionally interrelated enough to evaluate them together in the same EIR. Specifically, certain enforceable mechanisms in Rule 12-16 were dependent on information gathered through Rule 12-15. Neither rule was adopted in the form it was proposed in 2015. Rule 12-15, which was never considered functionally dependent on Rule 12-16, was subsequently revised and adopted in April of 2016. Rule 12-16 has also been substantially revised since being proposed in 2015. There remains some functional relationship between the two in that Rule 12-16 relies on information gathered through Rule 12-15. Given that Rule 12-15, being primarily informational, was assessed in an EIR to have negligible environmental effect, it is unlikely that considering these effects in combination with Rule 12-16 would alter the CEQA analysis of Rule 12-16. It should be noted, however, that Rule 12-15 is being considered as part of the cumulative impacts analysis for Rule 12-16.

Putting aside Rules 12-15 and 12-16, the Air District has at times sought to combined various Refinery Strategy rules together into common CEQA documents. In each of these combined CEQA analyses it was noted that rules were being combined for administrative convenience only, and that no inference was created that the rules were functionally interdependent. If there is no larger CEQA project encompassing these various rules, then the significance of combining them in one CEQA document is a purely administrative. Nor is it otherwise legally improper to combine distinct CEQA projects into one CEQA document. See, *Neighbors of Cavitt Ranch v. County of Placer,* 106 Cal. App. 4th 1092 (2003).

The practical difficulties in analyzing all Refinery Strategy rules in one CEQA analysis would be insurmountable. If, for instance, CEQA analysis should have been completed prior to the Board announcing the 20% reduction policy goal, such an analysis would have been pure speculation. Analysis of an emissions reduction figure is an empty exercise unless the details of how those reductions will be achieved are known. The Refinery Strategy Board Resolution was a directive to staff to attempt to develop such details. It is implausible that CEQA requires the governing board of a public agency to conduct a CEQA study prior to issuing such a directive to its staff.

As a practical matter, analyzing all Refinery Strategy rules together under CEQA could only occur if all the rules were proposed simultaneously. Resource constraints alone make such a scenario highly unlikely. Resources aside, technically complex rules such as those applicable at different refinery operations will develop at a different pace and on different schedules. The development of rules comprising the Refinery Strategy illustrates this. The Refinery Strategy effort has been in continual flux as new information and analysis (much of it coming from the public and the refineries themselves) has emerged. The iterative process of proposing ideas, soliciting feedback, and revising proposals is appropriate and normal for development of a single rule. This iterative nature is multiplied as additional rules are developed during the same time frame. With several rules simultaneously under consideration, an attempt to conduct CEQA analysis on the totality of such an effort would result in an endless loop of revision and recirculation of CEQA documents, effectively foreclosing the adoption of any rules under consideration. The Air District believes CEQA intends no such result.

Comment: Action on Rule 12-16 should be delayed. A DEIR should be prepared for both Rules 12-16 and 13-1 on the current schedule for Rule 13-1 so that both rules may be considered for adoption in September.

Health Professionals, R. Lin, et al.,

Response: Air District staff has expressed misgivings with respect to Rule 12-16 in its previous form and does not believe a combination of both rules would resolve the issues raised; in fact, such a confluence may serve to exacerbate those issues. One of the stated purposes of Rule 12-16 is to "…discourag[e] investment in new refinery equipment that would lead to increased emissions of GHG, PM, NOx, or SOx from Bay Area refineries." This objective is at cross-purpose to that of Rule 13-1, which is to limit the carbon intensity (the ratio of mass of GHGs emitted to the volume of refinery inputs, e.g., crude oil) of refining petroleum. Carbon intensity limits would result in improved refinery efficiency and allow for production increases, provided the refinery operated within its intensity limit. Further, Rule 13-1 contains, as a compliance alternative, GHG emissions limits that are at least as, if not more stringent than, those contained in Rule 12-16. The option of the intensity and emission limits provide greater flexibility in compliance than Rule 12-16. Finally, the criteria pollutant limits in Rule 12-16, now removed, conflict with Air District NSR rules and may be considered arbitrary during a judicial review.

II. Overall Objective/Environmental Setting/Background

Comment: The project description, objectives, and environmental setting need to be revised to reflect a well-defined need and objective. The DEIR does not establish a need or clearly and accurately define the purpose/objective of Rule 12-16. The DEIR does not sufficiently explain why the Rule meets or fails to meet that need and purpose.

R. Lin, et al,

Response: The Air District disagrees with this statement. The project description clearly describes Rule 12-16, the objectives were drafted from recommendations by CBE and their associates, who advocated for Rule 12-16. As for the environmental setting, the Air District's disagreements with the commenters specific concerns about the environmental setting portion of the document are discussed below.

Comment: The DEIR should also demonstrate how an emissions cap would reduce the emission intensity of the production of transportation fuels.

Shell

Response: As written, Rule 12-16 would have little impact on a refineries emissions intensity, unless a refinery improved its energy efficiency, which in turn would improve its emissions intensity.

Comment: There is a lack of clarity throughout the DEIR when using the terms "project" and "alternatives."

WSPA

Response: The Air District believes that the DEIR is sufficiently clear on these issues.

Comment: The air monitoring data presented doesn't seem to support this regulation for refineries, but rather that further regulation is needed for mobile sources and in the Eastern District (Livermore, Patterson Pass, and San Ramon). The DEIR does not explain the expected impacts of this regulation on refineries, the communities surrounding the refineries, or the areas with the most exceedances of ambient air quality standards. The project objective should include involvement of affected businesses and discuss other refined products at a refinery.

Health Professionals, J. Griggs, L. Mejicanos, N. Mendoza, R. Lin, et al, S. Lee, Shell, T. Yu, WSPA

Response: Rule 12-16 as proposed by CBE and their associates would prevent refinery emissions from increasing above the emission limits, which represent the maximum emissions of each pollutant over a five-year period and an additional 7 percent buffer. As such, the Rule would not have an effect on the surrounding community, except for the potential to cause adverse environmental impact associated with criteria pollutant controls as is discussed in the DEIR. Because the rule addresses refinery emissions it is not necessary to discuss each refinery's product slate because the impact of the product slate is reflected in each facility's emissions profile that is

characterized by the emissions inventory. Subsequent changes to Rule 12-16 made in response to comments apply caps to GHG emissions only and employ a slightly different methodology for determining those caps from previous versions.

Comment: The Environmental Setting should include discussions about expected changes in emissions at refineries and the effect on environmental justice communities. Refineries commented that emissions are expected to decline due to existing limits and regulations. Others contend that emissions will increase due to refining lower quality oils in the Bay Area, accidents, expansion projects, increased exports, and inadequacy of source-level pollution limits.

Health Professionals, R. Lin, et al, WSPA

Response: CEQA guidelines, Section 15125(a) under Environmental Setting states: "An EIR must include a description of the physical environmental conditions in the vicinity of the project, as they exist at the time the notice of preparation is published, or if no notice of preparation is published, at the time environmental analysis is commenced, from both a local and regional perspective. This environmental setting will normally constitute the baseline physical conditions by which a lead agency determines whether an impact is significant. The description of the environmental setting shall be no longer than is necessary to provide an understanding of the significant effects of the proposed project and its alternatives." The commenters' assert that the environmental setting should:

- Include the objectives of Rule 12-16; the trend toward refining increased volumes of lower quality oils in the Bay Area;
- Discuss the industry trend to refining lower quality oils in the Bay Area; recent and foreseeable refinery expansion projects or capacity to refine greater quantities of lower quality oils in the Bay Area;
- Include an estimate of the potential increase in combustion emissions (GHGs, PM, NOx and SOx) that Rule 12-16 is designed to limit; and the potential for emission increases as a result of accidents that Rule 12-16 is designed to prevent; disclose that aggregating individual source limits does not produce effective, overall, facility-wide pollution controls on Bay Area refineries;
- Discuss that there are no safe levels of particulate matter and, given high baseline pollution, every $PM_{2.5}$ exposure increment will contribute to increased risk of mortality, morbidity, and lost productivity for Bay Area residents;
- Recognize as part of the current landscape that failure to prevent increased refinery emissions will have environmental justice repercussions since they will predominantly occur in communities where residents are low income and/or are people of color and already disproportionately burdened by poor underlying health and multiple-source pollution exposures;

These assertions are not supported by CEQA. CEQA Guidelines Section 15125(d) states that… "[t]he EIR shall discuss any inconsistencies between the proposed project and applicable general plans, specific plans, and regional plans." The DEIR addresses this aspect of CEQA in Sections 3.2.1, 3.3.1, 3.4.1, and 3.5.1 of the document.

Comment: Revise sections of the Existing Regulatory Setting to include a discussion of State climate and other relevant pollution reduction policies, and include relevant vulnerability factors to assess disadvantaged communities' cumulative exposure to pollution impacts on vulnerable populations exposed to refinery emissions regionally, and, specifically, those in communities near Bay Area refineries.

R. Lin, et al

Response: Section 3.3.3.2 State Regulations of the DEIR contains a comprehensive listing of State laws and regulations affecting GHGs, including a discussion of AB 197 which requires CARB, when adopting rules and regulations, to achieve emissions reductions to protect the State's most affected and disadvantaged communities, CARB shall consider the social costs of the emissions of GHGs, and prioritize emission reduction rules and regulations that result in direct emission reductions at large stationary sources of GHG emissions and direct emission reductions from mobile sources.

Comment: Understanding the environmental effects of the proposed action, therefore, requires information about the baseline state of change in refinery emissions caused by changes in refinery oil feed quality and quantity.

CBE

Response: There is no evidence of increasing GHG emissions since these data were collected in consistent fashion by CARB beginning in 2008. The highest GHG emissions from 4 of the 5 refineries was in 2008, and the fifth refinery's highest GHG emissions was in 2012. There is also no evidence of increasing criteria pollutant emissions. Emissions of NO_X and SO_2 have consistently declined over time and PM emissions have remained steady, once one accounts for changing measurement techniques. Subsequent changes to Rule 12-16 made in response to comments apply caps to GHG emissions only and employ a slightly different methodology for determining those caps from previous versions.

III. Project Description/Identifying Affected Sources

III.1 Project Description

Comment: The DEIR's project description is vague, inaccurate, and incomplete and this renders the analysis of significant environmental impacts (and dismissal of other resource topics) inherently unreliable. The District must revise and recirculate the DEIR to address the issues with the project description.

CCEEB, L. Mintzer, R. Lin, et al., Shell

Response: Staff disagrees. The DEIR describes Rule 12-16 quite clearly, listing the types of facilities and sources the rule would affect; the requirements of the rule, including emissions limits and implementation schedules, and the types of control equipment that could be used to comply with the requirements of the rule and the environmental effects. The comment that the IS is incomplete and makes no attempts

to identify affect resources is not correct as explained below. Further, none of these concerns were raised during the 30-day public comment period on the NOP/IS.

Comment: The DEIR prejudices consideration of Rule 12-16 by mislabeling it “CBE’s” proposal.

R. Lin, et al

Response: As stated in the DEIR and the staff report, proposed Rule 12-16 represents a policy proposal made by CBE, et al. and is being presented at the direction of the Air District’s Board of Directors. This is an accurate description. It should be noted that staff has publicly expressed concerns regarding the efficacy and legality of the Rule 12-16 in the form proposed by CBE and went so far as to list those concerns to CBE along with possible solutions with which to revise the proposal; CBE opted not to incorporate staff recommendations. While it is true that Air District staff originally proposed a rule numbered “12-16” in the fall of 2015, that 12-16 and the one proposed by CBE and their associates are entirely different proposals that share only a common enumeration. After consideration of comments, staff has revised Rule 12-16 to address the negative environmental impacts, and other problems with the criteria pollutant limits. Staff is supporting adoption of the final version of Rule 12-16.

Comment: The DEIR failed to disclose these existing baseline environmental conditions. In particular, its air quality analysis (see DEIR pp. 3.2-1 through 3.2-14) provided no information whatsoever about these oil quality-driven changes in refinery air emissions. In other words, the DEIR failed to disclose the problem Rule 12-16 is needed to solve.

The District could have disclosed and evaluated the baseline state of change in refinery combustion emissions caused by changing refinery oil feed quality and quantity in the DEIR.

The DEIR could have concluded that increasing combustion emissions caused by refining higher-emitting grades of oil in greater amounts is an existing baseline condition in the region.

CBE

Response: As mentioned above, there is no reliable evidence that refinery combustion emissions are increasing, but there is a concern that they could increase in the future given the decline in traditional sources of crude oil.

Comment: The DEIR concluded that if Rule 12-16 is not adopted other measures will reduce refinery combustion emissions (DEIR at 4-6) without disclosing or evaluating any information about the scale of the emissions increase that Rule 12-16 could prevent. This conclusion is not credible. The DEIR’s failure to evaluate the refinery combustion emission increments the proposed action could prevent renders its assertion of this conclusion misleading, unsupported, and incorrect.

Air District staff could have estimated the refinery combustion emission increments that the proposed action could prevent in the DEIR.

The DEIR failed to provide adequate information about refinery emissions the proposed action could prevent, and failed to disclose readily available information that, when disclosed and considered, reverses the DEIR's conclusions regarding Rule 12-16.

CBE

Response: The Air District shares CBE's concerns about the potential for increasing combustion emissions due to changes in feedstock, but it is not an appropriate topic for a CEQA analysis.

Future crudes imported to Bay Area refineries will be replacing existing mixes, which can currently be heavy and sulfurous, depending on the design of the particular refinery. Extrapolation of more intensive processing requirements beyond existing permit limits and existing equipment limits is not valid. Existing permits and equipment limitations prevent the ability to significantly increase processing intensity. That said, Air District staff agrees that refineries are currently able to apply for permits for their facilities to process heavier and more sulfurous crude which would likely lead to increased combustion emissions. That is why staff is supporting adoption of the final version of Rule 12-16, which focuses on GHG emissions. That said, Air District staff do not agree that it is possible to accurately predict the extent of those emission changes. This type of knowledge is highly speculative. While refineries may purchase heavier, more sulfurous crudes, such as Canadian tar sands, they may also purchase lighter, less sulfurous crude such as shale oil depending on dynamic relative pricing at the time. Given the speculative nature of such an analysis, it's not appropriate to include in a CEQA document.

Comment: The DEIR failed to disclose or evaluate the local health benefits of preventing exposures to that excess air pollution.

Air District staff could have quantified the health benefits of Rule 12-16 in the DEIR. For example, among other health benefits, it could have estimated the premature deaths of adults averted by the proposed action. Estimates of premature deaths that could be averted by the proposed action, regionally and within 2.5 miles of refinery fence lines.

CBE

Response: A response to a previous comment detailed why it is too speculative to include estimates of future emission increases due to crude slate changes in the CEQA analysis. Further extrapolating that estimate to include how those emission changes would translate into community exposure and health impact is similarly too speculative for a CEQA document and not appropriate to include.

III.2 Control Technologies

Comment: The DEIR does not adequately address the environmental impacts of the rules because the equipment that will be installed in order to comply with the rules has not been determined yet.

L. Mintzer

Response: While Rule 12-16 does not specify control equipment to ensure compliance, it is reasonable to assess the limited number of potential compliance scenarios and evaluate the control equipment available to ensure compliance under those scenarios. This is what the DEIR has done in its evaluation of use of selective catalytic reduction units and wet gas scrubber. The final proposed version of Rule 12-16 removes the criteria pollutant limits that were the basis for the concern about possible negative environmental impacts. The Air District does not believe that the refineries will need to install any equipment to comply with the final proposed version of Rule 12-16.

Comment: The DEIR lacks adequate and consistent identification of control equipment (including control equipment of GHGs) that may be used to comply with Rules 11-18 and 12-16 and the associated detailed impacts analysis (including soils analysis, noise analysis, utilities and service systems) of that control equipment that could have significant impacts.

L. Mintzer, Shell

Response: The DEIR developed an extensive and comprehensive listing of control technologies that could be employed to comply with Rule 12-16 (Rule 11-18 will be considered by the Board of Directors at a future date). These options are clearly listed in Chapter 2: Project Descriptions. The final proposed version of Rule 12-16 removes the criteria pollutant limits. The Air District does not believe that the refineries will need to install any equipment to comply with the final proposed version of Rule 12-16.

Comment: Revise the DEIR to disclose the no cost, no impact option of compliance with Rule 12-16 and remove all references to and analysis of the installation of pollution control equipment as a necessary compliance option for Rule 12-16 and, also, any discussion of such associated significant impacts.

CBE, R. Lin, et al.

Response: It is reasonable to assume that at some point a refinery's emissions may be on the verge of exceeding or exceed its emission limits for the criteria pollutants addressed by Rule 12-16; if this potentiality were not the case, there would be no need for Rule 12-16 as proposed by CBE and their associates. In evaluating this potential, staff determined that there were three scenarios under which adverse environmental impact could occur—the installation a selective catalytic reduction (SCR) unit to control NOx emissions and the installation and operation of a wet gas scrubber to control SO_2 emissions. The construction of both an SCR and WGS could result in significant NOx emissions from the operation of construction equipment as presented in Tables 3.2-16, 3.2-19, 3.2-20 in the DEIR. Additionally, the operation of a wet gas scrubber at a refinery could result in significant water demands as presented in Table 3.5-1 of the

DEIR. Although the evaluation of these scenarios does not guarantee their occurrence, the Air District would be remiss not consider their potential impact the EIR. That said, since the final proposed version of Rule 12-16 does not include the criteria pollutant limits, the anticipated negative environmental impacts are no longer expected to occur.

Comment: The DEIR assumed that refinery emissions will increase, refiners will install costly new engineered controls to capture a larger fraction of those emissions and meet the limits in Rule 12-16, and those costly new controls will cause significant impacts that cannot be mitigated. The DEIR provided no evaluation of the strength of the incentive this option provides refiners to avoid new costs, analysis of this option as mitigation for the "unmitigable" impacts alleged, or consideration of whether Rule 12-16 may be necessary to achieve emissions cuts that other regional and state air quality and climate measures seek. The DEIR then compounded its error by concluding that the proposed action is not part of an environmentally superior alternative.

District staff could have compared all Rule 12-16 compliance options in the DEIR, including continuing current operations without refining lower-quality oil or expanding production capacity, the DEIR could have concluded that a no-cost compliance option which is consistent with other plans and policies would not require any change to existing equipment or operation, and could thereby avoid any potential negative environmental impact of implementing Rule 12-16.

CBE

Response: The purpose of the CEQA document is to evaluate potential negative impacts from the proposed project. Since limiting throughput to comply with Rule 12-16 does not cause any negative environmental impact, it is not appropriate to evaluate that response to the Rule in a CEQA analysis. With respect to the alternatives analysis, since draft Rule 13-1 does not directly limit criteria pollutants, it avoids the possible negative environmental impacts of Rule 12-16. Similarly, since the final proposed version of Rule 12-16 does not include limits on criteria pollutants, it also avoids the possible negative impacts of Rule 12-16 as envisioned by CBE and their associates.

Comment: The DEIR did not provide adequate information about any of these topics:

(1) Existing baseline conditions that affect oil refining emissions in the Bay Area;
(2) The potential oil refining emission increments that the proposed action to implement Rule 12-16 could prevent;
(3) The long-term local health hazards associated with refinery emissions that Rule 12-16 could prevent;
(4) The short-term "episodic" local health hazards associated with refinery emissions that Rule 12-16 could prevent; and
(5) The potential environmental impacts that could occur as side effects of implementing this action.

CBE

Response: As detailed in in previous responses, Air District staff disagrees with the assertion that the EIR should have included projected emission increases and health

impacts that may occur should Rule 12-16 not be adopted. The additional assertion that Rule 12-16 would prevent episodic local health hazards is similarly speculative.

Comment: Lower quality oil feeds increase process severity, the frequency of equipment failures and process gas imbalances, the volumes of flammable and contaminated materials that are available to be released in those failures and imbalances, and thus the frequency and magnitude of refinery emission episodes.

CBE

Response: This analysis is overly speculative and not appropriate for a CEQA analysis. Furthermore, it is not supported by the facts. Any change of crude requires thorough review of potential operational or corrosion issues, as required by Process Safety Management – Management of Change processes:

- Increase in processing severity is unlikely as crude mix must remain within existing permit and equipment limits.
- Process gas supply-demand balance must be anticipated and accommodated in the Management of Change process.
- Expectation of an inadequate or failed Management of Change process is highly speculative.

IV. Alternatives Analysis

Comment: The District's failure to include as alternatives each permutation of all possible rule combinations is fatal to its analysis in the DEIR.

CCEEB

Response: Under the CEQA Guidelines, there is no requirement for the alternatives analysis to "…consider every conceivable alternative to a project. Rather it must consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation." Section 15126.6(a) of the CEQA Guidelines.

Comment: The Alternatives should have included a scenario where a facility or refinery is shut down.

Shell

Response: It is unclear if the comment refers to 1) a refinery closure due to the requirements of either Rule 11-18 or 12-16 or 2) the potential effects of a California refinery closure due to other reasons and the subsequent response by Bay Area refineries and the related environmental impacts in relation to the two rules. For the first case, there is no reason to believe that the impacts of either rule would result in the closure of a Bay Area refinery—both rules are crafted in such a manner to ensure that affected facilities can comply and avoid undue socioeconomic harm. Under the second interpretation, the closure of any California refinery would result in all the remaining refineries increasing production to ensure meet the state demand in refinery products are met. The 2015 closure of the ExxonMobil refinery in Southern California resulted in a 10 percent reduction in production that was met by the other California refineries and

imports from out-of-state. Even under these conditions, refineries in the Bay Area did not exceed the GHG caps in Rule 12-16. That said, a closure of this type, while possible, is highly speculative and, therefore, not appropriate for consideration in this environmental assessment. Furthermore, the final, proposed version of Rule 12-16 has a provision that will prevent the rule from contributing to fuel shortages during an extended, significant, unplanned, refinery outage.

Comment: The evaluation of alternatives to Rule 12-16 are limited to only one proposal for establishing the caps. The Air District does not provide support for the proposed 7 percent threshold allowance, nor does it consider whether an alternative to setting the caps at any other level might eliminate concerns of fuel shortages in the event of unanticipated long-term temporary loss of production or the ability to provide future adequate fuel supply to the local market. These consequences and their potential environmental impacts should be evaluated and considered so that the possibility of unanticipated leakage of emissions is minimized.

Shell

Response: The final proposed version of Rule 12-16 set GHG limits high enough to accommodate projected growth in demand for transportation fuels. Furthermore, it allows for GHG emissions assuming full utilization of recently permitted projects and has a provision to account for significant, unplanned, impacts on the transportation fuel market. Together, these improvements minimize the possibility that the Rule will cause GHG leakage.

Comment: The DEIR fails to adequately discuss the environmentally superior alternative. Revise the DEIR's findings of significant impacts that arise from the construction and operation of pollution abatement equipment to comply with Rule 12-16 (in all areas, Air Quality, GHGs, Hazards and Hazardous Materials, Hydrology, Water Quality, and Utilities,) and revise each subsequent section of the DEIR that had relied on those misidentified significant impacts, including consideration and comparison of Alternatives.

R. Lin, et al.

Response: It is reasonable to assume that at some point a refinery's emissions may be on the verge of exceeding or exceed its emission limits for the criteria pollutants addressed by Rule 12-16; if this potentiality were not the case, there would be no need for Rule 12-16 as proposed by CBE and their associates. Because this potentiality exists and would result in significant impacts, the DEIR could not find that Rule 12-16 as proposed by CBE, would be the environmentally superior option. The final proposed version of Rule 12-16, could be an environmental superior option since it avoids the potential negative environmental impacts of the criteria pollutant limits.

Comment: The "No Project" alternative should include: 1) an evaluation of the foreseeable climate and local pollution impacts that could result from the several Bay Area refinery expansion projects that enable the refining of lower quality oil feedstocks; 2) how the Air District's regulations and the State's climate policies with and without

Rule 12-16 can or cannot reduce such impacts; a discussion of whether the "infrastructure inertia" created by the commitment to major capital refinery investments in process changes could enable more refining of more climate-disrupting feedstocks for the foreseeable future; and 3) an analysis of the subsequent opportunity cost of a sustainable energy future.

R. Lin, et al.

Response: Section 15126.6(e)(2) of the CEQA Guidelines states that "[t]he 'no project' analysis shall discuss the existing conditions at the time the notice of preparation is published…, as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services." There is substantial debate on what types of feedstocks refineries will use in the future. This type of knowledge is highly valuable and, by nature, speculative. While refineries may purchase heavier, more acidic crudes, such as tar sands, they may also purchase lighter, sweeter shale oil crude to balance the impacts of tar sands or because of the price of either. It is impossible to determine how refiners would react to the changing landscape of crude oil commodities market and such speculation is inappropriate for this CEQA review.

Comment: Inclusion of draft Rule 13-1 in the alternatives analysis is highly speculative because it is still in development and it is premature to make findings in this DEIR regarding how effective implementation of any rule in conjunction with Rule 13-1 may prove.

R. Lin, et al.

Response: Section 15126.6(a) of the CEQA Guidelines states: "An EIR shall describe a range of reasonable alternatives to the project… which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives. Further, Section 15126(f) states: "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." The EIR is only required to present feasible [with emphasis] alternatives (e.g., potential options, not absolutes) that would avoid or substantially lessen any of the significant effects to foster informed decision-making and public participation. Both Draft Rules 11-18 and 13-1 are currently under development by Air District staff and are included in the recently adopted 2017 Clean Air Plan. From these perspectives, Rules 11-18 and 13-1 should not be viewed as "speculative" and the combination of both presents a reasonable alternative through which to compare and evaluate the merits of proposed Rule 12-16. Draft Rule 13-1 (in combination with Rule 11-18) is a reasonable alternative to be considered in comparison to Rule 12-16 in its current form. The Final EIR addresses Rule 12-16 only.

V. Significant Environmental Impacts

Comment: The DEIR does not support adoption of Rule 12-16 since there would be significant environmental impacts (particularly water usage), even after mitigation. The

DEIR does not demonstrate that any air quality benefit outweighs the significant impact, nor does it adequately detail mitigation measures or objective criteria for measuring success.

CCEEB, Chevron, WSPA

Response: Staff agrees that the DEIR does not support a finding that Rule 12-16, as proposed by CBE and their associates, should be adopted. However, revisions to the proposed rule have been made that eliminate the environmental deficiencies and support its adoption.

VI. Missing Topics/Topics Not Adequately Addressed

VI.1. Hazardous Materials

Comment: The hazard analysis needs to evaluate the following issues: presence and potential disturbance of asbestos-containing materials and/or lead paint, potential disturbances of areas known to be contaminated, fuel transportation hazards from shipments of fuels from other locations, and potential hazards associated with control devices ((1) the increased use of caustic or lime for the LoTOx technology, and (2) the catalysts used for selective oxidation catalyst as listed in Table 3.4-1).

Shell

Response: This comment incorrectly states that the DEIR did not include hazards analyses for the increased use of caustic or lime for the LoTOx technology or the catalysts used for the selective oxidation catalyst technology. The LoTOx technology is typically used in conjunction with a wet gas scrubber and NaOH or soda ash are the most likely caustics that would be used. As indicated in Section 3.4.4.6 of the DEIR, neither NaOH nor soda ash would cause or contribute to exceedances of any applicable hazards and hazardous materials significance thresholds. Similarly, the analysis in Subsection 3.4.4.7.2 concluded than accidental releases of NaOH or soda ash during transport would also not cause or contribute to exceedances of any applicable hazards and hazardous materials significance thresholds.

Regarding the selective oxidation catalyst technology, as noted in the DEIR, a typical SRU/TGU system is not expected to require more than several hundred pounds of selective oxidation catalyst modules per year. As a result, delivery of catalyst modules can be accomplished in one truck trip. Based on their chemical properties, sulfur oxidation catalysts are not expected to pose significant adverse health or physical hazard impacts during use. See DEIR Subsection 3.4.4.7.1 for additional information.

As noted in the Initial Study, implementing Rule 12-16 would potentially result in the installation of additional air pollution control equipment which is not expected to create substantial quantities of solid or hazardous waste. Waste streams from refineries would be processed similarly as current methods, so no significant impact to land disposal facilities would be expected. As a result, no further analysis of hazardous waste impacts was required.

The final proposed version of Rule 12-16 removes the criteria pollutant limits. The Air District does not believe that the refineries will need to install any equipment to comply with the final proposed version of Rule 12-16.

VI.2. Water Quality

Comment: The evaluation of impacts to water quality should be revised. The analysis should address the potential impacts from instances when wastewater from a wet scrubber is not treated and recycled to minimize water demand. Supporting information should be provided regarding potential increases in runoff from construction activities and water application rates for dust suppression.

Shell

Response: As noted in the DEIR, not all the wastewater generated by air pollution control equipment would be discharged as wastewater. Some portion of the wastewater would likely be emitted as steam or is treated and recycled. Depending on the volume of potential wastewater discharged, if it is not within the percent variation allowed by the local sanitation districts, affected refinery operators may need to apply for revisions to their Industrial Wastewater Discharge Permit. Regardless of the facility, wastewater discharges from an industrial facility would be required to be discharged in compliance with the applicable wastewater discharge permits and, therefore, impacts would be less than significant. The final proposed version of Rule 12-16 removes the criteria pollutant limits. The Air District does not believe that the refineries will need to install any equipment to comply with the final proposed version of Rule 12-16.

Comment: Insufficient information has been provided in the IS to support the conclusion that construction activities associated with control technologies would be limited in size, thus, limiting the potential for increases in runoff.

Shell

Response: The question in the Initial Study referring to potential water runoff impacts does not simply refer to increased runoff, it refers to increased runoff that may "exceed the capacity of existing or planned stormwater drainage systems…" Industrial facilities such as refineries are subject to several requirements regulating stormwater runoff. The State of California has been delegated authority to implement the Clean Water Act Storm Water Pollution Prevention Plan (SWPPP) provisions. The SWPPP also applies to water discharges from construction activities. The SWPPP requires that an affected facility be able to manage stormwater runoff, which is expected to be substantially greater than runoff that may occur from dust control activities during construction. As a result, it was concluded in the Initial Study that Rule 12-16 as proposed by CBE and associates would not create or contribute to runoff water that would exceed the capacity of the existing stormwater drainage systems at affected refineries. Based on this conclusion, no further analysis of potential water runoff impacts was required in the DEIR. The final proposed version of Rule 12-16 removes the criteria pollutant limits. The Air District does not believe that the refineries will need to install any equipment to

comply with the final proposed version of Rule 12-16.

Comment: The scenario related to water usage for dust suppression was not fully substantiated, and the water application rates were unrealistic.

Shell

Response: Other CEQA documents evaluating construction air quality impacts control equipment have also made the assumption that the largest types of air pollution control equipment used to control refinery emissions include electrostatic precipitators, fuel gas treatment, and wet gas scrubbers. (See, for example, SCAQMD, 2010). The comment does not include any data or other information that identifies other air pollution control equipment that could be used to comply with Rule 12-16 as proposed by CBE and associates and would require a construction footprint larger than 6,000 square feet.

As the comment notes, the analysis of water demand for dust suppression during construction uses conservative assumption. Using conservative assumptions to analyze environmental impacts is a standard practice that ensures that impacts are not underestimated. The final proposed version of Rule 12-16 removes the criteria pollutant limits. The Air District does not believe that the refineries will need to install any equipment to comply with the final proposed version of Rule 12-16.

VI.3. Socioeconomic Impacts

Comment: The DEIR fails to adequately analyze socioeconomic impacts, including the operational safety, flexibility, and sustainability of the refineries.

Chevron, Phillips 66, *R. Lin, et al., Shell*

Response: The socioeconomic impacts of the proposal are discussed in both the Staff Report and the associated Socioeconomic Impacts Analysis of Proposed Rule 12-16.

VI.4. Offsets/Cap and Trade

Comment: The DEIR presents a confusing analysis of GHG emissions and does not address whether Rule 12-16 would allow the use of Cap-and-Trade or other offset programs, and does not explain how the credits work with the Rule 12-16 cap.

CCEEB, Shell, WSPA

Response: Rule 12-16 is not expected to impact the use of Cap-and-Trade or other offset programs unless refineries wanted to increase capacity. Other responses in this document provide details on why the Air District believes the GHG limits in Rule 12-16 are consistent with the capacity operation of the refineries and that gasoline consumption on the West Coast is predicted to decline over time based on projections from the U.S. Energy Information Agency.

VI.5. Other Environmental Effects

Comment: The DEIR fails to have a section on environmental effects found not to be significant.

Shell

Response: CEQA Guidelines Section 15128 states that "An EIR shall contain a statement briefly indicating the reasons that various possible significant effects of a project were determined not to be significant and were therefore not discussed in detail in the EIR. *Such a statement may be contained in an attached copy of an Initial Study*." (emphasis added) The Draft EIR complied with CEQA Guidelines Section 15128 because the Initial Study was included as Appendix A of the EIR.

Comment: The introduction to Section 3 notes that the DEIR provides analysis for a list of environmental areas, not all of which are provided in the report.

Shell

Response: Section 3.1 of the DEIR has been revised in the Final EIR to be consistent with the analyses in the document.

VI.6. Tribal Cultural Resources

Comment: The DEIR and Initial Study used an old Appendix G checklist and failed to include consideration of Tribal Cultural Resources.

Shell

Response: Tribal cultural resources were included in the evaluation of cultural resources. Public Resources Code §21080.3.1 states that that "(p)rior to the release of a negative declaration, mitigated negative declaration , or environmental impact report for a project, the lead agency shall begin consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project if: (1) the California Native American tribe requested to the lead agency, in writing, to be informed by the lead agency through formal notification of proposed projects in the geographic area that is traditional and culturally affiliated with the tribe… To date, the Air District has not received a request from any California Native American tribe requesting formal notification, therefore, formal notification is not required. The NOP/IS was sent to the State Clearinghouse and no comments were received from Native American tribes and no request for formal consultation was received. Therefore, the Air District is in compliance with the requirements of AB 52 and Public Resources Code §21080.3.1 which implements AB 52.

VI.7. Energy Conservation Impacts

Comment: The DEIR failed to evaluate Energy Conservation impacts following Appendix F. The DEIR needs to describe and evaluate the energy consuming equipment and processes that will be used during construction and operation.

Shell

Response: Appendix G of the CEQA Guidelines states that "Potentially significant energy implications of a project shall be considered in an EIR to the extent relevant and applicable to the project." The DEIR evaluated the potential increase in electricity, the equipment that would require the increase in electricity, and the related GHG emissions

in Section 3.3.4.2.4 of the DEIR. Table 3.3-15 of the Draft EIR provided the estimated increase in electricity associated with WGSs and SCRs and estimated the potential increase in electricity demand. As stated in Chapter 3.3.5 of the DEIR, measures to mitigate operational GHG emission impacts typically rely on energy efficiency measures. "Improving energy efficiency is equipment- and operation-specific, so each affected facility operator would have to perform a facility-wide evaluation to determine appropriate energy efficiency measures. Such an analysis is outside the scope of the environmental analysis for the proposed project." Therefore, to the extent feasible, energy impacts were evaluated in the DEIR. The programs designed to reduce GHG emissions in California are aimed at energy efficiency as well as requiring the use of renewable energy sources. As discussed in the Regulatory Setting (see page 3.3-13), SB 32 and 350 will reduce GHG emissions by 40 percent below 1990 levels by 2030 to ensure California meets its target of reducing GHG emissions to 80 percent of 1990 levels by 2050 and required CARB to update the Climate Change Scoping Plan. The Scoping Plan requires energy efficiency in all sectors in California.

The final proposed version of Rule 12-16 removes the criteria pollutant limits. The Air District does not believe that the refineries will need to install any equipment to comply with the final proposed version of Rule 12-16.

VI.8. Agriculture and Forestry

Comment: The Agriculture and Forestry section should evaluate if distribution infrastructure or other infrastructure and components within public and private right-of-way potentially be included under the purview of either proposed ruling.

Shell

Response: Proposed Rule 12-16 would establish emission caps on the refineries and related facilities. The rule is not expected to require distribution infrastructure in public right-of-ways. As discussed throughout the IS as well as the DEIR, construction activities are expected to be confined to the boundaries of the existing refinery facilities. The final proposed version of Rule 12-16 removes the criteria pollutant limits. The Air District does not believe that the refineries will need to install any equipment to comply with the final proposed version of Rule 12-16.

VI.9. Biological Analysis

Comment: The biological analysis includes a number of incomplete analyses requiring substantial evidence to justify elimination and should also include regulatory review. This analysis is very conceptual without providing any specific information that relates to locations where possible issues affecting coastal / bay or other wetlands.

Shell

Response: As discussed in the IS, refinery facilities have been graded and developed and biological resources apart from landscape species have been removed in the operating portions of the refinery. To be effective, air pollution control equipment is sited close to the equipment that it is trying to control. Therefore, any control equipment that may be required under Rule 12-16 is expected to be located near the operating

portions of the refineries. While wetland and other biological resources may be located within the confines of existing refineries, they are generally not located near the operating portions of the refineries. Please note that the NOP/IS and DEIR were sent to the State Clearinghouse so that all appropriate state agencies had access to information concerning the proposed rule. However, no public agency provided comments on the NOP/IS or DEIR. As suggested by the commenter, when and if specific emission reduction projects are implemented by refineries, they would be subject to further CEQA review. Further, as also suggested by the commenter, there are a number of existing rules and regulations that apply to the protection of biological resources, including the migratory bird act. Compliance with these existing rules and regulations is required regardless of whether Rule 12-16 is approved. For example, compliance with the migratory bird act is required should trees be removed. However, as stated previously, new control equipment is expected to be near the operating portions of the refinery where trees and other vegetation have been removed to minimize fire hazards. Therefore, mitigation measures that reiterate the requirements of existing laws are not required. The final proposed version of Rule 12-16 removes the criteria pollutant limits. The Air District does not believe that the refineries will need to install any equipment to comply with the final proposed version of Rule 12-16.

VI.10. Cultural Analysis

Comment: The cultural analysis is incomplete. Rule 11-18 discussion only addresses archaeology and does not consider history structures, while the Rule 12-16 analysis addresses historic structures and not archaeology. Paleontology and human remains are not discussed.

Shell

Response: As discussed in the IS (see pages 2-23 of Appendix A of the DEIR), refinery facilities have been graded and developed. To be effective, air pollution control equipment is sited close to the equipment that it is trying to control. Therefore, any control equipment that may be required under Rule 12-16 as proposed by CBE and its associates was expected to be located near the operating portions of the refineries where cultural resources, including archaeological, paleontological, historical, tribal resources, and human remains would not be expected to be located. The final proposed version of Rule 12-16 removes the criteria pollutant limits. The Air District does not believe that the refineries will need to install any equipment to comply with the final proposed version of Rule 12-16.

VI.11. Transportation Analysis

Comment: The transportation analysis is incomplete. Because refineries and likely other TAC emitting facilities, utilize marine vessels and railcars, equipment, etc., marine transportation and railcars should have been components of the transportation analysis.

Shell

Response: Although marine vessels and railcars are used to transport feedstock and products, no changes to marine or rail transportation are expected due to implementation of Rule 12-16, so their impacts do not need to be evaluated. As

discussed throughout the DEIR, installation of new air pollution control equipment could result in an increase in truck transport, but materials to support the operation of air pollution control equipment (e.g., ammonia and caustic) would not be expected to be delivered by vessel. The final proposed version of Rule 12-16 removes the criteria pollutant limits. The Air District does not believe that the refineries will need to install any equipment to comply with the final proposed version of Rule 12-16.

VI.12. Odor Impacts

Comment: The DEIR did not present significance determination associated with the odor impacts in the DEIR. The analysis should require that odors be minimized and piles of organic matter in soil be covered to reduce odors.

Shell

Response: The DEIR did not include an odor analysis because it was concluded in the Initial Study for the proposed project, that Rule 12-16 would not generate significant adverse odor impacts. The rule is not expected to result in an increase in odorous emissions at the refineries. As noted in the Initial Study, hydrogen sulfide (H_2S), which is the primary odorous compound emitted from the refineries, or other odorous sulfur-containing compounds are not expected to increase as a result of adopting proposed Rule 12-16. In addition, all facilities affected by Rule 12-16 are also subject to Regulation 7, which places general limitations on odorous substances and specific emission limitations on certain odorous compounds. Regulation 7 states further that a person shall not discharge any odorous substance which causes the ambient air at or beyond the property line of such person to be odorous and to remain odorous after dilution with four parts of odor-free air. Therefore, odors such as those described in the comment would either be minimal or eliminated through compliance with Regulation 7.

VI.13. Regional Growth

Comment: The DEIR failed to account for the impact of projected regional growth which may require additional need for goods and materials and how this would influence the impacts of the proposed rules, including increased demand for transportation fuel that may require local refineries to increase capacity and/or these be supplied by facilities outside of the region.

Shell

Response: As detailed in previous responses, the caps are set at levels consistent with the full-capacity operation of the refineries. Furthermore, projections of transportation fuel demand from CARB and the EIA were incorporated into the limits and show decreasing demand for these products over time after an initial short-term rise of approximately 3% despite population and economic growth due to increasing efficiency and transition away from petroleum-based fuels.

VI.14. General Information

Comment: The General Information section does not provide General Plan Designations or Zoning as required. These Plans need to be further researched and discussed.

Shell

Response: The information regarding the general plan and zoning designation of each of the five refineries are provided below. All the General Plan and land use plans for Richmond, Martinez, Benicia and Rodeo (Contra Costa County) allow for and encourage the continued use of industrial areas within their respective communities. Some of the General Plans encourage the modernization of existing industrial areas, including the refineries. A summary of the land use policies that apply to industrial areas is summarized for each community that the five Bay Area refineries are located.

1. Richmond General Plan 2030 includes the following land use policies regarding industrial areas (Richmond, 2015[1]).

    - Action LU3.H Industrial Lands Retention and Consolidation Ensure that industrial uses are consolidated around rail and port facilities and work with existing industrial operators, economists and commercial brokers to remain informed about the future demand for industrial land.
    - Action LU3.I Industrial Modernization Support heavy industry's on-going efforts to modernize and upgrade their plants to reduce energy use, increase efficiency and reduce emissions.

2. City of Martinez General Plan includes the following land use policies regarding industrial areas (Martinez, 2015[2]).

    - 21.51 Expansion of the petroleum refining and related industries must proceed in an orderly fashion and be consistent with protection of the community's air, water, scenic and fiscal resources.
    - 30.351 Adequate land for industrial growth and development should be provided. It is the policy of the City to encourage and assist existing industry to relocate away from the southern perimeter of the waterfront.
    - 30.352 The City should consider further annexation to the east of the current Martinez City Limits to provide space for expansion of industry.
    - 30.353 Industrial expansion accompanied by adverse environmental impact will not be permitted.

[1] City of Richmond (Richmond), 2015. Land Use and Urban Design, Richmond General Plan 2030. http://www.ci.richmond.ca.us/DocumentCenter/Home/View/8809.

[2] City of Martinez (Martinez), 2015. Martinez General Plan. City of Martinez. http://www.cityofmartinez.org/civicax/filebank/blobdload.aspx?BlobID=7569

- 30.354 Acceptability of any industry shall be based upon its demonstrated ability to conform to performance standards set by the City.
- 30.355 Architecture of some merit and landscaping of building sites and parking areas should be required; according to design and landscaping criteria for industrial sites.

3. City of Benicia General Plan includes the following land use policies regarding industrial areas (Benicia, 2015[3]).

- **POLICY 2.6.1:** Preserve industrial land for industrial purposes and certain compatible "service commercial" and ancillary on-site retail uses.
- "Compatible," as defined in the California General Plan Glossary, means "capable of existing together without conflict or detrimental effects." Compatibility will often be decided on a case-by-case basis by the Planning Commission and City Council.
- **POLICY 2.6.2:** Other land uses should not adversely affect existing industrial and commercial land uses.
- Program 2.6.A: Where General Plan amendments propose to convert industrial land to non-industrial or non-commercial uses, require the preparation of a fiscal and economic impact analysis to ensure that the conversion does not adversely affect the city's long-term economic development, or the economic vitality of existing industrial/commercial uses.
- Program 2.6.B: Develop criteria for evaluating whether a proposed non-industrial/non-commercial use would impact the viability of existing industrial/commercial uses. Use the criteria to evaluate non-industrial and non-commercial projects proposed in the Industrial Park.
- **POLICY 2.6.3:** Facilitate continued development of the Industrial Park. Especially encourage general industrial uses to locate in the basin northeast of Downtown (around Industrial Way between East Second and the freeway).
- Program 2.6.C: For lands designated limited industrial, reduce the length of time and number of steps required for development proposals to proceed, consistent with CEQA, community development policies and ordinances, and the design review process for general industrial lands.
- **POLICY 2.6.4:** Link any expansion of Industrial land use to the provision of infrastructure and public services that are to be developed and in place prior to the expansion.
- Program 2.6.D: Continue to update the overall capital improvements program and infrastructure financing plan for the Industrial Park and other major industrial areas.
- Program 2.6.E: Develop Industrial Park infrastructure and public services standards, as approved by the City Council.

[3]City of Benicia (Benicia), 2015. From 1847 Benicia General Plan Into the 21st Century. City of Benicia. Adopted: June 15, 1999. http://www.ci.benicia.ca.us/index.asp?Type=B_BASIC&SEC={4961C62F-22A5-4BB7-B402-D050A5856B00}&DE={8874E99E-FF86-45FF-8F9D-FAC81A3022A5}

- **POLICY 2.6.5:** Establish and maintain a land buffer between industrial/commercial uses and existing and future residential uses for reasons of health, safety, and quality of life.
- Program 2.6.F: Use topography, landscaping, and distance as a buffer between Industrial Park uses and residential uses.
- A buffer is "adequate" to the extent that it physically and psychologically separates uses or properties so as to shield, reduce, or block one set of properties from noise, light, or other nuisances generated on or by the other set of properties. Buffers will be determined on a case by case basis.

4. Rodeo: The Contra Costa General Plan Land Use Element identifies the following land use policies (CCC, 2015).

    - 3.163. A buffer of agricultural lands around the eastern Union Oil (currently Phillips 66) property is created in this plan to separate the viewpoint residential area from future industrial development on the property. These open space lands should remain undeveloped.

Based on a review of the applicable land use plans, the construction of equipment within the confines of existing refineries is not expected to conflict with any applicable land use plan, policy or regulation of an agency with jurisdiction over the project. The jurisdictions with land use approval recognize and support the continued use of industrial facilities. The final proposed version of Rule 12-16 removes the criteria pollutant limits. The Air District does not believe that the refineries will need to install any equipment to comply with the final proposed version of Rule 12-16.

VI.15. Mandatory Findings of Significance

Comment: The Mandatory Findings of Significance is inadequate and notably lacks substantial justification for impact findings; the findings under this section require reconsideration. The justification for there being no potential to degrade the quality of the environment is unsubstantiated and non-objective.

Shell

Response: The intent of this comment is not clear. The Initial Study contains a Mandatory Findings of Significance section. As discussed in that section of the Initial Study the potential secondary adverse air quality impacts, including cumulative impacts would be addressed in the EIR. As discussed throughout the Initial Study, the potentially significant impacts associated with implementation of Rule 12-16 as proposed by CBE and their associates would be discussed in the Draft EIR. Please see the Draft EIR for the evaluation and analysis of the potentially significant environmental impacts and the appropriate significance conclusions (primarily in Chapter 3 of the EIR). The final proposed version of Rule 12-16 removes the criteria pollutant limits. The Air District does not believe that the refineries will need to install any equipment to comply with the final proposed version of Rule 12-16.

VI.16. Secondary Impacts

Comment: The DEIR limited its analysis of secondary impacts only to installing air pollution control equipment to comply with risk reduction plan requirements of Rule 11-18 and emissions limits of Rule 12-16.

Shell

Response: In order to comply with Rule 12-16 as proposed by CBE and associates and increase fuel production while maintaining compliance with refinery criteria pollutant caps, it is expected that the refineries would install additional air pollution control equipment and more energy efficient equipment to limit refinery emissions. Other impacts such as an increase in the demand for fuels and potential secondary impacts are considered speculative and their related impacts are also considered speculative. CEQA Guidelines Section 15145 states that if a particular impact is too speculative for evaluation, the lead agency should note its conclusion and terminate discussion of the impact. The final proposed version of Rule 12-16 removes the criteria pollutant limits. The Air District does not believe that the refineries will need to install any equipment to comply with the final proposed version of Rule 12-16.

VII. Documentation/Clarifications Needed or Typos

Comment: Revise Appendix A of the DEIR to include the "Health Experts' December 2016 comment on the DEIR Scope," "CBE December 2016 Technical Report on the DEIR Scope," and "December 2016 Legal Comment of 350 Bay Area, CBD, CBE, NRDC, and Sierra Club on the DEIR Scope."

Health Professionals, R. Lin, et al.

Response: The appendix will be revise to include the "Health Experts' December 2016 comments and "December 2016 Legal Comment of 350 Bay Area, CBD, CBE, NRDC, and Sierra Club on the DEIR Scope."

Comment: The IS references were inadequate. The fact that only three references were used in the development of the IS further demonstrates the lack of intent to comply with the spirit of CEQA.

Shell

Response: It is the opinion of the commenter that a sufficient number of references were not used in the preparation of the IS. CEQA does not mandate the use of a specific number of references for preparation of an IS or EIR.

Comment: The list of preparers and agencies consulted is deficient. This section of the DEIR provides a list of names, but does not provide any affiliation or interest rationale to offer insight into the consultation value to the process. The list must indicate the name, affiliation, and a very brief explanation of each individual's role in preparation of the EIR.

Shell

Response: CEQA Guidelines Sections15129 indicates that the EIR shall identify all federal, state or local agencies, other organizations, and private individuals consulted in preparing the draft EIR, and the persons, firm, or agency preparing the draft EIR. That information was provided in Section 5.3, page 5-7 of the DEIR. CEQA Guidelines Sections15129 does not require the name, affiliation or "interest rationale": to be included.

Comment: The DEIR does not provide reference for its assertion of the refinery average utilization rates.

Shell

Response: The 80- 87 percent utilization rate is provided in the Staff Report for Rule 12-16. A reference for these data will be added to the Final EIR for clarification).

Comment: Most resource sections only include a general boilerplate statement of the regulatory framework of each given resource.

Shell

Response: The regulatory setting portion of the DEIR provides a summary of regulations that are applicable to the protection of each of the environmental resources evaluated in the DEIR. Existing regulations generally serve to protect the resource and are generally requirements for compliance for new projects or modifications. The applicable rules are identified by numbers, e.g., Air District Regulation 8, Rule 18: Equipment Leaks or federal GHG Reporting Program (40 CFR Part 98 which can be further reviewed, if the reader is interested.

Comment: The DEIR Table 3.2-1 is missing some AAQS; it does not show the state AAQS of sulfates, hydrogen sulfide and vinyl chloride.

Shell

Response: The ambient air quality standard for sulfates was included in Table 3.2-1. Hydrogen sulfide and vinyl chloride have been added to Table 3.2-1, these pollutants are generally regulated on a site-specific basis as opposed to a regional basis.

Comment: The construction emission significance criteria are provided with no citation of substantial evidence.

Shell

Response: Contrary to the assertion in this comment, the construction significance thresholds are based on substantial evidence and included review by the public prior to adoption by the Air District's Governing Board. For additional information see BAAQMD, 2010. The final proposed version of Rule 12-16 removes the criteria pollutant limits. The Air District does not believe that the refineries will need to install any equipment to comply with the final proposed version of Rule 12-16.

Comment: The basis for the water demand significance threshold is not explained.

Shell

Response: CEQA Guidelines Section 15155 – City or County Consultation with Water Agencies, defines a "water demand" project in several ways. While the criteria for defining water demand are not significance thresholds per se, the criteria can provide some insight as to how city or county lead agencies evaluate water demand impacts. CEQA Guidelines §15155 (a)(1)(C) defines a water-demand project as: "A commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space." To estimate what this means in terms of water demand per person relative to the square footage (sf) of the floor area of the plant, commercial water usage rates[4] and average employment levels[5] (i.e. the number of employees per square foot) can be applied as follows:

$$\frac{\text{(123 GAL WATER)}}{\text{(YEAR) (SF OF BUILDING)}} \times \frac{\text{(1,000 SF OF BUILDING)}}{\text{(1.8 EMPLOYEES)}} \times \frac{\text{(1 YEAR)}}{\text{(260 DAYS)}} \times \text{(1,000 EMPLOYEES)} = \text{262,820 GAL/DAY}$$

This water demand estimate can then be applied to industrial sources because CEQA Guidelines §15155 (a)(1)(E) uses the same 1,000 employee level to defines a water-demand project as: "An industrial, manufacturing, or processing plant or industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area." The final proposed version of Rule 12-16 removes the criteria pollutant limits. The Air District does not believe that the refineries will need to install any equipment to comply with the final proposed version of Rule 12-16.

Finally, the typographical error noted on page 3.5-20 will be corrected in the Final EIR.

Comment: The evaluation of impacts to water quality is incomplete. The analysis should address the potential impacts from instances when wastewater from a wet scrubber is not treated and recycled to minimize water demand.

Shell

Response: As noted in the DEIR, not all the wastewater generated by air pollution control equipment would be discharged as wastewater. Some portion of the wastewater would likely be emitted as steam or is treated and recycled. Depending on the volume of potential wastewater discharged, if it is not within the percent variation allowed by the local sanitation districts, affected refinery operators may need to apply for revisions to their Industrial Wastewater Discharge Permit. Regardless of the facility, wastewater discharges from an industrial facility would be required to be discharged in compliance

4 California Commercial End-Use Survey, Consultant Report, Table 8-1, p 150. Prepared For: California Energy Commission, Prepared by: Itron, Inc. March 2006.
http://www.energy.ca.gov/2006publications/CEC-400-2006-005/CEC-400-2006-005.pdf

5 Urban Land Use Institute Data, Wausau West Industrial Park Expansion, Development Impact Analysis, Average
Employment Levels, p.4, Prepared by Vierbicher Associates, January 5, 2001.

with the applicable wastewater discharge permits and, therefore, impacts would be less than significant. For additional information, refer to DEIR Section 3.5.4.2. The final proposed version of Rule 12-16 removes the criteria pollutant limits. The Air District does not believe that the refineries will need to install any equipment to comply with the final proposed version of Rule 12-16.

Comment: Very few citations are provided for the data provided and when provided, not all references listed are used and not all references used are refenced accurately or at all. In addition, there are numerous examples where available information was not obtained for the purpose of completeness.

Shell

Response: The commenter does not provide examples of data that they believe have not been properly referenced. Please note that the citation to "BAAQMD, 2017" is to the final EIR for the Clean Air Plan.

Comment: Table 3.3-15 included electricity use for wet gas scrubbers and SCRs while the title only indicates that wet gas scrubbers are included.

Shell

Response: The title on Table 3.3-15 (now Table 3.3-13 in the final EIR) has been modified as suggested.

Comment: The text citation of source of the 2015 GHG emissions inventory does not match Table 3.3-3.

Shell

Response: The correct reference is BAAQMD 2017 and it has been corrected in the Final EIR.

Comment: The format of this section is not consistent with the other assessment sections.

Shell

Response: As suggested in this comment Chapter 3.5 has been revised in the Final EIR and made consistent with other sections of the EIR.

Comment: Note that neither the alternatives discussion or Tables 4-2a or 4-2b include the alternative to adopt Rules 12-16 and 11-18 together, yet there is discussion of this alternative in the document.

WSPA

Response: In Section 2.1, the DEIR discusses the potential for adoption of either, both, or neither by the Board of Directors. While the alternatives analysis does not contain discussion for the combination of both Rules 11-18 and 12-16, the cumulative impacts analysis addresses the cumulative impacts of the adoption of both rules along

with the impacts of the Refinery Strategy as was discussed in the EIR for the 2017 Clean Air Plan. The Final EIR address Rule 12-16 only.

Comment: Emission intensity caps (Rule 13-1) and mass emission caps (Rule 12-16) are complementary measures and their combination could protect health better than Rule 12-16 alone. This alternative is not considered in the draft EIR although Rule 13-1 is discussed in combination with Rule 11-18. CEQA requires an alternative to accomplish the main objectives of the project at hand, yet Rules 13-1 and 11-18 do not provide health protection equivalent to 12-16. Rule 11-18 targets various toxic air contaminants but not greenhouse gases and particulate matter and is fundamentally different in terms of health protection strategy and outcome. Rule 13-1, as currently drafted, omits direct control of PM2.5 and could allow facility-wide refinery emissions to increase; it is does not provide protections comparable to Rule 12-16. Regardless, it is premature to consider Rule 13-1 in the Rule 12-16 EIR.

CBE, Health Professionals

Comment: Rule 12-16 could prevent a refinery combustion emissions increment of as much as 40–100 percent regionally over 40 years.

CBE

Response: CEQA Guidelines, Section 15126.6(a) states: "An EIR shall describe a range of reasonable alternatives to the project… which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives." Accordingly, a subset of Rule 12-16 could be considered as an alternative if it met the criteria listed in Section 15126.6(a); however, the superset of a combination of both Rules 12-16 and 13-1 could not possibly meet these criteria because the resulting significant effects could be no less than either rule alone.

Comment: Tables 4-2a on page 4-18 and 4-2b on page 4-19 have a column identified as the "proposed project" but no clear "proposed project" has been identified.

WSPA

Response: Indeed, the DEIR addresses two proposed projects: draft Rule 11-18 and proposed Rule 12-16. As the titles of the tables indicate, "proposed project" in Table 4-2a refers to Rule 11-18 and in Table 4-2b, Rule 12-16. The Final EIR address Rule 12-16 only.

Comment: The Air District should use more recent data for this EIR than the 2011 emission inventory. The Air District needs to state why it is using 2011 annual emissions data for a 2014 Inventory Summary Report in a 2017 DEIR.

WSPA

Response: There are limited emissions data available that would serve to establish emissions limits. The use of 2011 emissions data is appropriate for establishing recent trends in refinery emissions and thereby setting emissions limits.

Comment: The Air District follows Table 3.2-4 with a discussion of how the air has improved and cites percentages. However, the source of that information is not provided and needs to be provided. The public and the decision-maker should be provided with the most current data to properly assess the impacts and mitigation.

WSPA

Response: The commenter is mistaken. All data presented in the discussions following Table 3.2-4 up to Table 3.2-5 are well cited. These citations include:

- BAAQMD, 2015. Bay Area Emission Inventory Summary Report: Greenhouse Gases, January 2015.
- BAAQMD, 2016. Toxic Air Contaminant Air Monitoring Data for 2014. Provided by BAAQMD.
- BAAQMD, 2017. DEIR for the Draft 2017 Clean Air Plan: Spare the Air, Cool the Climate: A Blueprint for Clean Air and Climate Protection in the Bay Area. Accessed March, 2017. http://www.baaqmd.gov/~/media/files/planning-and-research/plans/2017-clean-airplan/2017plandrafteirpdf-pdf.pdf?la=en

Comment: On Page 3.2-31, Section 3.2.4.1.2, the DEIR states: "It is assumed that the proposed project has the potential to result in the construction of up to three to five WGS units under Rule 11-18 or three to five units under Rule 12-16." What is the basis for this assumption? Since Rule 11-18 would apply to many industries and facilities, why is the assumption the same for Rule 11-18 as for Rule 12-16, which only applies to five refineries and three ancillary facilities?

WSPA

Response: Currently, only one facility in the Bay Area operates a wet gas scrubber: Valero Refinery in Benicia. However, it is possible that up to four facilities could potentially utilize a WGS to control SOx, PM (addressed by Rule 12-16) and/or TAC emissions (addressed by Rule 11-18); these facilities are the Chevron Refinery in Richmond, the Shell Refinery in Martinez, the Tesoro Refinery in Martinez, and Lehigh Cement Plant in Cupertino (the largest single source of SOx emissions in the Bay Area)—which supports the range of three to five expressed in the DEIR. The final proposed version of Rule 12-16 removes the criteria pollutant limits. The Air District does not believe that the refineries will need to install any equipment to comply with the final proposed version of Rule 12-16.

Comment: On Page 4-7 Section 4.3.2, Alternative 2.2., the DEIR states: "…This alternative would consist of a combination of the environmental benefits and impacts of adopting and implementing proposed Rule 12-16 and draft Rule 13-1." The Air District should clarify whether Rule 12-16 is part of this alternative as stated in the first sentence or if this is a typographical error. If 12-16 is part of this alternative, the Air District should explain the impacts and the analysis in the alternative.

WSPA

Response: The inclusion of "12-16" in the reference sentence is in error and should refer to "11-18" as does the title of that subsection. This will be corrected in the Final EIR.

Comment: The second and third paragraphs in Section 3.2.1.2.4 of the "Environmental Setting" include two paragraphs of statements that are uncited and imply causality without any quantitative information on whether those correlations are causal.

WSPA

Response: Staff agrees and the final EIR will provide citations for the two paragraphs mentioned in the comment.

Comment: Section 3.3.3 of the DEIR includes a paragraph that identifies a project level GHG threshold for stationary source projects of 10,000 metric tonnes of CO_2e, citing the District's 2010 CEQA Air Quality Guidelines. Those Guidelines identified a threshold of 10,000 metric tonnes of CO_2e per year of operational emissions. As identified on the District's CEQA webpage, the District was ordered to "*set aside the Thresholds and is no longer recommending that these Thresholds be used as a general measure of project's significant air quality impacts.*"

WSPA

Response: In establishing a GHG significance threshold for programs such as the 2017 Clean Air Plan, a no net increase GHG significance threshold is used and is considered the most stringent threshold among available thresholds so no further justification is necessary. The 2017 Clean Air Plan provides GHG emission reduction targets based on emissions from all sources within the Air District's jurisdiction. A no net increase significance threshold allows Air District staff to evaluate whether the Plan is achieving its GHG emission reduction goals and whether or not additional control measures or strategies are necessary to achieve GHG emission reduction goals.

The no net emission increase significance threshold does not apply to individual stationary source projects, instead the Air District uses a GHG significance threshold of 10,000 MT CO_2e per year for stationary source projects. Contrary to the assertion in this comment, this stationary source significance threshold is based on substantial evidence and included review by the public prior to adoption by the Air District's Governing Board. For additional information see BAAQMD, 2010.

Comment: Section 4.3.1 states that there are no facility-wide emissions limits on refineries; that is incorrect. There are facility-wide emissions limits, either spelled out explicitly in permits or as a result of equipment-specific emissions limits and/or equipment capacities ("potential to emit").

WSPA

Response: The commenter is incorrect. The DEIR does not state that there are no facility-wide emissions limits on refineries; it states: "Under the No Project Alternative (12-16), the proposed rule would not be adopted and, thus, facility-wide emissions limits

on GHGs, PM (PM_{10} and $PM_{2.5}$), NOx, and SO_2 would not be established." The facility-wide emissions limits in that quoted sentence is referring to those limits contained in proposed Rule 12-16. This is not the same as stating there are not facility-wide emissions limits.

Comment: On Page 3.5-23, Section 3.5.5.2., the DEIR states: "Therefore, the proposed project will remain significant after mitigation for water demand." What does "proposed project" refer to in this sentence? Is the proposed project Rule 12-16, 11-18 or both? The District needs to identify the actual project. The Air District must weigh and analyze the expected improvement by adopting the Rules against the significant impact on water demand even after mitigation.

WSPA

Response: The commenter is correct in that the section is not clear as to what the "proposed project" is. This will be clarified in the final EIR.

Comment: The District should use market researchers, analysts' forecast, and California Energy Commission resources to estimate gasoline demand rather than simply stating that demand is impossible to predict. The effects of AB-32 on refineries should also be discussed.

D. Kubeck, M. Johnson, S. Ardito, S. Lee

Response: Any forecast of gasoline demand would be considered speculative and, therefore, inappropriate for consideration under CEQA. CEQA Guidelines Section 15126.6(f)(3) states that "[a]n EIR need not consider an alternative whose effect cannot be reasonably ascertained and whose implementation is remote and speculative." The potential effect of Rule on gasoline prices, including an analysis of government projections of gasoline demand is discussed is the Staff Report and the socioeconomic analysis, which is appropriate.

Comment: The Air District staff's recent finding that "emissions leakage would not occur as a result of Rule 12-16" (CAP DEIR at 3.3-24) discredits arguments against your authority to implement this rule immediately.

T. Finley

Response: While leakage may not occur as a result of the implementation of Rule 12-16, there are other issues with the requirements of the rule as proposed by CBE and their associates that may conflict with the Air District's authority. Federal Clean Air Act (CAA) and the California Health and Safety Code (H&SC) require the Air District to develop permitting programs that allow for criteria pollutant emissions to increase at a facility as long as those emissions are offset by an equal or greater amount of reductions of the same pollutant from a location within the region (CAA Sections 173(a) and 173(c)(1) and H&SC Sections 40918(a) and 40709(a)). The Air District has such a permitting program embodied in Regulation 2: Permits, Rule 2: New Source Review (Rule 2-2). This rule applies equally to all facilities in the Bay Area. Although state and local agencies may adopt more stringent rules than required by federal and state law,

there is a significant argument that a fixed numeric cap for criteria pollutants conflicts with these federal and state provisions that allow facilities to increase emissions if certain conditions are met. The final proposed version of Rule 12-16 was modified to address these concerns.

VII.1. Technical issues

Comment: The emission cap of 7 percent allowance is unsubstantiated. Is there information to support that 7 percent is appropriate to capture year-to-year variation? The DEIR did not adequately address the impact of the 7 percent allowance on future socioeconomic impacts, impacts from decrease operational flexibility and impacts from leakage.

Shell

Response: The Air District conducted an analysis on the year-to-year variation of refinery GHG emissions and found that the average facility GHG emissions variability was slightly larger than 6 percent during recent years. Air District staff used CARB's GHG mandatory reporting data for the refineries and associated facilities subject to proposed Rule 12-16, reported for calendar years 2011 – 2015. This time period is consistent with the emissions baseline for proposed Rule 12-16 and also represents the calendar years for which ARB's GHG mandatory reporting data was reported using a consistent methodology. In the final proposed version of Rule 12-16, the Air District derived new GHG limits and explained the methodology.

Comment: The DEIR mentions that emission limits under Rule 12-16 would change if the method of monitoring or estimating emissions changes, but fails to describe the mechanism.

Shell

Response: Changes to methodology and subsequent changes to Air District rules would be subject to additional rule making and amendments to existing rules. Since the changes to monitoring or methodology are speculative at this time, their potential impacts are also speculative. CEQA Guidelines Section 15145 states that if a particular impact is too speculative for evaluation, the lead agency should note its conclusion and terminate discussion of the impact.

Comment: The DEIR is confusing as it fails to adequately define qualifying terms. The IS refers to *major* sources, *significant* contributions, *substantial* impacts, and the like. Without an objective definition of these terms, the analysis is unsubstantiated and further appears biased to justify the conclusion without a thoughtful analysis.

Shell

Response: Most of the terms outlined in this comment are used in the general English terminology. Significant impacts have been defined as impacts that exceed significance thresholds.

Comment: The construction estimates for installing pollution control devices is not realistic. Experience shows that the concept, funding, design, permitting and construction could take several years and are very expensive units to purchase and operate.

Shell

Response: The comment asserts that the construction estimates for installing a new wet gas scrubber are not realistic, but does not provide any data or other information for a more realistic schedule. The comment only notes that installing a wet gas scrubber from concept to completion may take years, which provides less detail on the construction schedule than is included in the DEIR. Subsection 3.2.4.1.2 of the DEIR provides detailed information on installing a wet gas scrubber, including the construction schedule, which is based on a similar analysis of installing a wet gas scrubber on an FCCU in southern California (SCAQMD, 2007), types of construction equipment, construction phases, numbers of construction workers per phase, etc. The final proposed version of Rule 12-16 removes the criteria pollutant limits. The Air District does not believe that the refineries will need to install any equipment to comply with the final proposed version of Rule 12-16.

Comment: The emission inventory used for setting emissions caps for Rule 12-16 is flawed. The Air District should perform an audit of the data in CEIDARS and compare to actual reported historical plant direct measured emissions (e.g., CEMS) and cite the specific emissions factor calculated data.

Shell

Response: Affected facility emissions inventory data used by Air District staff are currently the most accurate data available. The impacted facilities were given an opportunity to review the data used to set the emission limits in Rule 12-16 and suggest changes and corrections in the data. All changes suggested by industry were made to the baseline data and the limits in the Rule reflect those changes.

CEIDARS data provide a consistent framework of emissions inventory data used by all air pollution control districts in California in developing their individual air district attainment plans and, therefore, are appropriate for promulgating individual rules to implement the attainment plans.

Comment: The DEIR relies on mitigation measures to address NOx emissions that are deferred mitigation measures which are not allowed under CEQA. The NOx mitigation measures need to be revised and the DEIR recirculated.

Shell

Response: No specific projects are currently being proposed to install air pollution control equipment at this time; however, the installation of air pollution control equipment may be an impact of implementation of Rule 12-16 as proposed by CBE and their associates. When applications are received for such equipment, mitigation

measures will be imposed. Therefore, this is not delayed mitigation. The final proposed version of Rule 12-16 removes the criteria pollutant limits. The Air District does not believe that the refineries will need to install any equipment to comply with the final proposed version of Rule 12-16.

Comment: The GHG emissions significance threshold is not adequately based on substantial evidence. The DEIR suggests a "no net increase in emissions" thresholds as appropriate for overall air quality plans, but fails to provide proper justification that there are sufficient alternative measures in its overall air quality plan to ensure that any GHG emission increases as a result of the proposed rules would be adequately offset by other measures.

Shell

Response: In establishing a GHG significance threshold for programs such as the 2017 Clean Air Plan, a no net increase GHG significance threshold is used and is considered the most stringent threshold among available thresholds so no further justification is necessary. The 2017 Clean Air Plan provides GHG emission reduction targets based on emissions from all sources within the Air District's jurisdiction. A no net increase significance threshold allows Air District staff to evaluate whether or not the Plan is achieving its GHG emission reduction goals and whether additional control measures or strategies are necessary to achieve GHG emission reduction goals.

The no net emission increase significance threshold does not apply to individual stationary source projects, instead the Air District uses a GHG significance threshold of 10,000 MT CO_2e per year for stationary source projects. Contrary to the assertion in this comment, this stationary source significance threshold is based on substantial evidence and included review by the public prior to adoption by the Air District's Governing Board. For additional information see BAAQMD, 2010.

Comment: The GHG emission inventory does not adequately include all indirect GHG emission which is consistent with the Air District's guidance on methodologies and included in GHG emissions inventory models used throughout the State.

Shell

Response: As indicated in Chapter 3.5 of the DEIR, the primary source of increased water demand and water requiring treatment is water used in a wet ESP. However, instead of clean water, it is likely that each affected refinery operator would utilize strip sour water or similar existing treated waste process water from elsewhere within each facility. Because existing sources of refinery wastewater, e.g., strip sour water or similar existing treated wastewater, could be used to operate a wet ESP, would produce minimal, if any GHG emissions. Similarly, wastewater from the wet ESP is collected and flows into a sump where it is typically treated and recycled to minimize water demand and wastewater generated from the equipment. Once recycled, wastewater generated by the wet ESP can also be returned to the wet ESP, which further reduces the total amount of water required for air pollution control, as well as the amount of wastewater discharged into the sewer system. Since the wastewater treatment system

doesn't include a combustion source, no GHG emissions would be generated. Additional demand for electricity could occur for waste treatment, but the analysis of Rule 12-16 as proposed by CBE and their associates and addressed in the DEIR include indirect GHG impacts from increased electricity demand. The final proposed version of Rule 12-16 removes the criteria pollutant limits. The Air District does not believe that the refineries will need to install any equipment to comply with the final proposed version of Rule 12-16.

Comment: The District is basing its conclusion (Section 3.3.4.3) on historic data that the refineries have not exceeded the proposed Rules 12-16 emissions caps and, therefore, proposed 12-16 will not conflict with the existing State Cap and Trade program. At the outset, this assumption is faulty; the current emissions caps are based on historic levels of production, which may or may not reflect future demand.

WSPA

Response: The emissions limits were re-derived for the final proposed version of Rule 12-16. As stated in the Staff Report, on average, the emissions limits do not appear to inhibit refining capacity considering Bay Area refineries as a group, since typical annual average utilization is 80 – 87 percent, and the emissions limits are designed to be consistent with full, permitted capacity. When the supply for fuels is constrained, the impacts can be dramatic and felt statewide. In 2015, the ExxonMobil refinery in Torrance was offline for most of the year. In addition, imports of refined products increased ten-fold, resulting in additional GHG emissions from shipping. However, during this period, refineries in the Bay Area never exceeded any of the limits contained in Rule 12-16, which indicates that the limits are appropriately proposed.

Comment: Revise the Environmental Setting and Staff Report using CEC data for Bay Area refineries alone, instead of PADD 5 West Coast refinery data, and disclose that Bay Area refineries emitted below the Emission Caps while operating at maximum capacity; and make subsequent revisions to all sections of the DEIR and Staff Report that rely upon PADD 5 West Coast refinery data instead of Bay Area refinery data alone.

R. Lin, et al.

Response: Response to Comment: California Energy Commission crude throughput data for the Bay Area refineries is more difficult to access, and less transparent than EIA utilization data. EIA data is preferred because it is far easier to independently locate and review the data. In addition, the supply/demand balance of transportation fuels is a function of the performance of the entire Pacific Coast region's refinery operations (i.e. PADD 5) rather than just Bay Area refineries. However, the CEC data provides insights similar to those from the PADD 5 utilization data, as follows:

Year	Average Crude Throughput (%)
2006	92.2
2007	85.8

Year	Average Crude Throughput (%)
2008	91.7
2009	83.8
2010	83.7
2011	80.9
2012	84.2
2013	89.5
2014	96.2
2015	93.9

During peak transportation fuel demand period of 2006 – 2008, Bay Area refineries operated near 92 percent crude throughput during two of the three peak years. Crude throughput decreased during the recession, and is now increasing again with higher transportation fuel demands. The refineries operated at 94 – 96 percent crude throughput during 2014 – 2015, during the baseline period. Rule 12-16 provides emission limits (and production capacity) based on each refinery's annual emissions during the baseline period from 2011 – 2015 and provide operating flexibility by allowing full utilization of recently permitted sources that were not at full capacity during this time period. The emission limits in Rule 12-16 are adequate to supply the Bay Area's current transportation and projected future fuel needs.

VII.2. Air Monitoring

Comment: Regarding Table 3.2-2 – Bay Area Air Pollution Summary – 2015: there is lacking or missing emission information for cities with/near refineries (Richmond, Martinez, Benicia, Rodeo, Crockett). Why has this information been omitted? The following data is also missing: Bethel Island (no PM), Crockett (lacking information), Fairfield (lacking information and no PM data), Martinez (lacking information and no PM data), Patterson Pass (lacking information and no PM data), and San Ramon (lacking information and no PM data).

C. Potter, D. Kubeck, L. Rice, M. Johnson, N. Mendoza, S. Ardito, T. Yu

Response: The data included in Table 3.2-2 is not incomplete. Rather, it reflects the criteria pollutant data collected from 2013 to 2015 at regulatory fixed-monitoring sites operated by the Air District. The dashes in table 3.2-2 indicate that there is not a monitor for that pollutant at a given site. For example, the Richmond site operates SO_2, H_2S, and toxics monitors, and the table shows the SO_2 data, since H_2S and toxics are not criteria pollutants. Descriptions of what pollutants are measured at each Bay Area site can be found in the Air District's Air Monitoring Network Plans, submitted each year to EPA (see Table 2-2 of the 2015 Plan, http://www.baaqmd.gov/~/media/files/technical-services/2015_network_plan-pdf.pdf?la=en). The decision of what pollutants to measure at each site is determined by the monitoring objective at each site. The network design is reviewed frequently, and a report of these ongoing evaluations, along with proposed network changes needed to better reflect air quality within the Air District's jurisdiction,

is submitted to EPA every five years. The next network assessment is due on July 1, 2020.

Comment: How does the Air District base a decision on incomplete information?
C. Potter, D. Kubeck, L. Rice, M. Johnson, N. Mendoza, S. Ardito, T. Yu

Response: The Air District uses the best monitoring, modeling, and emissions information available at a given time to develop and implement a strategy to reduce pollutants that have a negative health impacts for the public.

Comment: Since the exceedances of Ambient Air Quality Standards are not shown to be near the refineries, the District should present data supporting the need for this Rule. Why are fence line monitoring data not included?
C. Potter, D. Kubeck, L. Rice, M. Johnson, N. Mendoza, S. Ardito, T. Yu

Response: While some emissions create impacts near the source, others are transported further away, and can also react with other emissions, contributing to high pollutant concentrations many miles from the source. Therefore, the ambient data from the entire Bay Area monitoring network, as well as emissions information from various sources, are all important for considering effective, achievable new emission reductions.

Comment: Why are fence line monitoring data not included?
C. Potter, D. Kubeck, L. Rice, M. Johnson, N. Mendoza, S. Ardito, T. Yu

Response: Fence line monitors were not included since the monitoring objectives of these sites are to identify unknown releases of pollutants at ground level, mostly from fugitive emission sources at the facility. The open path monitors used for many of the pollutants in the fence line networks do not determine concentrations at a given location, and are not designed to measure the impact of the facility emissions on ambient air. Air District staff did add the $PM_{2.5}$ data from the Richmond community monitors (North Richmond, Atchison Village, and Point Richmond) to the $PM_{2.5}$ trends chart and the fixed-site Ground Level Monitors (GLMs) for SO_2 on the SO_2 trends chart. Updated charts may be found at the end of this Appendix. Neither of these data sources are considered regulatory, and the GLM monitors are inside the facility's fence lines, and therefore, do not represent ambient air. However, the data, while more uncertain than the regulatory data, provide additional information of the distribution of these two pollutants near the refineries.

Comment: Considering the spatial distance between your monitoring stations and the variation in weather and wind currents, is it accurate to simply take an average of measured pollutants and use that model to calculate air quality metric compliance or is more sophisticated modeling and mapping required?
L. Rice

Response: The Air District follows the regulations promulgated by U.S. EPA and the California Air Resources Board that require certain monitoring and data calculation

methodologies for showing compliance with the National Ambient Air Quality Standards (NAAQS) or California Ambient Air Quality Standards (CAAQS). Specific approved, accurate, and stable monitors, operated according to rigorous quality control and quality assurance requirements, and located according to regulations produce the data that is used to determine this compliance (see 40 CFR Parts 53 and 58). The metric that is calculated using this data to determine compliance with the NAAQS or CAAQS is called a design value. The calculation methodologies for design values for each pollutant are described by 40 CFR Part 50. Design values are typically determined for each site using three years of data, and the highest result is used to determine compliance of a given area. Using multiple years of data assures that the resulting design value includes more information about inter-annual variability of pollutant concentrations. The locations of the monitors used for this regulatory network are designed to capture population exposure and expected high concentrations, and can represent either near source or area-wide pollutant concentrations, depending on the pollutant. Since it is generally data from these networks that help determine the level of the standards, using the design value metric from these monitors is the appropriate way to determine compliance with those standards.

VIII. Unintended consequences/impacts/limitations

VIII.1. Operational Flexibility

Comment: The imposition of emission caps deprives refineries of operational flexibility needed to balance load, safety, capacity, product, and regulatory compliance. The impacts could include operational curtailment or shutdown, negative effects on the operability of pollution control equipment, limitations on future projects to modernize or make cleaner or low carbon fuels, and/or increased importation of fuels from outside the State or country.

Chevron, Phillips 66, Shell, WSPA

Response: While the emission limits contained in Rule 12-16 may pose some barriers to production, staff believes the limits are appropriately proposed and would account for unexpected decreases in capacity due to the shutdown of any one of California's refineries.

VIII.2. GHG Emissions

Comment: The DEIR includes no analysis of the extent to which the proposed regulations to reduce emissions from Bay Area refineries may result in increases in global GHG and the associated cumulative impacts, and needs to do so.

K. Liebe, L. Mintzer, Shell, WSPA

Response: Rule 12-16 provides emission limits based on normal variation during the baseline period (2011-2015) and additional allowances to account for anticipated growth in fuel demand and for full utilization of permitted facilities. The emission limits in Rule 12-16 are adequate to supply the Bay Area's current and anticipated transportation fuel needs. If a Bay Area refinery has an unplanned outage, the remaining Bay Area

refineries can increase production short-term to cover the loss of supply. Long-term, significant, unplanned outages are also addressed by the final proposed version of the rule.

IX. Legal Authority/How the regulation works with other regulations

Comment: The Air District needs to explain how Rule 12-16 will comply with (and not conflict with or violate) the federal Clean Air Act, California Air Quality Laws (including the State's Cap-and-Trade program and offset program, prohibition of mandating specific air pollution control equipment), BAAQMD regulations and programs, and existing permits and limits.

The Existing Regulatory Setting should also include any shortcomings of the existing regulations (specifically to protect communities near Bay Area refineries) that the proposed rules will address.

K. Liebe, R. Lin, et al., Shell, WSPA

Response: The Staff Report includes a discussion on regulatory background and legal authority. While the Air District does not believe there is any requirement to describe "shortcomings" of existing regulations, the Staff Report represents staff's best effort to identify needs for improvement in air quality and how the proposed rule would address those needs.

X. Other Comments

Comment: The corresponding increase in fossil fuel exports will lead to an increase in exogenous air pollution in the Bay Area since a portion of the byproducts of combustion of fossil fuels exported from the Bay Area will return to us from Asia through transpacific atmospheric transport. This exogenous air pollution will directly threaten health and, also, impede progress toward the targets and goals of the 2017 Clean Air Plan. Exogenous / overseas sources of pollution are of increasing concern as they have been directly implicated in deaths in local populations and documented as a greater proportion of exposure than locally-sourced pollution in some settings. (Annenberg 2014, Christensen 2015, Zhang 2007, 2008, 2009).

Health Professionals

Response: This assertion is too speculative to be considered in this environmental assessment.

Comment: The prior bundling of proposed Rule 12-15 and 12-16 in a DEIR in 2015 and later detachment from Rule 12-15 and re-bundling with proposed Rule 11-18 in this DEIR is a stark pronouncement of its procedural inadequacy.

Shell

Response: The rules identified in the comment have evolved substantially due to information and comment from the public and regulated community. Rules have been proposed for adoption when they have been deemed ready, while others were delayed so that information and comment could be further evaluated and incorporated. For example, although Rules 12-15 and 12-16 were initially proposed at the same time, adoption of both was delayed. Rule 12-15 was subsequently deemed ready for adoption in April of 2016 while Rule 12-16 was undergoing a significant reworking. Rather than signifying a procedural irregularity, this sequence of events demonstrates a determination to proceed only after careful consideration of public comment.

Commenters

C. Potter	Chris Potter, email: EIR Comments, May 3, 2017
CBE	Greg Karras, Communities for a Better Environment, letter: Draft Environmental Impact Report for Proposed Regulation 11, Rule 18 (Rule 11-18) and Proposed Regulation 12, Rule 16 (Rule 12-16), Bay Area Air Quality Management District, May 8, 2017
CCEEB	Bill Quinn, California Council for Environmental and Economic Balance, letter: Draft Environmental Impact Report for Proposed Rules 11-18 and 12-16, May 8, 2017
Chevron	Marc R. Bruner, PerkinsCoie, letter: Comments on Draft Environmental Impact Report (SCH #2016102043) For Proposed Air District Regulations 11-18 and 12-16, May 8, 2017
D. Kubeck	David Kubeck, email: Comments on Draft EIR: Regulation 11-18 & 12-16, May 7, 2017
Health Professionals	Heather Kuiper, DrPH MPH, et al, letter: Health Impacts and implications should be included in the No Project and alternative scenarios and the environmental and regulatory settings sections of the EIR for BAAQMD Rule 12-16, May 8, 2017
J. Riggs	James T. Riggs, email: Environmental Impact Report (EIR) for Rule 11-18 (HRAs and Toxic Emissions) and Rule 12-16 (Refinery GHG Caps), May 8, 2017
K. Liebe	Kurt Liebe, PE, email: BAAQMD Public Comment: Environmental Impact Report (EIR) for Rule 11-18 (HRAs and Toxic Emissions) and Rule 12-16 (Refinery GHG Caps), May 4, 2017
L. Mintzer	Laurie Mintzer, email: Rule 11-18 and 12-16 EIR Comments, May 8, 2017
L. Mejicanos	Lucas Mejicanos, email: Comments Proposed regulation 12, Rule 16: Petroleum Refining Facility-Wide Emissions Limits, May 8, 2017
L. Rice	Lynn Rice, email: Questions on EIR, May 4, 2017
M. Johnson	Matthew Johnson, email: EIR Comments, May 8, 2017
N. Mendoza	Nicole M. Mendoza, email: Comment Regarding EIR for proposed Rules 12-16 and 11-18, May 8, 2017
Phillips 66	Don Bristol, letter: Environmental Superintendent, Phillips 66 Company: Comments on BAAQMD's DEIR for Regulation 12, Rule 16 and Draft Regulation 11, Rule 18, May 8, 2017
R. Lin, et al	Roger Lin, Communities for a Better Environment, et al, letter: Comments on the Draft Environmental Impact Report for Regulation 11-18: Toxic Risk Reduction Rule (Rule 11-18) and Regulation 12-16: Petroleum Refining Facility-Wide Emissions Limits (Rule 12-16), May 8, 2017
S. Lee	Shawn Lee, email: Comments for Draft EIR for Reg 11 Rule 18 and Reg 12 Rule 16, May 7, 2017
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