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March 6, 2008

Lamont Thompson, Senior Planner
City of Richmond
Planning and Building Regulations Department
1401 Marina Way South
Richmond, CA 94804

RE: Chevron Energy and Hydrogen Renewal Project, Comments on FEIR

Dear Mr. Thompson:

We have reviewed the Final Environmental Impact Report (FEIR) for the Chevron Energy and Hydrogen Renewal Project (Project). The FEIR addresses a number of the defects we raised in our comment letter of July 7, 2007, on the Draft Environmental Impact Report (DEIR). We are pleased that Chevron will be required to mitigate greenhouse gas emissions from the Project to a net of zero emissions over the Project's baseline. We are greatly appreciative of the City's willingness to limit the Project's greenhouse gas emissions to net zero. This requirement sets an important precedent and helps address the growing problem of global warming. However, as described below, we believe the FEIR can be improved both to ensure legal compliance with CEQA and to ensure that the City's vision as outlined in the FEIR is realized.

We are concerned that the FEIR fails to make a finding on the significance of the GHG emissions from the Project and that its proposed greenhouse gas-related mitigation measures are too uncertain and undefined to support a determination that they will be effective. In addition, the FEIR's finding that VOC emissions are now below the significance threshold is not adequately supported, its discussion of flaring impacts lacks sufficient detail and relies on a document that does not yet exist, and the absence of crude slate parameters leaves open issues of future pollution. We detail our remaining concerns below, and request that the City revise the FEIR before approving the Project.

The City Must Make a Finding of Significance for Greenhouse Gas Emissions

CEQA assigns to the lead agency the responsibility to determine whether an impact is significant.[1] This is a fundamental and essential CEQA task: the finding of significance triggers the lead agency's obligation to require feasible mitigation.[2] While the FEIR accurately points out that there are currently no regulatory thresholds for significance relating to global warming impacts, this does not relieve the City of its legal obligation under CEQA to determine whether or not the Project's impacts are significant.[3] To comply with CEQA, the City must make a determination of whether the Project's contribution to the problem of global warming is significant.

For the reasons stated in our July 7, 2007, the City's conclusion that making a significance determination for the greenhouse gas-related impacts of this Project would be too "speculative" is not supported. (See FEIR at p. 2-26)[4] The City acknowledges that global warming is caused by greenhouse gas emissions, and that this Project will contribute an additional 898,000 metric tons of greenhouse gases per year to the atmosphere. The relevant question, then, is whether this incremental contribution to the existing and serious problem of global warming is cumulatively considerable under CEQA's cumulative impacts analysis. "'[C]umulatively considerable" means that the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other

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[1](Cal. Code Regs., tit. 14, § 15064.)

[2](Pub. Res. Code, § 21002.1, subd. (b).) "For each significant effect identified in the EIR, the agency must make one or more of the following findings: (1) that changes or alterations have been required in, or incorporated into, the project that avoid or substantially lessen the effect; (2) that the lead agency lacks jurisdiction to make the change, but that another agency does have such authority; and/or (3) that specific economic, social, or other considerations make infeasible the mitigation measures or project alternatives identified in the final EIR." *(Sacramento Old City Assn. v. City Council* (1991) 229 Cal.App.3d 1011, 1034 [citing Pub. Res. Code, § 21081]; see also *County of San Diego v. Grossmont-Cuyamaca Community College Dist.* (2006) 141 Cal.App.4th 86, 100.)

[3]As the CEQA Guidelines note, "[a]n ironclad definition of significant effect is not always possible...." (Cal. Code Regs., tit. 14, §15064, subd. (b).)

[4]The FEIR states that there are no "applicable standards" to assist the City in determining the significant of this Project's contribution to global warming. While this is technically correct, the City is not without relevant resources. In January 2008, the California Association of Air Pollution Control Officers issued a white paper entitled "CEQA and Climate Change." Among other things, the document discusses different approaches for analyzing the global warming related impacts of projects. CAPCOA's white paper is available at http://www.capcoa.org/.

current projects, and the effects of probable future projects."[5] Courts have rejected the argument that a project has no cumulatively considerable impacts simply because it is contributing only a relatively small percentage to a larger environmental problem.[6]

By any objective standard, the proposed Project's 898,000 additional metric tons of greenhouse gas emissions per year appears to be significant under CEQA. For comparison's sake, many of the "early action measures" for reducing greenhouse gases identified by the California Air Resources Board (CARB) are in the range of, or substantially less than, 500,000 metric tons.[7] CARB's new reporting threshold regulations under AB 32 target "the most significant GHG emission sources" and include any industrial source that emits over 25,000 metric tons of CO_2 per year from general stationary combustion.[8]

While it may be argued that, by including mitigation for the Project's emissions (see FEIR p. 2-27; FEIR p. 4-13-4-20), the City implicitly has acknowledged that the Project's impacts are significant, we remain concerned about the City's strategy for several reasons. First, failing to make an express finding of significance has the potential to mislead the public and local officials into believing that greenhouse gas emissions from the refinery's expansion are not a concern, thereby undermining CEQA's goals of transparency and informed decision making. Second, CEQA's mandate for the consideration and adoption of mitigation measures, and of a mitigation monitoring and reporting program, is triggered by a finding that a project has a significant environmental effect. (See, e.g., Pub. Res. Code § 21081.6, subd. (a); Cal. Code Regs, tit. 14, §15097, subd. (a).) Without such a finding, it is unclear whether the City is legally required to prepare a mitigation and monitoring report for the Project. A mitigation and monitoring plan conforming to the standards set forth in the CEQA Guidelines Section 15097 would eliminate some of our concerns about the City's current mitigation plan.

For these reasons, the FEIR must include an express finding on the significance of the Project's greenhouse gas-related impacts.

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[5](Cal. Code Regs., tit. 14, § 15130, subd. (a).)

[6](*Communities for a Better Environment v. Cal. Resources Agency* (2002) 103 Cal.App.4th 98, 119-120.)

[5](See http://www/climatechange.ca.gov/climate_action_team/reports/2007-04-20_ARB_early_action_report.pdf.)

[8]CARB Proposed Regulation For the Mandatory Reporting of Greenhouse Gas Emissions, to be added to Title 17, California Code of Regulations, proposed section 95101, subd. (b). Available at: http://www.arb.ca.gov/regact/2007/ghg2007/attachbres07_54.pdf.

The FEIR's Discussion of GHG Mitigation Measures Does Not Allow the City to Make an Informed Decision About the Project

We believe that the City has taken an important step towards reducing the GHG emissions of this Project by committing to mitigate the Project's GHG emissions to the current baseline. To comply with CEQA and to ensure that the City's goal is achieved, however, the measures must be further developed and defined. As currently formulated in the FEIR, the City does not identify the specific mitigation measures that will be adopted, where they will take place, what impacts they may have or how they will be enforced.

Discussion of mitigation measures is a core requirement of CEQA. Because the DEIR contained no discussion of potential mitigation measures for GHGs, (DEIR at 4.3-40), they are discussed for the first time in the FEIR. The mitigation measures therefore have not been subject to review, discussion, or comments by the public. The problems stemming from this lack of public review are amplified by the indefinite nature of the mitigation measures proposed. Under CEQA, "[a]n EIR shall describe feasible measures which could minimize significant adverse impacts including, where relevant, inefficient and unnecessary consumption of energy." (Cal. Code Regs., tit. 14, § 15126.4, subd. (a)(1).) "Formulation of mitigation measures should not be deferred to some future time." (Cal. Code Regs., tit. 14, § 15126.4, subd. (a)(1)(B).); *San Joaquin Raptor Rescue Center v. County of Merced* (2007) 149 Cal.App.4th 645, 670 (holding inadequate a generalized goal of maintaining habitat, without a set of specified mitigation measures from which a selection would be made after further study).

The FEIR's suggested mitigation measures, set forth in three short pages, are vague and general. (FEIR at 2-26-29). The only true commitment in the FEIR (albeit an important one) is that the 898,000 metric tons of estimated GHG emissions will be mitigated to zero.[9]

1. The FEIR Does Not Commit the City to Any Particular Mitigation Measure or Even a Set of Mitigation Measures.[10]

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[9] Even assuming arguendo that this would qualify as a "specific performance criteria" for mitigation measures, the measures must have sufficient detail and clarity so that decision makers and the public can make informed decisions about the Project. The FEIR's discussion of mitigation measures falls short in this regard because it does not adequately inform the public or the decision makers about what type of mitigation measures will actually be adopted, where the mitigation measures will occur, or what impact the mitigation measures may have or how these measures will be enforced.

[10] Information about available mitigation measures is currently available to the City. This is not an instance where mitigation measures cannot be discussed now because they are unknown.

The centerpiece of the mitigation is set forth in Mitigation Measure 4.3-5(e), described as a "plan for achieving complete reduction up to the maximum estimated Proposed Project GHG emission increase over the baseline." (FEIR p. 4-18.) While Mitigation Measure 4.3-5(e) lists a number of candidate mitigation measures that must be considered, including an audit of energy efficiency measures and GHG reductions recommended by CARB for refineries, it does not require that any of these measures actually be adopted and does not set forth criteria which the City must use to determine what mitigation measures should be adopted or take priority. (FEIR at 4-18-4-20.) Indeed, the language appears to create a situation where the mitigation that may ultimately be selected may be wholly outside the list of examples set forth in 4.3-5(e). In order to comply with CEQA and ensure that mitigation measures actually adopted are consistent with the City's stated objectives, the FEIR should specify a set of mitigation measures or set forth specific criteria for mitigation measures that must be adopted.

2. <u>The FEIR Does Not Require That Mitigation Measures Be Implemented at the Refinery and/or the City of Richmond.</u>

While the FEIR states a preference for local GHG reductions, it does not require that *any* of the mitigation measures actually take place at the refinery, or within the City of Richmond. (FEIR at 2-28.) For example, although Mitigation Measure 4.3-5(e) outlines the priority by which measures should be implemented – first priority to on-site mitigation at the refinery, second priority to mitigation in the City of Richmond, third priority to mitigation within the Bay Area's air district, and fourth priority to mitigation within California or consistent with requirements adopted for GHG reductions by the California Air Resources Board (CARB)[11] – it does not mandate that Chevron actually follow the location priorities set forth in the FEIR. While the City's intention is laudable – to ensure that benefits flow to the local community, that measures can more easily be verified, and that reductions will serve to meet California's state-specific reduction requirements embodied in AB 32 – as written, the measures actually adopted could occur anywhere in the State and literally could be anything. There are mechanisms that the City could, and should, employ to ensure that the City's objectives are achieved, for example, the City could require a certain minimum percentage of the GHG reductions to take place at the refinery and/or in the City of Richmond before moving further afield.

3. <u>The FEIR Does Not Analyze the Impacts of the Mitigation Measures</u>

Another concern about the open-ended nature of the mitigation plan is that the public and the decision makers will have no opportunity, before the Project is approved, to consider any impacts that may result from specific mitigation measures. CEQA requires that an EIR analyze any significant effects resulting from the adoption of a mitigation measures. (Cal. Code Regs.,

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[11]As of February 29, 2008, CARB has not decided whether, for purposes of compliance with AB 32, GHG reductions can occur outside California.

tit. 14, §15126.4(a)(1)(D)). Some GHG mitigation measures could, in theory, result in additional air pollution or toxic emissions in Richmond or elsewhere (for example, increased use of diesel fuel, which is about 30% more carbon efficient than gasoline may increase criteria air pollutants; diesel fuel is responsible for about 70% of the overall cancer risk in California). Ensuring that measures to reduce greenhouse gas emissions do not interfere with efforts to achieve existing air pollution requirements and do not result in increases in toxic air contaminants are important objectives of AB 32. (See Health & Safety Code §38562(b)(4).) To ensure that mitigation measures adopted will not increase the amount of local air pollution, the City should consider setting specific parameters that would prohibit the adoption of mitigation measures that would increase other specific pollutants.

4. <u>The FEIR's Monitoring and Enforcement of Mitigation Measures is Inadequate</u>

The proposed monitoring program for the suggested mitigation measures is too vague and needs to be strengthened. The FEIR proposes that Chevron submit an "annual report" to the City so that the City "can monitor Chevron's compliance" with the FEIR's mitigation measures (Mitigation Measure 4.3-5f), but does not expressly require that a mitigation and monitoring plan conforming to the standards set forth in the CEQA Guidelines Section 15097 (Mitigation Monitoring or Reporting) be adopted. There is no discussion of what will be required in the annual report, or how the City will verify that carbon reduction offsets of potentially great variability, occurring possibly throughout the State – are real.[12] Finally, the FEIR should discuss the measures available to the City if Chevron fails, either because the mitigation measures prove to be inadequate to keep emissions at baseline, or if Chevron fails to demonstrate that its reductions have taken place prior to the Project's inception, or if they occur too slowly. The FEIR should specifically require certain minimal elements be contained in the monitoring report to ensure that the mitigation measures will be properly implemented and effective. Without such protections, the commitment to zero net emissions may be illusory.

In summary, to ensure that the City's vision is actually achieved, we urge the City to further define and specify the mitigation measures for the Project. The City should explicitly require that some portion of the measures be implemented at the Richmond refinery or in the surrounding community. While reducing GHG emissions has a global benefit, GHG emission reductions also often result in lower emissions of other air pollutants, reduced energy costs, or other co-benefits. This limitation would ensure that at least some of these benefits are realized locally, and would further AB 32's objectives that GHG controls maximize overall societal benefits, maximize environmental and economic benefits for California, and not disproportionately impact low-income communities. (Health & Saf. Code §§ 38562(b)(2),

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[12]The FEIR says that the reductions will need to meet the criteria of AB32 – that they are permanent, quantifiable, verifiable and enforceable – but it does not explain how that test will be satisfied. (Mitigation Measure 4.3-5c.)

(b)(6); 38570(a)(3).) It also would help ensure that the reductions achieved are credible and verifiable. For similar reasons, the City could also explore the possibility of requiring Chevron to make payments to a locally-administered GHG mitigation fund that directs funding to local emission reduction projects, such as that administered by the Bay Area Air Quality Management District.

VOC Emissions

1. The FEIR's Claim that VOC Emissions are Now Below the Significance Threshold is Not Adequately Supported

The DEIR concluded that VOC emissions primarily from the proposed storage tanks of 16.2 tons per year would cause Chevron to exceed the significance threshold for VOCs. (DEIR at 4.3-33-4.3-36.) The FEIR, in contrast, indicates that VOCs are below the significance threshold because firing rates have been revised and mitigation measures (floating roofs) will be required for two of the ten storage tanks. (FEIR at 2-30.)[13] The FEIR estimates that floating roofs will reduce VOC emissions by 11.7 tons per year, to 4.5 tons per year. (FEIR at 2-33.) These conclusions constitute new information about the significance of VOC emissions that has not and will not be subject to public review, comment, and discussion. We are concerned because, first, the FEIR's conclusion that VOC emissions will be reduced is not adequately supported and, second, its reliance on the Bay Area Air Quality Management District (BAAQMD) to ensure that VOC emissions will be below significance is premature.

The FEIR does not explain the basis for its conclusion that VOCs will be reduced due to the floating roof tops for two of the tanks, other than to indicate that mitigated fugitive emissions have been estimated using EPA's Tanks 4.0 9d model. The FEIR does not say why floating roof tops were chosen as a mitigation measure or identify alternative mitigation measures. How would a member of the public know that was the appropriate emissions model or that the emissions calculations are correct, especially since this information was not disclosed in the DEIR?

Nor does the FEIR discuss what impacts the floating roofs themselves may have on the environment or health and safety and what measures will be taken to mitigate the impacts. The FEIR appears to indicate that there could be some problem if the concentration of organic vapor in the vapor space between the tank and roof exceeds 30% of its lower explosive limit (LEL)

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[13]The FEIR contains two slightly different revisions of the explanation for changes in the VOC emissions. (FEIR at 2-30; 4-52.) The first version says VOC emissions are changed because of "more-accurate firing rate assumptions ...." (FEIR at 2-30); the second version says VOC emissions are changed because of "more-accurate assumptions" (FEIR 2 at 4-52). It is not clear which revision is the final and correct one, but for purposes of this comment letter, we are assuming the first version is the final revision.

where it says that "[a]ny situation causing a concentration in excess of 30 percent LEL shall be immediately corrected or the tank shall be removed from service." (FEIR at 2-33.) The FEIR, however, fails to explain the nature of this apparently serious potential problem.

The FEIR revises the estimated emissions for all criteria air pollutants based on changes to the firing rate and mitigation measures for two of the storage tanks,[14] (FEIR at 2-30 and 2-31), but does not disclose the basis for the change in the firing rate.[15] The FEIR says the revised firing rates will be included as a condition in the permit for the facility granted by the BAAQMD. However, the FEIR's revised firing rates listed in Mitigation Measure 4.3-2b do not match the firing rates for the same pieces of equipment in BAAQMD's preliminary draft permit conditions, Chevron (Version 11), dated September 20, 2007.

And while the FEIR says that mitigation measures to reduce VOC emissions for the tanks will be part of the BAAQMD permit, Chevron has not even applied to the BAAQMD for a permit for storage tank emissions. Chevron concedes that the tanks are part of the proposed Project, but chose not to include them in the BAAQMD application for the Project. (FEIR at 2-31.) The FEIR does not state if and when Chevron plans on submitting the application for the tanks and why they were excluded from the Project application.

Moreover, it appears that the permit terms are still unresolved, therefore it is unclear how the City can rely on an unfinished BAAQMD permit to regulate firing rates now or in the future. Without any assurance that the firing rates are now fixed and accurate and will remain at the level stated in the FEIR for the life of the Project, the new VOC emission estimates which are now estimated to be below the significance threshold may not accurately reflect the actual emissions from the Project.

Under CEQA "[a]n EIR must include detail sufficient to enable those who did not participate in its preparation to understand and to consider meaningfully the issues raised by the proposed project" (*Laurel Heights Improvement Assn. v. Regents of University of California*, (1988) 47 Cal.3d 376, 405.) As the California Supreme Court has explained, "[t]he data in an EIR must not only be sufficient in quantity, it must be presented in a manner calculated to adequately inform the public and decision makers, who may not be previously familiar with the details of the Project. "[I]nformation 'scattered here and there in EIR appendices' or a report 'buried in an appendix,' is not a substitute for 'a good faith reasoned analysis.'" (*Vineyard Area Citizens For Responsible Growth v. City of Rancho Cordova*, (2007) 40 Cal. 4th 412, 442 [citing

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[14]The FEIR's revised emission figures for criteria air pollutants do not match the emission estimates Chevron submitted to the BAAQMD in Revision 21 (Version 3).

[15]The FEIR says only that Chevron revised its emission rates in the BAAQMD permit application after the DEIR was issued to "reflect more accurate firing rates ...." FEIR at 2-30. It does not state why the current firing rates are more accurate or how accuracy was determined.

California Oak Foundation v. City of Santa Clarita (2005) 133 Cal. App. 4th 1219, 1239].) The FEIR here is deficient because it fails to provide sufficient detail for someone who was not involved in the preparation to understand the document, the information is scattered here and there, and it relies on a future environmental document to support its claim that VOC emissions from tanks will be mitigated below significance.

Without sufficient evidence that the floating tank roofs will reduce emissions by 11.7 tpy or that the tanks will be subject to BAAQMD permit conditions, or that the firing rates are accurate, the FEIR's conclusion that VOC emissions are below significance thresholds is not adequately supported.

Flaring and Crude Slate Conditions

While the FEIR improved on the DEIR's scant description of the Project's impact on flaring, it relies heavily on Flare Management Plans (FMPs) required under BAAQMD regulations to support its claim that flaring will be reduced. As the FEIR acknowledges, the FMPs have not been updated to include the impacts from the Project (FEIR at 2-46; 2-52), and therefore, any claim that the FMP will reduce flaring is premature. The FEIR's reliance on a future environmental document (future FMP amendments) is inadequate. (See *Vineyard Area Citizens, supra*, 40 Cal. 4th at 447 [holding that FEIR improperly purported to tier from future environmental document].) The FEIR also says that Project facilities will be designed and engineered to minimize the volume and frequency of gases being routed to the flare gas recovery system, but fails to give specifics as to how or what that means. (FEIR at 2-46; 2-52.) The FEIR claims that Chevron has adopted some of Shell's steps to reduce refinery flaring (FEIR at 2-45), but it is not clear how much the Project and/or the FMP will reduce flaring. The lack of specificity and detail does not allow the public or decision makers to assess the FEIR's claims and is therefore inadequate under CEQA.

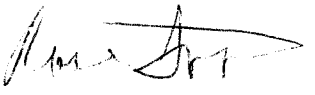
In our comment letter on the DEIR, we noted that the DEIR did not address if and how expanding the range of crude oil that can be processed at the refinery would impact flaring. (AG DEIR Comment Letter at 11-12.) In response, the FEIR referred to Master Responses 2.2 and 2.7 for Crude Slate and Flaring. (FEIR at 3.1-3.) In Master Response 2.2, the FEIR repeatedly states that "[i]t is reasonably foreseeable that Chevron will run a crude slate similar to that which is currently processed at the refinery, but in a mixture that has higher sulfur levels." (FEIR at 2-8, 2-13, 2-15.) To ensure that the crude slate is not changed to a heavier and/or dirtier crude as a result of this Project, the City should impose crude slate conditions in its Conditional Use Permit. Chevron should not object to the crude slate conditions since it states that it is planning on running a crude slate to similar to what it is currently processing at the refinery.

Conclusion

In summary, the FEIR is inadequate under CEQA because it does not contain sufficient information for decision makers and the public to evaluate the Project and its impact, especially the mitigation measures for GHGs, VOCs, and flaring. The FEIR is also inadequate because it fails to make the required significance finding regarding GHG emissions and because its discussion of mitigating VOCs and flaring impacts relies on environmental documents not yet prepared.

We commend the City for committing to mitigate the Project's GHG emissions to zero. To make this actually happen in the manner consistent with the City's stated objectives, it should revise the FEIR to set certain parameters or requirements for the GHG emissions. As currently formulated in the FEIR, the GHG mitigation measures do not require any particular mitigation measures to be adopted, do not require that the mitigations be implemented at the refinery or in the City of Richmond, do not evaluate the impacts of mitigation measures, and do not have a sufficient enforcement mechanism to achieve the City's important goal of zero GHG emissions for this Project.

Sincerely,



ROSE B. FUA
Deputy Attorney General

For EDMUND G. BROWN JR.
Attorney General

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