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VIA FACSIMILE AND FIRST CLASS MAIL

Chris Kalashian
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San Joaquin Valley Air Pollution Control District
1990 East Gettysberg Ave.
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RE: Proposed Mitigated Negative Declaration and Initial Study for Bar 20 Dairy

Dear Chris Kalashian:

We have reviewed the revised January 2008 Proposed Mitigated Negative Declaration (Mitigated Negative Declaration) for the proposed expansion of the Bar 20 Dairy.[1] The Dairy seeks to triple is existing dairy operations from 6,204 to 19,120 cows. The revised document is an improvement over the Air District's September 2007 Mitigated Negative Declaration (later withdrawn) for this project, and we appreciate the Air District's efforts to both quantify and require mitigation of greenhouse gas (GHG) emissions of from the Dairy.

As discussed below, however, the revised document still does not satisfy the Air District's CEQA obligations. Using the data in the Air District's Initial Study, we estimate that the additional cows proposed to be added to the Dairy will emit as much greenhouse gas (GHG) each year as do 7,900 cars. By issuing a Mitigated Negative Declaration, the Air District implicitly has found that the greenhouse gas-related impacts of the project have been mitigated to levels below significance, but there is no support in the document for such a finding. Under CEQA, the Air District must analyze and determine whether the GHG emissions from the project, as mitigated, are still significant. If, as it appears, they may be significant, the Air District must prepare an Environmental Impact Report (EIR).

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[1]The Attorney General provides these comments pursuant to his independent power and duty to protect the natural resources of the State from pollution, impairment, or destruction in furtherance of the public interest. (See Cal. Const., art. V, § 13; Cal. Gov. Code, §§ 12511, 12600-12; *D'Amico v. Board of Medical Examiners*, 11 Cal.3d 1, 14-15 (1974)). These comments are made on behalf of the Attorney General and not on behalf of any other California agency or office.

Dairies and Greenhouse Gas Emissions

We encourage the Air District to take a leadership role in further examining ways to reduce GHG emissions from this dairy and from the substantial number of dairies and other animal operations that fall under its jurisdiction. Methane accounts for approximately 5.7 percent of all GHG emissions in California, and half of the State's methane emissions comes from livestock and manure. Methane is a powerful GHG that has 21 times the global warming potential of carbon dioxide (CO_2). Livestock and their manure emit greenhouse gases equivalent to 13.2 million tons of carbon dioxide each year in California.[2] The eight counties regulated by the Air District are home to approximately 1.5 million dairy cows and 1,500 dairies, meaning that within the Air District's jurisdiction are 83 percent of California's dairy cows and 74 percent of its dairies.[3] Thus, the approach taken by the Air District in carrying out its responsibilities under CEQA can have a large effect on emissions of GHG from California dairies and other animal operations.

Discussion of Significance in the Bar 20 Dairy Mitigated Negative Declaration

By proposing a finding that the project will have no significant effect on the environment with the mitigation measures proposed, the Air District implicitly has determined that the GHG emissions from the Dairy expansion will be mitigated to less-than-significant levels. According the Initial Study, the expansion of the Dairy will increase emissions of GHG by the equivalent of 28,302.1 tons per year of CO_2, which will be reduced to 17,444.1 tons per year of CO_2 equivalent with required mitigation measures.[4] The Air District did not explicitly determine whether the GHG emission will be mitigated to a non-significant level, but instead stated that:

> There are no widely accepted published thresholds of significance for determining the impact of GHG emissions from an individual project, or from a cumulative perspective, on [global climate change]. Without established guidelines or thresholds of significance, characterizing GHG impacts and implementing feasible and cost effective GHG emission reduction measures for an individual project is speculative. (Initial Study, p. 2-15.)

As a threshold matter, the absence of an established threshold does not relieve a lead agency of its obligation under CEQA to determine whether or not impacts are significant. As the

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[2] California Energy Commission, *Inventory of California Greenhouse Gas Emissions and Sinks: 1990 to 2004*, December 2006, Table 6.

[3] California Department of Food and Agriculture, *California Agricultural Resource Directory 2006*, 2006, at p. 97.

[4] As explained below, however, these figures do not accurately measure the GHG emissions impact of the Dairy expansion.

CEQA Guidelines note, "[a]n ironclad definition of significant effect is not always possible . . . ."[5] Where there is no established threshold, lead agencies must rely only on their own "careful judgment . . . based to the extent possible on scientific and factual data"[6] in determining whether a project's global warming-related impacts are significant.

In making its determination, we encourage the Air District to review the California Association of Air Pollution Control Officers (CAPCOA) recent white paper entitled "CEQA & Climate Change: Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to the California Environmental Quality Act." This document is available at http://www.capcoa.org/.

The Revised Document Should Evaluate Whether Mitigation Measures Could Further Reduce the Global Warming Impact of Methane Emissions from the Dairy

One of CEQA's primary purposes is "to require public agencies to adopt feasible mitigation measures to lessen the environmental impacts of the projects they approve."[7] This revised Initial Study analyzes various mitigation measures and attempts to quantify, where possible, their potential to reduce GHG emissions. This approach is a clear improvement over the previous report, which did not address GHG mitigation at all. The Air District can do more, however, to make its mitigation analysis complete.

As discussed, if the impacts of the Dairy are not in fact mitigated to levels below significance, the Air District must analyze addition mitigation measures, and require those that are feasible. It appears that additional mitigation options are available. For example, the Air District did not address whether the Dairy could purchase GHG offsets or pay a mitigation fee to mitigate some of the global warming potential of the Dairy expansion – even though it is requiring the Dairy to purchase volatile organic compound (VOC) and PM_{10} offsets. The Air District should evaluate whether purchasing GHG offsets or paying mitigation fees would reduce the impacts of the Dairy expansion to non-significant levels. The Dairy could, for example, fund off-site projects (e.g., alternative energy projects) that will reduce GHG emissions, or could purchase "credits" from another entity that will fund such projects. The Air District should ensure that any mitigation taking the form of carbon offsets is specifically identified and that such mitigation will in fact occur.

In addition, we understand from a separately circulating CEQA document that the Dairy intends to install a methane digester to collect methane gas from liquid manure waste and pipe

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[5] Cal. Code Regs., tit. 14, § 15064, subd. (b).

[6] Cal. Code Regs., tit. 14, § 15064, subd. (b).

[7] *Woodward Park Homeowners Ass'n, Inc. v. City of Fresno* (2007) 150 Cal.App.4th 683, 690. *See also* 14 Cal. Code Regs, tit. 14, § 15021, subd. (a).

the gas to an existing PG&E gas line. The Dairy has applied to the Air District for a permit to build and operate the digester. We applaud the Dairy for taking this step toward reducing the global warming impact from its operations by using this emerging technology, and we hope that this digester can serve as an example for other California dairies.

Given that the digester appears to be mitigation for the Dairy, the mitigation potential of the methane digester should be studied by the Air District in more detail in this CEQA document. Currently, the Initial Study only briefly discusses the digester, and does not include it as one of the required mitigation measures. The Initial Study estimates that the digester could reduce methane emissions by 1,500 tons per year (31,500 tons per year of CO_2 equivalents), which is almost all of the methane generated by the liquid manure lagoons.[8] The basis for this calculation is not provided.

<u>The Revised Document Should Re-examine and Clarify the Emissions Calculations</u>

One of CEQA's main purposes is to inform government decision makers and the public about the environmental impacts of a proposed project.[9] Several aspects of the Initial Study/Mitigated Negative Declaration's GHG emissions calculations should be further evaluated by the Air District, as the current Initial Study appears to substantially underestimate the actual emissions impacts from the Dairy expansion.

- **There is no valid justification for including emissions from the new cows' liquid manure in the *pre*-project emissions calculations.**

In Appendix A, the Initial Study calculates the amount of methane and nitrous oxide (NO_2) produced by the Dairy before and after the expansion, and then calculates the net increase in emissions due to the expansion. However, it incorrectly adds the emissions from the liquid manure generated by the new cows to *both sides* of the equation. The result is that this significant source of emissions is simply eliminated from the calculation of net impacts. (The lagoons at the new facility are expected to contain up to 70 million gallons of wastewater and emit the equivalent of 27,763.2 tons of CO_2 per year, without mitigation.) Whether or not the manure lagoons have already been built, they do not emit methane unless they are being used, and it is the permitting of the additional thousands of cattle using these lagoons that will result in the methane output. The Initial Study must compare the proposed expanded Dairy to the state of

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[8] The Initial Study says that the methane digester's reduction of 1,500 tons of methane per year "should mitigate all of the increase in GHG emissions from this project." (Initial Study, p. 2-24.) This seems illogical, however, since only the emissions from liquid manure will be captured by the digester, not the significant enteric emissions from the cows themselves or the emissions from dry manure.

[9] Cal. Code Regs., tit. 14, § 15002, subd. (a)(1).

environment without the expansion.[10] Although in August 2007 – one month before releasing the first version of the Initial Study – the Air District issued a permit to construct the new lagoons (which were already built and operating at that time), CEQA does not allow the Air District to consider only emissions from selected other structures at the expanded Dairy in its impact analysis. The new lagoons are needed to accommodate the additional cattle at the expanded Dairy, and without those cattle the new lagoons would have no purpose. The Air District therefore must consider the impacts from the Dairy expansion as a whole.[11]

By eliminating the liquid manure waste from the expanded Dairy from its calculations, the Air District calculates the net increase in emissions – with mitigation – to be 804.1 tons of methane and 1.8 tons of NO_2 per year, for a total of equivalent of 17,444.1 tons of CO_2 per year. However, if the liquid manure from the new cows at the expanded Dairy is properly included only in the post-project emissions calculation, then net increase in emissions – with the Air District's mitigation calculations – is 1,993.3 tons of methane and 5.2 tons of NO_2 per year, for a total equivalent of 43,471.3 tons of CO_2 per year.[12] Thus, the Air District under reports the GHG emissions increase of the project by two-and-a-half times.[13] The Initial Study's minimization of the potential impacts contravenes one of CEQA's primary purposes – "to inform the public and decision makers of the consequences of environmental decisions before those decisions are made." (*Woodward Park Homeowners Ass'n, Inc., supra*, 150 Cal.App.4th at 690.)

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[10] *Environmental Planning & Information Council v. County of El Dorado* (1982) 131 Cal.App.3d 350, 358-59 (finding that environmental impact report improperly compared conditions anticipated in proposal to what was anticipated in general plan instead of comparing the proposal to actual conditions that then existed).

[11] *City of Santee v. County of San Diego* (1989) 214 Cal.App.3d 1438, 1452 ("CEQA mandates . . . that environmental considerations do not become submerged by chopping a large project into many little ones – each with a . . . potential impact on the environment – which cumulatively may have disastrous consequences."); Cal. Code Regs., tit. 14, § 15378.

[12] Thus, the Dairy expansion has the same global warming impact as putting an additional 7,900 cars on the road each year, even using the Air District's mitigation calculations. (Annual emissions from a typical passenger vehicle are the same as 5.5 tons of carbon dioxide. (*See* U.S. Environmental Protection Agency, *Emission Facts*, EPA420-F-05-004, February 2005, at p.2, available at http://www.epa.gov/otaq/climate/420f05004.pdf.))

[13] The Initial Study makes the same error regarding VOC and PM_{10} emissions as well, by adding emissions from the manure produced by the cows at the expanded Dairy to both sides of the equation. By defining the project so narrowly as to exclude from its calculations the existing liquid manure emissions at the expanded Dairy, the Initial Study erroneously calculates the post-project emissions from liquid manure to be even lower than the pre-project emissions.

- **Methane emission changes due to changes in lagoon operation are not calculated.**

The Initial Study also potentially underestimates methane emissions by using the same methane emissions factors for both the expanded Dairy lagoons (as permitted in August 2007) and the proposed changes to those lagoons, even though the Air District determined that methane emissions would actually increase with the proposed changes. The Air District's engineering review of the Dairy expansion found that converting the lagoon and storage pond at the expanded Dairy into an anaerobic treatment lagoon system would reduce VOC emissions by 40 percent, but would increase methane and CO_2 emissions because some of the VOCs would be converted to methane and CO_2. This 40-percent VOC reduction is included in the calculations of the changes in VOC emissions from the proposed lagoon configuration (compare pages A-12-A-14 with A-26 and A-28). But the increased methane generation this new configuration would bring about is not calculated; the same emission factors are used for both the pre- and post-project scenarios (compare pages A-47 with A-48). This potential under-reporting of methane emissions is exacerbated by including the methane emissions on both sides of the equation, as described above. The CO_2 increase from the lagoon change is not quantified at all.[14]

- **Methane offsets are not adequately explained.**

The Initial Study does not explain whether the dairies being closed as mitigation would have closed anyway. If these dairies would have closed regardless of whether the expanded Dairy project is approved by the Air District, the closing of those dairies is not truly done in mitigation of this project. Without the 520 tons per year of methane offset by closing other dairies, the project would emit an additional 10,920 tons of CO_2 equivalents per year. The Initial Study does not analyze whether these offsets are legitimately counted.

Conclusion

Given the seriousness of global climate change, a project contributing as much to global warming each year as at least 7,900 additional cars (even after proposed mitigation) would appear to be cumulatively significant under any reasonable view. The Air District's proposed finding that the increased emissions from the Dairy will not be significant is not supported by the kind of analysis suggested in the CAPCOA white paper. The Air District should determine whether the global warming impacts of the Dairy expansion will cumulatively significant, and if so, impose mitigation measures to reduce those impacts to a non-significant level or prepare an EIR to further evaluate this project.

Because of the large number of dairy cows located within its jurisdiction, the Air District

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[14] A few other errors are included in the Initial Study. Footnote 2 to Table 2.6.3.3 includes numbers that are not reflected in the table. Also, the tables on pages 2-35 and A-35 are duplicates of a table in the withdrawn Initial Study and contain old data; they have not been updated to reflect the new analysis in the revised Initial Study.

has the opportunity to become a leader and provide examples of ways to reduce the global warming impact of livestock. We encourage the Air District to further analyze the global warming impacts of the expanded Dairy and possible mitigation measures in a clear and appropriately detailed document. We appreciate the opportunity to comment on the document and would be happy to meet with Air District staff to discuss these comments.

Sincerely,

/S/

TIMOTHY E. SULLIVAN
Deputy Attorney General

For EDMUND G. BROWN JR.
Attorney General

cc: Arnaud Marjollet, San Joaquin Valley Air Pollution Control District

Bar 20 Dairy comment to San Joaquin Valley APCD.wpd