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July 3, 2008

VIA Email and Certified Mail

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Re: Comments on the SEIR for the Van Der Kooi Dairy, State Clearing House Number
2006011107

Dear Dr. Barber:

The Center for Biological Diversity (the "Center"), Earthjustice, California Rural Legal Assistance ("CRLA"), and the Tehipite Chapter of the Sierra Club submit these comments on the May 2008 Supplemental Environmental Impact Report ("SEIR") for the Van Der Kooi Dairy, State Clearing House Number 2006011107 ("Project").

The Center is a non-profit conservation organization dedicated to the protection of native species and their habitats through science, policy, and environmental law. The Center's Climate, Air, and Energy Program works to reduce greenhouse gas emissions to protect biological diversity, our environment, and public health. The Center educates the public about the impacts of climate change on our world, including the animals and plants that live in it, and to build the political will to enact solutions. The Center has over 40,000 members throughout the western United States, including many that live and recreate in Fresno County, California, where this project is proposed. We respectfully submit these comments on the SEIR and ask that they be included in the administrative record for the Project.

Earthjustice is a non-profit public interest law firm that works on behalf of its community, public-health, and environmental clients to defend their right to a healthy environment.

California Rural Legal Assistance ("CRLA") is a public interest law firm active in promoting workers rights and protecting the health and safety of the farmworker community in the Fresno County area. We write this letter on behalf of our client, Mrs. Eugenia Melesio, a Fresno County resident concerned about the significant environmental impacts that new and expanding dairies will have on her and her family's health and safety.

The Sierra Club is a non-profit conservation organization that works to protect the basic right of clean air and a healthy environment for all Americans and to ensure that polluters and the government agencies that regulate them adhere to environmental laws. The Tehipite chapter of the Sierra Club, which includes Fresno County, has long fought to improve air quality in the San Joaquin Valley, where its members are exposed to some of the worst air pollution in the country.

As detailed in earlier comments,¹ we are deeply concerned about greenhouse gas ("GHG") emissions as well as other environmental and public health impacts from large confined animal facilities such as the proposed Van Der Kooi Dairy, especially given the enormous pollution problems generated by existing dairies in Fresno County. The SEIR anticipates that the Van Der Kooi Dairy will house 6,120 animals, consisting of 3,200 milk cows, 480 dry cows, 2,060 heifers, and 380 calves (SEIR at 1). These animals will join a county-wide dairy herd that totaled approximately 212,276 head in 2006 (Kresge and Strohlic 2007). This number continues to grow at an alarming rate as new dairies move into Fresno County from Southern California (*id.*). Existing dairies generate millions of gallons of wastewater, which is generally applied to cropland, and millions of tons of manure in Fresno County. Large confined animal feeding operations like the Van Der Kooi Dairy release large quantities of ammonia, as well as methane and nitrous oxides, two potent greenhouse gases ("GHG"). Any unmitigated increases in methane, nitrous oxides, and other greenhouse gases will have a significant impact on the environment because they will cumulatively interfere with the deep emissions cuts necessary to stabilize the climate by 2050. Because the SEIR ignores obvious Project sources of GHGs as well as proven strategies for reducing cumulatively significant greenhouse gas emissions, the Project's EIR and SEIR fail to meet requirements under CEQA to adequately consider environmental impacts and adopt all feasible mitigation measures.

The DEIR states that, based on 2005 projections, the cumulative methane emissions from the dairy industry in the San Joaquin Valley are approximately 524,706 tons per year (DEIR at 5-7). That is equivalent to approximately 11,662,068 metric tonnes² of carbon dioxide.³

¹, See March 24, 2008 comments on the EIR from the Center and Earthjustice; March 24, 2008 comments on the Notice of Preliminary Decision on the Authority to Construct Permit from Earthjustice, representing the Center; March 21, 2008 comments from CRLA, representing Mrs. Eugenia Melesio, and March 19, 2008 comments from Patience Milrod, on behalf of Mrs. Melesio – all herein incorporated by reference.

² One metric tonne is equivalent to 1,000 kilograms or 2,205 pounds.

³ A carbon dioxide equivalent is a metric measure used to compare the emissions from various greenhouse gases based upon their global warming potential (GWP). Carbon dioxide equivalents are commonly expressed as "million metric tons of carbon dioxide equivalents (MMTCDE)" or "million short tons of carbon dioxide equivalents (MSTCDE)". The carbon dioxide equivalent for a gas is derived by multiplying the tons of the gas by the associated GWP. $MMTCDE = (\text{million metric tons of a gas}) * (\text{GWP of the gas})$. The GWP for methane is 24.5. This means that emissions of one million metric tons of methane is equivalent to emissions of 24.5 million metric tons of carbon dioxide. http://www.climatechange.ca.gov/glossary/letter_c.html

According to the SEIR, the Project itself is estimated to release 1,222.97 tons per year of methane from manure decomposition and animal digestive processes (28,013.36 tons per year carbon dioxide-equivalent emissions) prior to mitigation (SEIR Appendix B).⁴

CEQA requires a comprehensive analysis of the global warming impacts of future dairy/feedlot operations, including but not limited to the sources identified above and the carbon dioxide emissions associated with the construction and operation of the dairy, production and transport of animals and animal feed, and transport of dairy and meat products. Curbing greenhouse gas emissions to limit the effects of climate change is one of the most urgent challenges of our time. Fortunately, CEQA sets forth a clear and mandatory process for the District to deal with the Project's greenhouse gas and global warming impacts. As detailed below, the SEIR fails to acknowledge the statewide and national significance of the climate crisis or the full expected contribution of Van Der Kooi Dairy to the problem. Moreover, the SEIR justifies ignoring and/or dismissing available, feasible, and achieved-in-practice mitigation measures to reduce those impacts, and fails to require offsets for unmitigated emissions, on the basis of an absurdly and illegally high proposed significance threshold. Sufficient mitigation measures must be adopted to ensure that greenhouse gas emissions generated by the Project are fully mitigated.

A. The SEIR Fails to Provide an Adequate Scientific and Regulatory Context for Addressing Global Warming

Climate change poses enormous risks to California. Scientific literature on the impact of greenhouse gas emissions on California (and the world) is well developed and was discussed at length in our March 24, 2008 comments on this project. In order to provide the necessary context for an assessment of a project's impacts on global warming, the SEIR should first discuss the impact of global warming on California by providing an accurate summary of the scientific literature on climate change. The environmental analysis for this Project must make a good faith effort at full disclosure and avoid minimizing or discounting the severity of global warming's impacts. See Guidelines § 15151; *San Joaquin Raptor/Wildlife Rescue Center v. County of Stanislaus*, 27 Cal.App.4th 713 (1994).

While ostensibly generated to compensate for the inadequacy of the EIR to address global warming concerns, the SEIR ignores the huge body of literature on California- and dairy industry-specific climate change impacts, instead including only a cursory definition of greenhouse gases and a mention of the worldwide greenhouse gas inventory (SEIR at 1-3) as the context for announcing reliance on an absurd proposed significance threshold of 42,000 tons carbon dioxide-equivalent emissions. This is a laughable abdication of the District's legal obligations under CEQA.

⁴ This tally of carbon dioxide equivalent emissions includes only methane. While nitrous oxide emissions factors are presented in Appendix B, they are not included in any subsequent calculations of GHG Project emissions in that appendix. Nitrous oxide Project emissions, which are entirely unmitigated, are calculated to be an additional 4.37 tons per year, or 1,354.7 tons per year of carbon dioxide-equivalent emissions (Table 2, SEIR at 5).

B. The SEIR Cannot Legitimately Rely on the a Significance Threshold of 42,000 Tons Because It Is Not Supported by Substantial Evidence and There Is a Fair Argument that That Environmental Effects May Still Be Significant at Levels Below this Threshold

To determine the significance of the Project's greenhouse gas impacts, the District proposes a greenhouse gas emissions threshold of 42,000 tons based on a conceptual approach set forth by CAPCOA referred to as the Regulated Emissions Inventory Capture methodology. The Regulated Emissions Inventory Capture methodology is fundamentally flawed because it is essentially ineffective at reducing greenhouse gas emissions, is inconsistent with the emissions reduction mandates of AB 32 and Executive Order S-3-05, and is premised on a meaningless comparison with criteria pollutant thresholds under the Clean Air Act. As there is a fair argument that environmental effects would occur at emission levels below this threshold, it cannot be legitimately relied on to support the District's determination that impacts from the Project's greenhouse gas pollution are less than significant.

The 42,000 ton greenhouse gas threshold proposed by the District would capture far less than half of new residential and commercial development. As CAPCOA notes, a 39,000 to 46,000 metric ton threshold would correspond to the GHG emissions of approximately 2,200 to 2,600 residential units, 1.5 to 1.8 million square feet of office space, 470,000 to 560,000 square feet of retail, and 275,000 to 320,000 square feet of supermarket space. (CAPCOA 2008 at 46.) Failing to capture well over half of all residential and commercial development means that a substantial amount of new growth would not be required to adopt all feasible mitigation measures to reduce greenhouse gas emissions. Moreover, larger projects that are above the 42,000-ton threshold would only be required to mitigate to 42,000 tons, thereby avoiding additional critical opportunities for further mitigation were a lower threshold established.

Under CEQA, "[t]he determination of whether a project may have a significant effect on the environment calls for careful judgment on the part of the public agency involved, based to the extent possible *on scientific and factual data*." CEQA Guidelines § 15064(b) (emphasis added). Accordingly, a significance threshold for greenhouse gases must reflect the grave threats posed by the cumulative impact of additional new sources of emissions into an environment where deep reductions from existing emission levels are necessary to avert the worst consequences of global warming. *See Communities for Better Env't v. California Resources Agency*, 103 Cal. App. 4th 98, 120 (2002) ("the greater the existing environmental problems are, the lower the threshold for treating a project's contribution to cumulative impacts as significant."); *see also Center for Biological Diversity v. National Highway Traffic Safety Administration*, 508 F.3d 508, 550 (9th Cir. 2007) ("we cannot afford to ignore even modest contributions to global warming."). Unsurprisingly, in reviewing the effectiveness of the Regulated Emissions Inventory Capture methodology, CAPCOA concluded this approach had a *low* effectiveness in reducing greenhouse gas emissions and a *low* consistency with AB 32 and Executive Order S-03-05. (CAPCOA 2008 at 55.)

Under CAPCOA's own analysis, the only two thresholds that are highly effective at reducing emissions and highly consistent with AB 32 and Executive Order S-3-05 are a threshold of zero [Threshold 2.1] and a quantitative threshold designed to capture 90 percent or more of

likely future discretionary projects (a 900-ton CO₂ Eq threshold) [Threshold 2.2]. (CAPCOA 2008 at 56-57). All other proposed thresholds are simply inadequate in light of the severe environmental threats posed by global warming and California's emissions reduction mandate. Indeed, CEQA requires that a lead agency must "still consider any fair argument that a certain environmental effect may be significant" even where a project complies with a regulatory threshold. *Protect the Historic Amador Waterways v. Amador Water Agency*, 116 Cal. App. 4th 1099, 1109 (2004). Because there is a fair argument that application of a threshold with limited effectiveness at reducing emissions would still result in environmental effects, reliance on a threshold that is not highly effective at reducing greenhouse gas emissions and/or fails to achieve mandated reductions leaves projects open to legal challenges under the fair argument standard. Accordingly, these thresholds, including the threshold proposed by the District, should not be adopted.

According to CAPCOA, 900 tons is roughly the equivalent of the emissions generated by 50 homes or 30,000 square feet of commercial space. (CAPCOA 2008 at 43). While the size of these projects ordinarily may seem minor enough to ignore, the challenges posed by climate change are far from ordinary. Given the recent extreme losses in arctic sea ice, scientists at the National Snow and Ice Data Center have concluded that "the observed changes in the arctic indicate that this feedback loop is now starting to take hold."⁵ Even the ambitious emissions reduction targets set by Executive Order S-3-05 in 2005, consistent with contemporaneous science indicating that reductions of 80% below 1990 levels by developed countries were sufficient to stabilize the climate (CA EPA 2006 at 18),⁶ are now believed to be insufficient to stabilize the climate. Based on the alarming and unpredicted rate of loss of Arctic sea ice and other recent climate change observations, scientists now state that "humanity must aim for an even lower level of GHGs" (Hansen et al. 2008)⁷ As our current scientific understanding now calls for even greater reductions and indicates that we already may have passed a climactic tipping point, a threshold of zero would appear to be necessary to ensure that new projects do not have a cumulatively significant impact on global warming.

Concerns that a zero significance threshold would require preparation of EIRs even for the smallest projects can be addressed were the District to develop and implement a mitigation offset program for greenhouse gases in conjunction with the promulgation of a threshold of significance. With the implementation of an offset program, a project proponent would have a

⁵ National Snow & Ice Data Center, *Arctic Sea Shrinks as Temperatures Rise*, Oct. 3, 2006 available at http://nsidc.org/news/press/2006_seaiceminimum/20061003_pressrelease.html Loss of sea ice is subject to a tipping point because, as sea ice melts in response to rising temperatures, it creates a positive feedback loop: melting ice means more of the dark ocean is exposed, allowing it to absorb more of the sun's energy, further increasing air temperatures, ocean temperatures, and ice melt.

⁶ Cal. EPA, Climate Action Team Report to Governor Schwarzenegger and the Legislature (Mar. 2006).

⁷ In *Target Atmospheric CO₂: Where Should Humanity Aim?*, James Hansen, the premier NASA climatologist, now concludes that "[i]f humanity wishes to preserve a planet similar to that on which civilization developed, paleoclimate evidence and ongoing climate change suggest that CO₂ will need to be reduced from its current 385 ppm to at most 350 ppm." An emissions pathway whereby developed countries would reduced emissions to 80% below 1990 levels as envisioned under Executive Order S-03-05 would cap atmospheric concentrations of CO₂ at approximately 450 ppm. See, e.g., UNDP, Human Development Report 2007/2008, *Fighting climate change: Human solidarity in a divided world* (2007) at 46-50 available at <http://hdr.undp.org/en/reports/global/hdr2007-2008/chapters/>

straightforward means of mitigating emissions to zero once all on-site mitigation measures were adopted.

3 Not only is the threshold used by the District ineffective and noncompliant with AB 32 and Executive Order S-3-05, but the Regulated Emissions Inventory Capture method has absolutely no relationship to the greenhouse gas emission reduction targets set by the State of California. Rather, the proposed approach discussed by CAPCOA and selected by the District is utterly arbitrary. It suggests that the threshold for GHG emissions might be set by comparing the NO_x or ROG thresholds to the emissions inventory of those pollutants. What makes this approach absurd is there is simply no relationship between the major source threshold and the emissions inventory. The major source thresholds used by the District as the “surrogate” for a NO_x significance threshold under CEQA were established by Congress in the Clean Air Act and have no connection whatsoever to the emissions inventory of an area. This ratio of the significance threshold to the emissions inventory is as meaningless as the ratio of the threshold to the number of cars on the road or the number of pigeons in the park – it is an arbitrary comparison of two numbers that have no connection.

The fact that these numbers have no connection should be obvious from the fact that the significance thresholds in the Clean Air Act do not vary from area to area, or state to state depending on the local emissions inventory. Nor do the thresholds change proportionately as inventories increase or decrease over time. To the contrary, the Clean Air Act provides for the tightening (i.e., lowering) of major source thresholds in areas that may be experiencing either increasing or decreasing inventories.

4 For example, major source thresholds in nonattainment ozone areas are tied to the classification of the area. *See e.g.*, CAA § 182a(c), (d), and (e). The initial classification is tied to the ambient ozone concentrations of an area. *Id.* at § 181(a)(1). The result is that, at least initially, the most polluted areas are subject to the lowest major source thresholds (i.e., the major source threshold is *inversely* related to the level of pollution). These initial classifications, however, change if an area fails to achieve the national ozone standard by the statutory deadlines. *See id.* at § 182(b)(2). The failure to meet these deadlines, again, is not tied to whether inventories are increasing or decreasing. Thus, the major source threshold tightens in areas that miss the statutory deadlines for attainment because they have done nothing to control pollution and consequently have inventories that are increasing. But some areas, such as the San Joaquin Valley, may be “bumped up” to higher classifications even when the inventory of emissions is allegedly declining because the reductions were not achieved in time or to the degree necessary to result in clean air by the statutory deadline. For these areas the major source threshold gets smaller even while the inventories decline.

The arbitrariness of the comparison between major source thresholds and inventories is reflected in the way the District has applied it. First, the District offers no explanation as to why 2005 is the appropriate year for the NO_x inventory. The inventory has declined significantly since Congress first adopted the Clean Air Act and the associated major source thresholds. In particular, state and federal mobile source controls have achieved upwards of 90 percent reductions in emissions from cars and trucks. Why then, even if one assumed that the NO_x threshold has some connection to the emissions inventory, would the District choose an

4 inventory that is much lower than the inventory as it existed when Congress established the major source thresholds for NOx? Second, why does the District use the statewide inventory of NOx when the thresholds are established according to the ozone classification area by area? Even if the District decided to use the local threshold and the local inventory, whose threshold and inventory should be used? The resulting GHG threshold would be different in every air district, an outcome that demonstrates there is no rational basis for this approach. A related question is why the District would use 100 tons per year as the appropriate threshold when the currently applicable NOx threshold for the San Joaquin Valley is 10 tons per year. There are no rational answers to these questions because the exercise is irrational at its core. CAPCOA was wrong to have included this conceptual approach in its White Paper and the District was wrong to have selected it as its preferred option.

C. The SEIR Fails To Accurately Inventory the Project's Global Warming Pollution

It is incumbent on the District to "disclose all it can" about project impacts and educate itself on methodologies that are available to measure project emissions. *Berkeley Keep Jets Over the Bay Comm. v. Board of Port Comm'rs* ("Berkeley Jets"), 91 Cal. App. 4th 1344, 1370 (2001). Without a complete inventory, the SEIR cannot adequately inform the public and decision-makers about the Project's impacts. As OPR has stated in recent guidance on GHGs, "lead agencies should make a good-faith effort, based on available information, to calculate, model, or estimate the amount of CO₂ and other GHG emissions from a project, including the emissions associated with vehicular traffic, energy consumption, water usage and construction activities." (California Office of Planning and Research 2008 at 5). Contrary to OPR Guidance, the SEIR fails to provide any data on the emissions generated by the Project's energy use and water consumption. Moreover, it is unclear whether and to what extent operational vehicular emissions are quantified.⁸

1. *The SEIR inexplicably and illegally attributes 1,950 of the proposed dairy's total animals to an "existing dairy," excluding their emissions from project totals.*

5 The 2006 DEIR describes the site of the proposed "new" Van Der Kooi Dairy as cropland "currently in agricultural production" consisting of 550 acres of corn, 80 acres of wheat, and 500 acres of oats, in addition to 112 fallow acres (DEIR Appendix I at 1). There is no mention anywhere in the DEIR of an existing, operational dairy on the site (*see* DEIR, Chapters 2 and 3, including site photographs showing existing croplands at the Project site). In calculating the net increase in methane and nitrous oxide emissions due to the Project, however, the District subtracts the emissions from 1,950 animals that supposedly generate "pre-project" emissions. The result is that total emissions attributable to the proposed Project are dramatically

⁸ While the DEIR quantifies truck trips from the Project (DEIR, AQ Section at 9), the SEIR does not describe or appear to include the greenhouse gas emissions generated from these trips. If these emissions are quantified, the assumptions in reaching a determination on operational transportation-related emissions are not adequately explained.

under-reported because 11,356.51 tons/year carbon dioxide equivalent “pre-project” combined methane and nitrous emissions are inexplicably and illegally subtracted from the total (Table 2, SEIR at 5; *see also* PE1 calculations from the “existing dairy” in SEIR Appendix B).

5 Under CEQA, the SEIR must compare the proposed Project to the state of the environment without the Project. *Environmental Planning & Information Council v. County of El Dorado* (1982) 131 Cal.App.3d 350, 358-59. In direct contravention of CEQA, the SEIR improperly exempts nearly half of the actual emissions from the proposed new dairy as “pre-project.” *See, e.g., Communities for a Better Env’t v. SCAQMD*, 158 Cal.App.4th 1336 (2008); *Woodward Park Homeowners Association, Inc. v. City of Fresno*, 150 Cal.App.4th 683, 693 (2007) (EIR for a new commercial development and shopping center on vacant land improperly compared the impacts of the proposed project against the impacts of a nonexistent office park that could be built at the site under existing zoning and plan designations). Even if there are dairy cows illegally occupying the Project site before the lead agency fully satisfies environmental review obligations under CEQA, exempting the emissions from these cows, which are part of the proposed Project, unlawfully segments the environmental review of the project. *City of Santee v. County of San Diego*, 214 Cal.App.3d 1438, 1452 (1989).

In fact, as the attached Initial Permit Application for Farms submitted by the applicant in compliance with the District’s Rule 4570 demonstrates, by September of 2005 the dairy had still not been built (*see* SJVUAPCD 2008). While the District claims in the ATC Application Review that for its own permitting purposes it is “grandfathering” 1,950 cows as part of an “existing” source because construction on that dairy commenced prior to July 1, 2005⁹, this is not a legitimate argument for failing to analyze the cumulative impacts of the dairy as a whole under CEQA.

In fact, as the attached Initial Permit Application for Farms submitted by the applicant in compliance with the District’s Rule 4570 demonstrates, by September of 2005 the dairy had still not been built (SJVAPCD 2008). While the District claims in the ATC Application Review that for its own permitting purposes it is “grandfathering” 1,950 cows as part of an “existing” source because construction on that dairy commenced prior to July 1, 2005¹⁰, this is not a legitimate argument for failing to analyze the cumulative impacts of the dairy as a whole under CEQA.

2. Substantial evidence does not support the SEIR’s use of emission factors.

⁹July 1, 2005 is the date the VOC emission factor for the District’s Rule 4570 increased from 12.5 tons per year to 19.5 tons per year VOC. This change effectively brought more dairies into the regulatory scheme (the prior threshold had been 1,954 animals and was reduced to 1,000 animals with the July 1, 2005 emission factor change). We note that according to the applicant’s July 8, 2005 response to a District request, 2,000 cows were originally allowed at the Van Der Kooi dairy and so a permit should have been required from the very beginning (*see* SJVUAPCD 2008).

¹⁰July 1, 2005 is the date the VOC emission factor for the District’s Rule 4570 increased from 12.5 tons per year to 19.5 tons per year VOC. This change effectively brought more dairies into the regulatory scheme (the prior threshold had been 1,954 animals and was reduced to 1,000 animals with the July 1, 2005 emission factor change). We note that according to the applicant’s July 8, 2005 response to a District request, 2,000 cows were originally allowed at the Van Der Kooi dairy and so a permit should have been required from the very beginning (*see* SJVUAPCD 2008).

The SEIR's use of low emissions factors for dairy cows are not supported by substantial evidence and minimize Project emissions. Appendix B of the SEIR lists uncontrolled emission factors for methane and nitrous oxides, two powerful greenhouse gases, as reproduced on the table below:

TABLE 1: Emission Factors Used in the Revised SEIR (Appendix B).

	Manure Methane (lbs/hd/yr)	Pre-Project Manure Methane (lbs/hd/yr)	Enteric Methane (lbs/hd/yr)	Nitrous Oxide from Manure (lbs/hd/yr)
Milk and Dry Cow	377.2	226.3	283.2	0.534
Heifers (15-24 mths)	5.4	3.2	139.4	3.2
Heifers (4-14 mths) and calves	5.4	3.2	88.7	3.2
Bulls	6.2	3.7	116.8	0.0

To support the use of these factors, the SEIR purportedly relies on the CARB Draft Documentation for California's Greenhouse Gas Inventory from 2005 (http://www.arb.ca.gov/cc/inventory/doc/doc_index.php). The rationale for the SEIR's use of these numbers as emission factors was not properly documented or explained. In fact, CARB staff would not validate the use of the state GHG inventory formulas to calculate emissions for individual dairies on an annual basis, indicating that this sort of application of the data is inappropriate.¹¹ Indeed, the emission factors used in the SEIR may dramatically underestimate enteric emissions of methane from the Project's lactating cows. In a 2006 study produced for CARB, Dr. Frank Mitloehner, an Air Quality Extension Specialist in the Department of Animal Science at the University of California at Davis, found that the enteric fermentation process in cows is a very significant source of methane emissions. In that study, lactating dairy cows were found to produce higher levels of methane than their dry cow counterparts. Methane emissions from lactating cows averaged 365 pounds per cow per year and from non-lactating dry cows approximately 275 pounds per cow per year (Mitloehner et al. 2006 at 17). In a subsequent presentation at the International Symposium on Near-Term Solutions for Climate Change in California, Dr. Mitloehner suggests that the methane emission factor for a lactating dairy cow is 412 pounds per cow per year and 268 pounds per cow per year for a dry cow (Mitloehner 2007 at slide 12). The use of these empirically generated, California-specific emissions factors would increase the estimates of enteric emissions from Project dairy cows by as much as 725 tons of methane per year (17,767.4 tons per year carbon dioxide equivalent emissions). Since the SEIR does very little to reduce the impact of enteric methane emissions, this is a serious flaw in the CEQA analysis. The Mitloehner study constitutes the best available information on California-specific emissions factors. Accordingly, the SEIR should recalculate Project emissions using these factors in order to more accurately state Project emissions.

¹¹ Personal communication with Webster Tasat, Manager, Emission Inventory Analysis Section, April 2008.

6 In addition to methane, nitrous oxide emissions should be recalculated and included in the total GHG emissions for the Project. N₂O has a global warming potential of 310 times that of CO₂. Therefore, it is very important that sources of this potent GHG be accurately quantified and mitigated. While the SEIR offers emission factors for nitrous oxide, including 0.534 pounds per head per year for lactating and dry dairy cows and 3.2 pounds per head per year for heifers, no scientific justification is offered for these factors, and nitrous oxide emissions from the Project are not consistently included in the total GHG inventory for the Project (see SEIR, Appendix B). The result is conflicting and misleading emissions calculations.

Moreover, the latest science suggests that the nitrous oxide emission factors used in the SEIR may be too low. In the 2007 presentation cited above, Dr. Mitloehner discusses emissions of N₂O from dairy sources (Mitloehner 2007). He suggests an emissions factor of 8.7 pounds per year per cow for lactating cows and 6.9 pounds per year per cow for dry cows, much higher than the numbers used by the District. Using Dr. Mitloehner's emission factors for dry and lactating cows, we find that the post-project emissions of N₂O post mitigation (excepting reductions from the to-be-closed dairies) are approximately 16.77 tons per year of N₂O or 5,198.7 tons per year of CO₂-equivalent.

3. *Project GHG emissions calculations fail to include carbon dioxide emissions from dairy animals.*

7 Like other GHGs, CO₂ is a byproduct of manure decomposition and enteric fermentation in ruminants. Emission factors for CO₂ emissions from dry and lactating cows are established in the same presentation by Dr. Frank Mitloehner mentioned above (Mitloehner 2007). Dr. Mitloehner suggests an emission factor of 18,325 pounds per cow per year for lactating cows and 13,637 pounds per cow per year for dry cows. Even if the SEIR calculated CO₂ emissions only from the 3,200 milk cows and 480 dry cows proposed for the Van Der Kooi Dairy, direct and unmitigated carbon dioxide emissions from this subsection of the Project's dairy animals would total approximately 29,393 tons per year. These emissions are illegally excluded from the calculations in the SEIR.

4. *As part of its inventory of global warming pollution, the MND must also analyze black carbon emissions resulting from the Project.*

- 8 a) Black carbon has a significant impact on global warming, and mitigation can provide immediate significant climate and health benefits.

As part of its analysis of global warming impacts, the MND must also address black carbon, an important short-lived pollutant that contributes to global and regional warming. Black carbon is produced by incomplete combustion and is the black component of soot. Although combustion produces a mixture of black carbon and organic carbon, the proportion of black carbon produced by burning fossil fuels, such as diesel, is much greater than that produced by burning biomass.

Black carbon heats the atmosphere through a variety of mechanisms. First, it is highly efficient at absorbing solar radiation and in turn heating the surrounding atmosphere. Second, atmospheric black carbon absorbs reflected radiation from the surface. Third, when black carbon lands on snow and ice, it reduces the reflectivity of the white surface which causes increased atmospheric warming as well as accelerates the rate of snow and ice melt. Fourth, it evaporates low clouds. Notably, black carbon is often complexed with other aerosols such as sulfates, which greatly increases its heating potential. (Ramanathan & Carmichael 2008; Jacobson 2001).

Due to black carbon's short atmospheric life span and high global warming potential, decreasing black carbon emissions offers an opportunity to mitigate the effects of global warming trends in the short term. (Ramanathan & Carmichael 2008). Black carbon is considered a 'short-lived pollutant' (SLP) because it remains in the atmosphere for only about a week (in contrast to carbon dioxide, which remains in the atmosphere for over 100 years). Furthermore, the global warming potential of black carbon is approximately 760 times greater than that of carbon dioxide over 100 years (Reddy & Boucher 2007) and approximately 2200 times greater over 20 years (Bond & Sun 2005). Some scientists estimate that black carbon is the second greatest contributor to global warming behind carbon dioxide (Ramanathan & Carmichael 2008).

Unlike traditional greenhouse gases, which become relatively uniformly distributed and mixed throughout the Earth's atmosphere, black carbon exerts a regional influence. The impacts of black carbon on a regional level include both atmospheric heating, as discussed above, and hydrological changes. Hydrological changes occur due to alterations in cloud formation and heat gradients (*id.*). For instance, aerosol pollution has been linked to decreases in the summer monsoon season in tropical areas as well as the drought in the Sahel region of Africa (*id.*). California is an area of particular concern because of the drought-fire cycle. The more drought conditions prevail, the more forest fires burn, and the forest fires in turn emit massive quantities of black and organic carbon. The release of these aerosols intensifies the drought effect.

Another impact of black carbon is accelerated snowmelt; for instance, black carbon is likely contributing to the retreat of Himalayan glaciers and the resulting water shortage in areas of Asia (*id.*). When black carbon settles on snow, it makes the snow darker so that it absorbs more solar radiation. This directly leads to snow melt. In addition, local atmospheric heating due to black carbon increases the melting rate. These same effects may well be operating in the Sierra Nevada, which would reduce water availability throughout California at crucial times of the year.

Black carbon is also detrimental to human health. Black carbon has been linked to a variety of circulatory diseases. One study found an increased mortality rate was correlated with exposure to black carbon. (Maynard 2007). The same is true for heart attacks. (Tonne 2007). Another study found that residential black carbon exposure was associated with increased rates of infant mortality due to pneumonia, increased chronic bronchitis, and increased blood pressure. (Schwartz 2007).

In developed countries, diesel burning is the main source of black carbon. Diesel emissions include a number of compounds such as sulfur oxides, nitrogen oxides, hydrocarbons,

carbon monoxide, and particulate matter. Diesel particulate matter is approximately 75% elemental carbon (US EPA 2002 Diesel Health Assessment).¹² The proposed project will require the use of diesel-powered heavy duty trucks, construction equipment, and agricultural equipment. Thus, it is crucial that black carbon be addressed as part of the environmental review for the Project.

b) Analyzing particulate matter is insufficient to address black carbon.

Particulate matter (PM) refers to the particles that make up atmospheric aerosols. The primary constituents of PM are sulfates, nitrates, and carbon compounds. Sulfates and nitrates form in the atmosphere from the chemical reaction of sulfur and nitrogen dioxides. These may often be present as ammonium sulfate or nitrate salts. Carbon compounds may be directly emitted, e.g. black carbon emitted from combustion, or may form in the atmosphere from other organic vapors, e.g. oxidation of volatile organic compounds.

Because PM can be reduced through mitigation of other constituents of PM than black carbon, it is essential that black carbon emission reduction strategies be considered independently from PM reductions. The proportions of the constituents of PM vary over time and by location (US EPA 2004). According to a recent series of surveys conducted at various U.S. cities under the EPA's "Supersite" program, black carbon was often only about 10% of total measured PM_{2.5}.¹³

In contrast to total PM_{2.5}, diesel PM is composed largely of black carbon. Nonetheless, some diesel PM reduction strategies do not affect black carbon. For instance, diesel oxidation catalysts can reduce diesel PM emissions as a whole by approximately 20 to 40%, yet they do not decrease black carbon emissions (Walker 2004). In addition, while low-sulfur fuel will reduce sulfate emissions, in and of itself low-sulfur fuel will not reduce black carbon. Low-sulfur fuel is important because it *allows* for better technology to reduce black carbon. (See, e.g., 69 Fed. Reg. 38957, 38995 (June 29, 2004)). Yet those reductions can only occur once the technology has been implemented.

c) Methods are available to specifically quantify black carbon emissions from the Project.

Like greenhouse gases, black carbon emissions from various types of engines and activities can be estimated through numerical calculations. (Bond 2004). Thus, there is no reason why black carbon can reasonably be omitted from these estimates.

The estimated black carbon emissions from the project can be inventoried similarly to other greenhouse gas emissions:

- Estimate the mass of diesel fuel consumed by each type of diesel engine, e.g. ship, machinery, truck, construction equipment, and locomotive.

¹² Not attached but available upon request.

¹³ For an overview of the program and initial results see <http://www.epa.gov/ttn/amtic/supersites.html>

- Calculate a black carbon emission factor (EF) using reference values available in the literature. For instance, Bond and colleagues provide an equation for “EF_{BC}” from various types of diesel engines that takes into account 4 different factors.¹⁴
- Multiply the emission factor times the mass of diesel (in kilograms) used for each engine type. This will provide the grams of black carbon emitted by that engine type.
- Sum all black carbon emissions from each engine category to obtain total black carbon emissions from the project.

After obtaining the total black carbon emissions from the project, the relative global warming impact of the emissions can be compared to other global warming pollutants. Carbon dioxide-equivalent values can be obtained by multiplying total black carbon emissions (in kilograms) from the project by the global warming potential (GWP) for black carbon. Although there is some variation in estimated GWP values, representative black carbon GWP values are: 760 over 100 years¹⁵ or 2200 over 20 years (Bond & Sun 2005).

D. Proposed Mitigation Measures are Inadequate and Available Measures are Insufficiently Considered

CEQA requires that agencies “mitigate or avoid the significant effects on the environment of projects that it carries out or approves whenever it is feasible to do so.” Pub. Res. Code § 21002.1(b). Mitigation of a project’s significant impacts is one of the “most important” functions of CEQA. *Sierra Club v. Gilroy City Council*, 222 Cal.App.3d 30, 41 (1990). Therefore, it is the “policy of the state that public agencies should not approve projects as proposed if there are feasible alternatives or feasible mitigation measures which will avoid or substantially lessen the significant environmental effects of such projects.” Pub. Res. Code § 21002; *see also Laurel Heights I*, 47 Cal.3d at 400-401.

In designing a project under CEQA, “the preferred practice is first to avoid, then to minimize, and finally to compensate for impacts.” (CAPCOA 2008 at 79.) Thus, a project must first avoid and reduce on-site greenhouse gas emissions. Any remaining emissions must then be offset through the purchase of credits from a verifiable and transparent source. *See, e.g., Anderson First Coalition v. City of Anderson*, 130 Cal.App.4th 1173 (2005).

Because the Project’s greenhouse gas emissions cumulatively contribute to global warming, “the EIR must propose and describe mitigation measures that will minimize the significant environmental effects that the EIR has identified.” *Napa Citizens for Honest Gov’t v. Napa County Bd. of Supervisors*, 91 Cal.App.4th 342, 360 (2001). CEQA requires that agencies “mitigate or avoid the significant effects on the environment of projects that it carries out or approves whenever it is feasible to do so.” Pub. Res. Code § 21002.1(b). Mitigation of a project’s significant impacts is one of the “most important” functions of CEQA. *Sierra Club v. Gilroy City Council*, 222 Cal.App.3d 30, 41 (1990). Therefore, it is the “policy of the state that public agencies should not approve projects as proposed if there are feasible alternatives or

¹⁴ See Bond et al. 2004 at 4 and Table 7.

¹⁵ The combined global average direct (480) and indirect (281) GWP for black carbon as reported in Reddy & Boucher (2007).

feasible mitigation measures which will avoid or substantially lessen the significant environmental effects of such projects.” Pub. Res. Code § 21002; *see also Laurel Heights I*, 47 Cal.3d at 400-401.

The EIR should propose and analyze a hierarchy of options to avoid, minimize, and offset greenhouse gas emissions. Conveniently, some of the best available control technologies for reducing criteria pollutants are extremely effective at reducing GHG emissions. There are two mitigation technologies for GHG as well as criteria pollutant emission control that are achieved in practice and particularly promising for dairies, including (1) anaerobic digester systems and (2) enclosed and connected milk parlors and cow housing units vented to biofilters. Unfortunately, anaerobic digesters are not even mentioned in the SEIR¹⁶, and available information on vented enclosures is ignored in the District’s rush to dismiss this technology (SEIR at 7-8). To meet the legal requirements of CEQA, both measures must be discussed explicitly with regard to greenhouse gas emissions, with emissions reductions benefits quantified wherever possible. Given that greenhouse gas mitigation is a rapidly developing field of technology, the latest available information must be included and discussed.

1. Anaerobic digesters.

Today, anaerobic digesters are widely regarded as the most effective mitigation for manure methane emissions; they are also effective at reducing nitrous oxide emissions from manure (*see, e.g.,* Amon et al. 2006, Paustian et al. 2006, Weiske et al. 2006). The EPA described biogas recovery systems using anaerobic digesters as a “proven technology” as far back as 2002 (US EPA 2002), and as of November 2007, the US EPA reported that 111 operating digesters are in use at US livestock facilities, including 15 in California (US EPA 2007c). Eighty percent of US digesters are used by the dairy industry (US EPA 2007c). Energy generated by anaerobic digesters at US agricultural facilities more than quadrupled between 2000 and 2007 (US EPA 2007c). Existing federal methane recapture programs produce enough energy today to power 20,000 American homes and have reduced methane emissions by 1.5 million tonnes (carbon dioxide-equivalent) (HSUS 2007; *see also* US EPA 2007b, US EPA 2007c, US EPA 2006b).

A number of federal and state resources are available to assist California dairies with selecting and implementing a digester system that is customized to their facility. For example, the federal government has established programs, including AgStar and Methane to Markets, which support the capture and re-use of methane gas from animal agriculture using anaerobic digesters. USDA funding for anaerobic digester systems has exceeded \$31 million since 2003 (US EPA 2007c). The captured and processed methane is then used to power on-site generators or sold back to local utility companies, thereby yielding economic benefits for livestock operations (*see* HSUS 2007, <http://www.epa.gov/agstar/>, AgStar Handbook excerpts (attached), US EPA 2006b, <http://www.epa.gov/methanetomarkets/>). In California, Pacific Gas and Electric Company (“PG&E”) is partnering with dozens of dairies and digester companies to help

¹⁶ However, on page 6 of the ATC Application Review, the District states that “the applicant has agreed to install a lagoon cover if it is required.” There is no mention of infeasibility or such control technology being cost-prohibitive. As anaerobic digesters can significantly reduce greenhouse gases, this control should be required as mitigation for this project.

facilitate the widespread use of this technology and reduce greenhouse gas emissions. (http://www.pge.com/news/news_releases/q1_2007/070320a.html). More information about PG&E's Net Energy Metering for Biogas Digester Generators program can be found online at http://www.pge.com/suppliers_purchasing/new_generator/ebio/. These programs demonstrate that capturing manure methane emissions via anaerobic digestion can be a win-win scenario for current and future dairy operations in Fresno County and throughout the San Joaquin Valley.

2. Enclosures vented to biofilters.

Vented enclosures, which have been identified as best available control technology (BACT) for cow housing structures, milk parlors, feed storage, and manure storage (SJVUAPCD Rule 4570, § 5.6B-F), are effective in controlling enteric and manure methane as well as nitrous oxide emissions. Enclosed barns are commonly in use in other parts of the country, including the South, where temperatures tend to be high (*see, e.g.,* <http://www.northfloridaholsteins.com/info.html>, SJVUAPCD 2007a-b). Regarding biofilters, the San Joaquin Valley Air Pollution Control District's Dairy Permitting Advisory Group states that "today there are more than 500 biofilters in Germany and in the Netherlands. In agriculture, biofiltration is widely used to control emissions from enclosed swine facilities and have been reported to be used in dairy situations from enclosed, mechanically ventilated housing and manure storage areas" (DPAG 2006 at 20). These technologies have been reported to be used at dairies (*see, e.g.,* SJVUAPCD 2006) and are widely used at swine facilities, which are of the same category or class as dairies. Thus, these technologies are achieved in practice and should be considered feasible under CEQA.

3. Mitigation targeting black carbon emissions.

a) Schedule deliveries to reduce truck idling time.

Current California regulations require heavy-duty truck engines to be turned off after idling for 5 minutes. (13 C.C.R. § 2485). This rule, however, does not apply when the truck is in traffic or queuing. (13 C.C.R. § 2485(c)(2)). Idling time due to either of these events can be avoided by careful scheduling on the part of the project proponent. Therefore, the project should be required to develop a delivery schedule that maximally avoids both traffic en route and waiting time at the facility.

b) Require all heavy-duty diesel delivery vehicles to reduce black carbon emissions.

Over 80% of the U.S. depends on heavy-duty diesel trucks to deliver their goods. (See American Trucking Industry Fact Sheet). Furthermore, a new 2008 truck has only one-tenth of the fine PM emissions of a 2006 truck. (Id.). This pair of facts shows that it is essential to address black carbon from delivery trucks.

Because black carbon is a component of diesel PM, some strategies that reduce PM will also reduce black carbon. One of the most common options is the use of a catalyzed diesel particulate filter, which can be installed on both new and existing diesel engines. (*See generally*

69 Fed. Reg. 38957 (June 29, 2004)). The California Air Resources Board (CARB) recently proposed a rule that would require in-use heavy duty diesels to reduce their PM emissions.¹⁷ Although the rule is not in effect yet, the project should aim to achieve the standards in the rule beginning immediately by requiring the companies that deliver goods to install technology such as diesel particulate filters on their delivery trucks.

- c) Require all mobile cargo handling equipment to comply with the emissions standards for port equipment.

Similar to heavy-duty on-road diesel engines, reductions in PM emissions from cargo handling equipment can also reduce black carbon. California law currently requires mobile cargo handling equipment, e.g. forklifts and loaders, located at ports or intermodal railyards to reduce their PM emissions to comply with California's on-road diesel standards or with EPA's Tier 4 standards for off-road vehicles. (13 C.C.R. § 2497). The existence of such a rule for ports is clear evidence that compliance is also feasible in the contexts of warehouses. Thus, the proposed project must reduce its black carbon emissions by requiring that all cargo handling equipment comply with the rule for port equipment.

- d) Accelerate compliance schedules.

Because black carbon pollution causes rapid and significant atmospheric heating as well as substantial human health risks, it is necessary to address this pollutant as rapidly as possible. A variety of regulations, as discussed above, will require reduced diesel emissions. The schedule for compliance with these standards, however, is often many years from the date of enactment. The project should create incentives for early compliance with all regulatory reduction measures so that black carbon can be reduced as rapidly as possible.

4. *Additional mitigations.*

Beyond the primary operational sources detailed above, the SEIR calculates that Project construction will produce 444.12 tons of carbon dioxide (Table 1, SEIR at 4; *see also* Appendix A). The decision not to consider or adopt any mitigations for construction emissions is apparently justified by the failure of construction emissions to meet the proposed significance threshold of 42,000 tons of carbon dioxide-equivalent emissions (*id.*). Notwithstanding the illegality of the proposed significance threshold itself (discussed above), the application of the threshold to individual sections of the Project constitutes illegal piecemealing of the environmental review process.

The SEIR should consider alternative facility designs, construction plans, and operations that reduce those emissions. Examples of such measures include, but are not limited to:

- Using biogas from methane recapture in conjunction with other alternative, renewable energy sources and best available emissions control technologies as needed in facility construction, operations, and project-related vehicles and equipment;

¹⁷ <http://www.arb.ca.gov/msprog/onrdiesel/onrdiesel.htm>

- Designing all confinement areas for frequent, resource-efficient cleaning and greenhouse gas sequestration;
- Choosing recycled, low-carbon, and otherwise climate-friendly building materials such as salvaged and recycled-content materials for building, hard surfaces, and non-plant landscaping materials;
- Minimizing, reusing, and recycling construction-related waste;
- Minimizing grading, earth-moving, and other energy-intensive construction practices; and
- Landscaping to preserve natural vegetation and maintain watershed integrity.

All of the above measures should have been discussed explicitly with regard to greenhouse gas emissions. The amount that each measure will reduce emissions must be quantified wherever possible. All feasible measures must be mandatory and enforceable, not aspirational or voluntary. Guidelines § 15065(c)(3), Guidelines § 15126.4(a)(2).

E. Unmitigated Emissions Must Be Offset

After adopting all feasible avoidance and mitigation measures, any remaining emissions must then be offset for each facility through the purchase of credits from a verifiable and transparent source.¹⁸ As proposed by CAPCOA, a potential cost-effective offset and verifiable offset could include an energy-efficient retrofit of existing building stock in the Project area to offset the remainder of the Project's emissions (CAPCOA 2008 at 80). Indeed, greenhouse gas offsets are now becoming a routine part of CEQA approvals. For example, in a recent settlement with the Attorney General regarding the mitigation of greenhouse gas emissions from a proposed Great Valley Ethanol Project, the project applicant agreed to pursue greenhouse gas emissions offsets that are real, permanent, verifiable, and additional off-site emissions reductions (GVE and AG Settlement Agreement 2008). Because the EIR does not offset the remainder of the Project's greenhouse gas emissions, the Project's impacts have not been fully mitigated to the extent feasible.

F. Other Concerns With This Project

1. Air quality.

We continue to have a number of concerns that the District's serious underestimation of criteria air pollutant emissions means the Project's EIR fails to meet requirements under CEQA to adequately consider environmental impacts and adopt all feasible mitigation measures. Most notably, the District's erroneous determination that the Van Der Kooi Dairy is a minor source under its New Source Review ("NSR") rule illegally excuses the dairy from emission-reducing measures that would otherwise be required, such as best available control technology and offset requirements.

¹⁸ See CAPCOA 2008 at 79 (in designing a project under CEQA, "the preferred practice is first to avoid, then to minimize, and finally to compensate for impacts.").

11 The District has been ignoring its obligation to require permits for sources between 10 and 25 tons per year ever since it was reclassified to extreme for the one-hour ozone standard on May 17, 2004. *See* 69 Fed. Reg. 20550 (April 16, 2004). Though the District tries to maintain that EPA's revocation of the one-hour standard relieved it of this duty, on December 22, 2006, the Court in *South Coast Air Quality Mgt. Dist. v. EPA*, 472 F.3d 882 (D.C. Cir 2006), upheld the one-hour standard for NSR anti-backsliding purposes. As a result, pursuant to 40 CFR section 52.24(k), Appendix S of 40 CFR part 51 applies to major sources until the District revises its NSR rules to meet extreme area NSR thresholds of 10 tons per year for both VOC and NOx. Even with the District's flawed major source determination that illegally dismisses more than 85% of the VOC emissions from this project as fugitive (*see* our March 24, 2008 comment letter on the Notice of Preliminary Decision on the Authority to Construct for Project No. C-1053434), the project is still a major source of NOx under the appropriate NSR threshold. By including the total determined post-project stationary source potential to emit for VOC emissions, this project becomes a major source of VOC emissions as well. As such, this project constitutes a major source, a major modification, and a federal major modification and should be regulated accordingly.

12 2. *Water quality.*

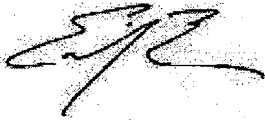
Similarly, we continue to be troubled by the District's illegal reliance on lagoon liners under Title 27 and its failure to adequately disclose or mitigate likely groundwater pollution from the Project. These concerns are detailed in CRLA's March 21, 2008 comments on the EIR and the December 26, 2006 comments on the DEIR from the Central Valley Regional Water Quality Control Board (*see* FEIR at 3-14 – 3/15), both of which we herein incorporate by reference.

CONCLUSION

For all of the reasons discussed above, we continue to object to the proposed new Van Der Kooi Dairy in Fresno County. We request that the District accept its responsibilities under CEQA and AB 32 to fully mitigate or offset GHG emissions of any new dairy in its jurisdiction and to fully assess and mitigate the significant air and water quality impacts this project will have on the Valley.

Thank you for your consideration of our concerns. References listed below are found on a CD, which will be mailed with a hard copy of this letter. These important references should be considered carefully and included in the administrative record for the project approval process. If you have any questions regarding these comments, please do not hesitate to contact Matthew Vespa at (415) 436-9682 x 309 or mvespa@biologicaldiversity.org; Emily Brown at (415) 436-9682 x 312 or ebrown@biologicaldiversity.org; or Sarah Jackson at (510) 550-6725 or sjackson@earthjustice.org.

The signatories to this letter wish to be placed on the mailing/notification list for all future environmental decisions regarding this Project (email preferred).

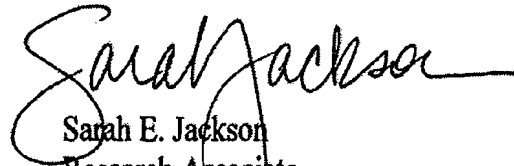


Emily R. Brown
Research Associate
Center for Biological Diversity



Matthew Vespa
Staff Attorney
Center for Biological Diversity

Sincerely,



Sarah E. Jackson
Research Associate
Earthjustice



Alegria De La Cruz
Directing Attorney
California Rural Legal Assistance



Kevin Hall
Air Quality Chair
Sierra Club-Tehipite Chapter

Enclosures: The following references are included in the accompanying CD for your review and inclusion in the administrative record.

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STATE OF CALIFORNIA

Arnold Schwarzenegger, Governor

NATIVE AMERICAN HERITAGE COMMISSION

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e-mail: ds_nahc@pacbell.net



June 6, 2008

RECEIVED

JUN 09 2008

Permits Srvc
S. IVAPCD

Dr. Dan Barber, Ph.D.

SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT

1990 East Gettysburg Avenue
Fresno, CA 93726

Re: SCH#2006011107; CEQA Notice of Completion; Supplemental Environmental Impact Report (SEIR) for the Van Der Kooi Dairy Project; Burrel Community; Fresno County, California

Dear Dr. Barber:

The Native American Heritage Commission is the state agency designated to protect California's Native American Cultural Resources. The California Environmental Quality Act (CEQA) requires that any project that causes a substantial adverse change in the significance of an historical resource, that includes archaeological resources, is a 'significant effect' requiring the preparation of an Environmental Impact Report (EIR) per the California Code of Regulations §15064.5(b)(c) (CEQA guidelines). Section 15382 of the 2007 CEQA Guidelines defines a significant impact on the environment as "a substantial, or potentially substantial, adverse change in any of physical conditions within an area affected by the proposed project, including ... objects of historic or aesthetic significance." In order to comply with this provision, the lead agency is required to assess whether the project will have an adverse impact on these resources within the 'area of potential effect (APE)', and if so, to mitigate that effect. To adequately assess the project-related impacts on historical resources, the Commission recommends the following action:

✓ Contact the appropriate California Historic Resources Information Center (CHRIS) for possible 'recorded sites' in locations where the development will or might occur. Contact information for the Information Center nearest you is available from the State Office of Historic Preservation (916/653-7278)/ <http://www.ohp.parks.ca.gov>. The record search will determine:

- If a part or the entire APE has been previously surveyed for cultural resources.
- If any known cultural resources have already been recorded in or adjacent to the APE.
- If the probability is low, moderate, or high that cultural resources are located in the APE.
- If a survey is required to determine whether previously unrecorded cultural resources are present.
- ✓ If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
- The final report containing site forms, site significance, and mitigation measures should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum, and not be made available for public disclosure.
- The final written report should be submitted within 3 months after work has been completed to the appropriate regional archaeological Information Center.

✓ Contact the Native American Heritage Commission (NAHC) for:

- * A Sacred Lands File (SLF) search of the project area and information on tribal contacts in the project vicinity that may have additional cultural resource information. Please provide this office with the following citation format to assist with the Sacred Lands File search request: USGS 7.5-minute quadrangle citation with name, township, range and section.
- The NAHC advises the use of Native American Monitors, when professional archaeologists or the equivalent are employed by project proponents, in order to ensure proper identification and care given cultural resources that may be discovered. The NAHC recommends that contact be made with Native American Contacts on the attached list to get their input on potential project impact (APE). In some cases, the existence of a Native American cultural resources may be known only to a local tribe(s).
- ✓ Lack of surface evidence of archeological resources does not preclude their subsurface existence.
- Lead agencies should include in their mitigation plan provisions for the identification and evaluation of accidentally discovered archeological resources, per California Environmental Quality Act (CEQA) §15064.5 (f). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American, with knowledge in cultural resources, should monitor all ground-disturbing activities.
- A culturally-affiliated Native American tribe may be the only source of information about a Sacred Site/Native American cultural resource.
- Lead agencies should include in their mitigation plan provisions for the disposition of recovered artifacts, in consultation with culturally affiliated Native Americans.

1 ✓ Lead agencies should include provisions for discovery of Native American human remains or unmarked cemeteries in their mitigation plans.

* CEQA Guidelines, Section 15064.5(d) requires the lead agency to work with the Native Americans identified by this Commission if the initial Study identifies the presence or likely presence of Native American human remains within the APE. CEQA Guidelines provide for agreements with Native American, identified by the NAHC, to assure the appropriate and dignified treatment of Native American human remains and any associated grave liens.

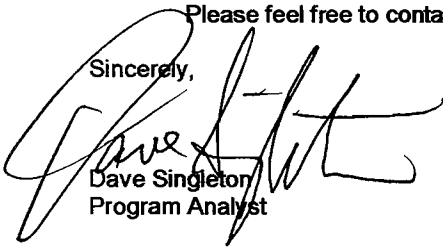
✓ Health and Safety Code §7050.5, Public Resources Code §5097.98 and Sec. §15064.5 (d) of the California Code of Regulations (CEQA Guidelines) mandate procedures to be followed, including that construction or excavation be stopped in the event of an accidental discovery of any human remains in a location other than a dedicated cemetery until the county coroner or medical examiner can determine whether the remains are those of a Native American. . Note that §7052 of the Health & Safety Code states that disturbance of Native American cemeteries is a felony.

✓ Lead agencies should consider avoidance, as defined in §15370 of the California Code of Regulations (CEQA Guidelines), when significant cultural resources are discovered during the course of project planning and implementation

2

Please feel free to contact me at (916) 653-6251 if you have any questions.

Sincerely,



Dave Singleton
Program Analyst

Attachment: List of Native American Contacts

Cc: State Clearinghouse

Native American Contacts
Fresno County
June 6, 2008

North Fork Mono Tribe
Ron Goode, Chairperson
13396 Tollhouse Road
Clovis , CA 93619
eagleeye@cuip.net
(559) 299-3729 Home

Mono

Traditional Choinumni Tribe
Angie Osborne
2787 N Piedra Road
Sanger , CA 93657
(559) 787-3336

Choinumni/Foothill

Santa Rosa Rancheria
Clarence Atwell, Chairperson
P.O. Box 8
Lemoore , CA 93245
(559) 924-1278
(559) 924-3583 Fax

Tache
Tachi
Yokut

Kings River Choinumni Farm Tribe
John Davis, Chairman
1051 Brookside Drive
Clovis , CA 93611
559-324-9908

Foothill Yokuts
Choinumni

Table Mountain Rancheria
Lee Ann Walker Grant, Chairperson
P.O. Box 410
Friant , CA 93626-0177
(559) 822-2587
(559) 822-2693 FAX

Yokuts

Dunlap Band of Mono Indians
Mandy Marine, Board Chairperson
Box 44
Dunlap , CA 93624
mandy@dunlapmono.org
559-338-2545

Mono

Dumna Wo-Wah Tribal Government
Keith F. Turner, Tribal Contact
P.O. Box 306
Auberry , CA 93602
(559) 855-3128 Home
(559) 696-0191 (Cell)

Dumna/Foothill
Mono

Kenneth Woodrow
1179 Rock Haven Ct.
Salinas , CA 93906
831-443-9702

Foothill Yokuts
Mono

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources for the propose SCH#2006011107; CEQA Notice of Completion; Supplemental/Subsequent Environmental Impact Report (SEIR) for the Van Der Kooi Dalry; San Joaquin Valley Air Pollution Control District; ; located in the Burrel Community; Fresno County; California.

Native American Contacts
Fresno County
June 6, 2008

Dumna Tribal Government
Jim Redmoon - Cultural Resources Representative
1305 E. Sussex Way Dumna/Foothill
Fresno , CA 93704 Choinumni
559-241-0226

Chaushiha Tribe
Jerry Brown
10553 N. Rice Road North Valley Yokuts
Fresno , CA 93720
559-434-3160

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources for the propose SCH#2006011107; CEQA Notice of Completion; Supplemental/Subsequent Environmental Impact Report (SEIR) for the Van Der Kool Dairy; San Joaquin Valley Air Pollution Control District; ; located in the Burrel Community; Fresno County; California.

Comment Letter 3

**CALIFORNIA RURAL LEGAL ASSISTANCE, INC.**
Fresno Migrant Office2115 Kern Street, Suite 370
Fresno, CA 93721Telephone: (559) 441-8721
Fax: (559) 441-8443

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To: San Joaquin Valley Air Pollution Control District **Fax No.:** (559) 230-6061
ATTN: Mr. David Warner

Re: Charles Vander Kooi Comment Letter dated 03/24/08

From: Elizabeth C. Trujillo, Legal Secretary **Date:** March 24, 2008

Pages: 3 (including this cover sheet)

COMMENTS: Faxed herein is Alegria's comment letter. Please do not hesitate to contact me if you have any questions. Thank you. ECT.

CALIFORNIA RURAL LEGAL ASSISTANCE, INC.

MIGRANT FARMWORKER PROJECT



Fresno Office

2115 Kern St., Suite 370
Fresno, CA 93721
(559) 441-8721
(559) 441-8443 (FAX)

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Directing Attorney

SILAS SHAWVER
Staff Attorney

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Alma Alvarez
Community Workers

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Directors of Litigation, Advocacy & Training

Regional Offices

Conejo	Santa Maria
Delano	Santa Rosa
El Centro	Santa Cruz
Gilroy	Shiloh
Modesto	Stockton
Marysville	Watsonville
Modesto	Paso Robles
Oxnard	San Luis Obispo
Monterey	Oceanside

March 24, 2008

Mr. David Warner
Director of Permit Services
Mr. Chris Kalashian
Air Quality Specialist
San Joaquin Valley Air Pollution Control District
1900 E. Gettysburg Ave.
Fresno, California 93726-0244

Via Facsimile (559) 230-6061

Re: Charles Van Der Kooi Dairy ATC application

Dear Gentlemen:

California Rural Legal Assistance ("CRLA") is a public interest law firm active in promoting workers rights and protecting the health and safety of the farmworker community in the Fresno County area. We write this letter on behalf of our client, Mrs. Eugenia Melesio, a Fresno County resident concerned about the significant environmental impacts that new and expanding dairies will have on her and her family's health and safety. With this letter, we also join with the comments made by Patience Milrod on behalf of Mrs. Melesio on March 19, 2008.

We submit the following comments in response to Charles Van Der Kooi Dairy's Application for Authority to Construct (ATC) permits to expand their current dairy operation. It is our client's position that both the ATC and the attached Final Environmental Impact Report are legally insufficient.

The ATC/EIR Does Not Adequately Analyze the Probable Nuisance or Human Health Impacts of the Expansion

The EIR (by incorporation of the draft Environmental Impact Report) states that hydrogen sulfide is very toxic. At the same time, it states that there is no emissions factor to quantify emissions. The Report thus concludes that because there are no accepted significance thresholds for this highly toxic emission, the emissions are deemed to be less than significant. The conclusion, based on this flawed and over-simplistic analysis, is thus invalid.

The ATC/EIR Does Not Adequately Address Water Issues

The Air District incorrectly identifies itself as the lead agency (see Milrod letter, March 19, 2008). However, if the Air District is the lead agency, the CEQA document must address all environmental impacts from the Project. With the significant expansion that is at issue with this application, there will necessarily be a corresponding increase in waste. Neither the ATC nor the EIR provide any information as to whether construction has been completed and/or inspected, or whether Fresno County construction permits have been

1

1

Mr. David Warner, Director of Permit Services
Mr. Chris Kalashian, Air Quality Specialist
March 24, 2008
Page 2

finalized. The EIR only assumes that current liners have been constructed in accordance with Regional Water Quality Control Board, and does not provide any information about the lagoon liners actually used by the Project.

Therefore, the Report and ATC ignore one major potential significant impact - groundwater quality - that a mega-dairy will have on the environment.

Further, the EIR relies on and suggests that the project use the existing standard for lagoon liners, found in Title 27 of the California Code of Regulations,. However, it is common knowledge that this standard has been found to be "insufficient to prevent groundwater contamination from confined animal facilities." The Study further cautions,

"Because Title 27 does not require that site-specific information be submitted to the RWQCB as part of a ROWD, it follows that the RWQCB cannot reliably evaluate the nature and possible water quality consequences of animal waste discharges, and therefore cannot rationally implement the applicable Basin Plan and the State's Antidegradation Policy requirements."¹

Given that the standard set out in Title 27 does not adequately protect groundwater, merely complying with existing Water Board requirements does not address the problem. The EIR acknowledges this threat, and dismisses it. The EIR does not require further mitigation measures to address this immediate problem.

For the reasons above, we object to the proposed ATC and EIR for the Van Der Kooi Dairy Expansion. We ask that this letter be made part of the record and that you consider these findings in your final determination of the Project. In addition, this letter serves as a formal request that the District immediately inform us when it makes a determination or takes any action on this application.

If you have any questions or concerns please do not hesitate to contact my office at (559) 441-8721.

Sincerely,

 by SMS
Alegria De La Cruz

Directing Attorney

CALIFORNIA RURAL LEGAL ASSISTANCE, INC.

cc: Patience Milrod, Esq.
Hon. Henry Perea, Chairman, Fresno County Board of Supervisors
Hon. Susan Anderson, Fresno County Board of Supervisors

¹Brown Vence & Associates, *Review of Animal Waste Management Regulations; Task 2 Report: Evaluate Title 27 Effectiveness to Protect Groundwater Quality*; San Jose State University Foundation Oct. 2003.

Law Office of Patience Milrod

Fax Cover Sheet

844 N. Van Ness
Fresno, CA 93728

Phone: (559) 442-3111
Fax (559) 442-3164
Email

To: David Warner
Chris Kalashian
Alegría DeLaCruz

Date: March 19, 2008

Fax #: 230-6061
441-8443

Pages: 8 (including this cover sheet)

From: Rayshaun Sturgis

Subject: VanderKooi ATC Application

RECEIVED

MAR 19 2008

Permits Srvc
S. N/APCD

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**PATIENCE
MILROD**

LAWYER/LICENCIADA EN LEYES

Comment Letter 4

March 19, 2008

David Warner
Director of Permit Services
Chris Kalashian
Air Quality Specialist
San Joaquin Valley Unified Air Pollution Control District
1990 E. Gettysburg Ave.
Fresno, California 93726-0244
By fax to 230-6061 (7 pages total)

RE: VanderKooi ATC application

Dear Gentlemen:

I write on behalf of Medical Advocates for Healthy Air and Eugenia Melesio. According to the Proposed ATC, the project proponent has applied to the San Joaquin Valley Air Pollution Control District ("District") for a permit to increase the number of milking cows on existing dairy facilities by 1,500 from 1,700 to 3,200, with a corresponding increase in support stock that brings the total herd size to 6,120 animals.

Please be advised that it is my clients' position that the Final Environmental Impact Report and ATC are legally insufficient for the following reasons:

Fresno County must be the Lead Agency on this project.

As David Crow, your District's former Executive Director and Air Pollution Control Official, pointed out in December 2005 (Exhibit A),

"[S]ingle-purpose agencies like the District are ill-equipped to evaluate the full spectrum of land use issues associated with allowing large commercial dairies to be constructed on land originally used for non-livestock agricultural purposes. Evaluating the effects of large dairies on features other than air pollution, such as water, historical sites, traffic and endangered species, falls outside of the scope of the district's expertise and is better left to land use agencies, such as county planning commissions. This is especially true where the agency is forced to balance socio-economic interests against public health risks."

Mr. Crow's letter cited CEQA Guidelines, § 15051(b)(1), in recognition of the fact that the California Environmental Quality Act does not permit other

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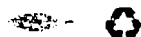
North Van Ness

Fresno, California

93728

559/ 442-3111

pm097@ceufresno.edu



San Joaquin Valley Unified Air Pollution Control District

March 19, 2008

page 2

agencies to assume those responsibilities: CEQA prescribes for the lead agency such a pivotal role in defining the scope of environmental review, lending its expertise in areas within its particular domain, and in ultimately recommending the most environmentally sound alternative, that the law "plainly requires the public agency with principal responsibility to assume the role as lead agency." *Planning and Conservation League v. Department of Water Resources*, 83 Cal.App.4th 892, 905, 100 Cal.Rptr.2d 173, 185 (2000); Public Resources Code, § 21067.

Courts have consistently held that the role of the lead agency is so significant that CEQA forbids delegation. *Id.* See also, *Kleist v. City of Glendale*, 56 Cal.App.3d 770, 779, 128 Cal.Rptr. 781 (1976) (public agency may not delegate review and consideration function to another body; delegation insulates public agency "from public awareness and possible reaction to the individual members' environmental and economic values. Delegation is inconsistent with the purposes of the EIR itself.") Under CEQA, any environmental analysis for an applicant dairy must be prepared "directly by, or under contract to" the lead agency. Public Resources Code, § 21082.1. The implementing regulations explicitly provide: "The draft EIR which is sent out for public review must reflect the independent judgment of the lead agency." Cal. Admin. Code, title 14, § 15084, subd. (e). See, e.g., *Sundstrom v. County of Mendocino*, 202 Cal.App.3d 296, 307, 248 Cal.Rptr. 352, 359 (1988).

Even where another agency, such as your District, may have concomitant responsibilities, the agency with responsibility for "the total environment" must take responsibility for evaluating environmental impacts. See, e.g., *City of Sacramento v. State Water Resources Control Bd.*, 2 Cal.App.4th 960, 973, 3 Cal.Rptr.2d 643 (1992) [appointment of the wrong lead agency required reversal: "because the underlying purpose of an EIR is to analyze and inform regarding adverse effects to the environment as a whole (Pub. Resources Code, § 21061), DFA is in the best position to make such an assessment." (Emphasis added)].

In light of Fresno County's dairy ordinance, effective November 26, 2007, the ATC is in error when it asserts that "no other agency has discretionary approval over the project, therefore establishing the District as the Lead Agency for the project." (ATC, p. 58.) Fresno County's ordinance is inadequate, but it does provide for discretionary review, and the Air District is thus not empowered to assume the role of Lead Agency for this application.

San Joaquin Valley Unified Air Pollution Control District
March 19, 2008
page 3

The expansion makes this dairy a major source.

The District inappropriately concludes that the Project is not a major source of air pollution in the San Joaquin Valley as defined in section 3.25 of District rule 2201. By illegally categorizing most of the emissions at the Project as fugitive emissions, the District has artificially lowered the post-project stationary source potential to emit values in order to avoid a major source determination for the dairy. However, under EPA regulations, if emissions can be "reasonably" captured and vented through a stack they cannot be considered fugitive. The District determined that the emissions from the dairy's milking parlor, cow housing, manure storage areas, land application, and feed handling and storage operations are fugitive, citing a 2005 CAPCOA memo that states: "No collection technologies currently exist for VOC emissions from these emissions units. Therefore, the VOC emissions from these sources are considered fugitive." ATC Application Review at 30.

2 While the District's review makes unsupported claims that only emissions from the IC engines and the liquid manure storage lagoons/ponds could reasonably be captured, the District's analysis is inappropriately limited when it claims that only by fully enclosing and keeping a negative pressure throughout the system can any emissions from the milk parlor, cow housing, manure storage, and feed handling and storage be captured. This is extreme. Emissions from these units can be captured with technologies such as baghouses, capture hoods, and others.

In fact, the District's own rule 4570 includes, among others, enclosing the milk parlor and venting to a VOC device, enclosing animal housing and venting to a VOC control device, enclosing the solid manure and venting to a VOC device, and enclosing silage and venting to a VOC device, in the list of class two mitigation measures—further evidence that these emissions can reasonably be captured. Rule 4570, § 5.6B-F. Thus, the emissions from these units cannot be characterized as fugitive. When these emissions are included, the VanderKooi Dairy's emissions easily exceed the major source threshold of 50,000 lbs of VOC per year. Therefore, the VanderKooi Dairy is a major source, and the District must regulate the dairy accordingly.

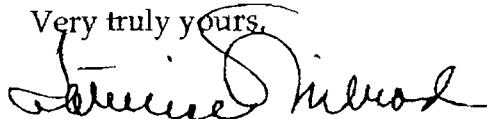
Notwithstanding my emailed request to you, dated December 13, 2006, to be informed of "any notices issued by the Air District" in connection with dairy permit applications in Fresno County, I was not informed of the District's Final EIR on the VanderKooi application. This time, I trust I may count on

San Joaquin Valley Unified Air Pollution Control District
March 19, 2008
page 4

2 | your notifying us immediately if/when the District does take final action on
this application, since the statute of limitations is so short.

Thanking you for your courtesy and consideration, I remain,

Very truly yours,

A handwritten signature in black ink, appearing to read "Patience Milrod", written in a cursive style.

PATIENCE MILROD

PM;eh

Enclosure

cc: MAHA Board

Alegría DelaCruz, Esq.

Hon. Henry Perea, Chair, Fresno County Board of Supervisors

Hon. Susan Anderson, Fresno County Supervisor

JAT-19-2005 03:48

FRESNO CO BOARD OF SUPV

P.02

EXHIBIT 'A'

**San Joaquin Valley**

AIR POLLUTION CONTROL DISTRICT

...leading the way to a cleaner future

December 6, 2005

Fresno County Board of Supervisors
2281 Tulare Street, Suite 301
Hall of Records
Fresno, CA 93721-2198

Dear Chairperson Case and Board Members:

I am writing on behalf of the San Joaquin Valley Unified Air Pollution Control District ("District") to express concern over a land use issue that has arisen as a result of the recent influx of large dairies into Fresno County. More specifically, it is my understanding that Fresno County does not require any type of discretionary permit, such as a Conditional Use Permit, when a new dairy is constructed on a parcel of land zoned for agricultural use. As a result, the District is the only agency in the county that must issue a discretionary permit for these facilities and, therefore, it becomes the de facto "Lead Agency" for purposes of the California Environmental Quality Act ("CEQA"). Because the District was created as a single purpose agency with an unelected official as its permitting authority, serving as a Lead Agency under CEQA has raised several challenges for the District. It is my hope that your Board will review these concerns and consider changing its practice of allowing dairies to locate as "of right" on agricultural land without any discretionary county approvals.

As you know, under CEQA, if an Environmental Impact Report ("EIR") shows that the project will have significant adverse effects on the environment if approved, the lead agency for the project must either make findings that the impacts have been mitigated to below the significance level, or determine that the EIR contains substantial evidence showing that certain economic, legal, social, technological, or other benefits outweigh the adverse effects on the environment.¹

After substantial amounts of research, the District has determined that large dairies (dairies consisting of approximately 900 cows or more) emit substantial amounts of air pollution. In most instances, this pollution cannot be mitigated to below a level of significance, even if the most stringent pollution controls are required. This reality leaves the District in the difficult position of either refusing to approve these dairy projects, or attempting to make the finding that economic or other benefits of the dairy outweigh the significant impact of the dairy on air pollution levels in the Valley.

¹ See Public Resources Code § 21081(b).

JAN-19-2006 03:48

FRESNO CO BOARD OF SUPERVISORS

P.03

Placing this type of decision in the hands of the District is problematic for several reasons. First, as the agency charged with reducing air pollution and protecting the public health, the District is faced with an inherent conflict when attempting to make the finding that the economic benefits of a large dairy operation outweigh the substantial impact on air quality. This is especially true since the Valley currently suffers the worst possible non-attainment status for both particulate matter ("PM") and ozone under the federal Clean Air Act, and dairies emit large amounts of both PM and ozone precursors, such as volatile organic compounds ("VOCs").

Second, even if the District could rationalize making the finding that the economic benefits of dairies outweighs any impact on air pollution; this type of finding would be best made by local elected officials since local elected officials generally must take all of their constituents' interests, both economic and health-related, into consideration when making difficult political decisions.

Although the District's Governing Board is comprised of elected officials, the District's Air Pollution Control Officer ("APCO") is an appointed officer. However, section 42300(a) of the Health and Safety Code provides that air pollution permitting decisions are made by the District's APCO. Thus, any CEQA findings required as part of the District's permitting process must also be made by the District's APCO. Accordingly, the District finds itself in the position of having its unelected APCO, who is charged with protecting air quality, making public findings that economic benefits override the harms associated with air pollution.

Finally, the CEQA Guidelines specifically state that "the Lead Agency will normally be the agency with general governmental powers, such as a city or county, rather than an agency with a single or limited purpose such as an air pollution control district or a district which will provide a public service or public utility to the project."² The reason for this is clear: single-purpose agencies like the District are ill-equipped to evaluate the full spectrum of land use issues associated with allowing large commercial dairies to be constructed on land originally used for non-livestock agricultural purposes. Evaluating the effects of large dairies on features other than air pollution, such as water, historical sites, traffic and endangered species, falls outside of the scope of the District's expertise and is better left to land use agencies, such as county planning commissions. This is especially true where the agency is forced to balance socio-economic interests against public health risks.

Fresno County is the only county of the eight counties in the District that does not require any type of discretionary land use approval for dairies proposed on agricultural land. Thus, the District is forced to assume the lead agency role for dairy permits in Fresno County, a role that has traditionally been left to local land use agencies. For the reasons outlined above, this has put the District in a position where its dual role as an air pollution agency and a de facto land use agency conflict severely.

² See section 15051(b)(1) of the CEQA Guidelines, 14 C.C.R. § 15051(b)(1).

JAN-19-2006 03:48

FRESNO CO BOARD OF SUPV

P.04

Accordingly, the District requests that your Board begin a dialogue to consider requiring a discretionary land use approval for dairies over the 900-cow "significance threshold," so that this type of land use decision is made by the agency equipped to do so.

Sincerely,

David L. Crow
Executive Director/APCO
San Joaquin Valley Unified Air
Pollution Control District



EARTHJUSTICE
Because the earth needs a good lawyer



CENTER for BIOLOGICAL DIVERSITY

March 24, 2008

VIA Email and Overnight Mail

Chris Kalashian, Air Quality Specialist
 San Joaquin Valley Unified Air Pollution Control District
 1990 East Gettysburg Avenue
 Fresno, CA 93726-0244

Email: Chris.Kalashian@valleyair.org
 Phone: (559) 230-6000

Re: Comments on the EIR for the Van Der Kooi Dairy, State Clearing House Number
 2006011107

Dear Mr. Kalashian:

Earthjustice and the Center for Biological Diversity (the "Center") submit these comments on the Environmental Impact Report ("EIR") for the Van Der Kooi Dairy, State Clearing House Number 2006011107 ("Project"). Earthjustice is a non-profit public interest law firm that works on behalf of its community, public-health, and environmental clients to defend their right to a healthy environment. The Center is a non-profit conservation organization dedicated to the protection of native species and their habitats through science, policy, and environmental law. The Center's Climate, Air, and Energy Program works to reduce greenhouse gas emissions to protect biological diversity, our environment, and public health. The Center educates the public about the impacts of climate change on our world, including the animals and plants that live in it, and to build the political will to enact solutions. The Center has over 40,000 members throughout the western United States, including many that live and recreate in Fresno County, California, where this project is proposed. We respectfully submit these comments on the EIR and ask that they be included in the administrative record for the Project.

We are deeply concerned about greenhouse gas ("GHG") emissions from large confined animal facilities such as the proposed Van Der Kooi Dairy, especially given the enormous environmental impacts of existing dairies in Fresno County. The EIR anticipates that the Van Der Kooi Dairy will house 6,646 animal units, consisting of 3,200 milk cows plus associated support stock. These animals will join a county-wide dairy herd that totaled approximately 212,276 head in 2006 (Kresge and Storchlic 2007). This number continues to grow at an alarming rate as new dairies move into Fresno County from Southern California (*id.*). Existing dairies generate millions of gallons of wastewater, which is generally applied to cropland, and millions of tons of manure in Fresno County. Large confined animal feeding operations like the Van Der Kooi Dairy release large quantities of ammonia, as well as methane and nitrous oxides, two potent greenhouse gases ("GHG"). Any unmitigated increases in methane, nitrous oxides, and other greenhouse gases are in direct conflict with AB 32's explicit call for a significant statewide reduction in greenhouse gas emissions by 2020. Because it ignores obvious Project

sources of GHGs as well as proven strategies for reducing cumulatively significant greenhouse gas emissions, the Project's EIR fails to meet requirements under CEQA to adequately consider environmental impacts and adopt all feasible mitigation measures.

Animal agriculture is responsible for 18 percent of all greenhouse gas emissions resulting from human activity, including 35 to 40 percent of global methane emissions and 65 percent of nitrous oxide emissions (Steinfeld et al. 2006, HSUS 2007). Though less prevalent in the atmosphere, methane and nitrous oxide are significantly more potent greenhouse gases than carbon dioxide. Because methane has a relatively short ten-year lifespan and is 21 times more warming than carbon dioxide (US EPA 2006a), reductions in methane emissions can yield dramatic benefits in the near-term, helping to forestall the worst impacts of global warming (*see* Quinn et al. 2007). Nitrous oxide emissions, which persist longer in the atmosphere than carbon dioxide (120 years) and are 310 times more potent, are another obvious target for immediate mitigation (US EPA 2006a). Fortunately, many promising mitigation strategies for livestock greenhouse gas emission reductions have been identified, and in many cases, mitigating these greenhouse gas emissions can be significantly less expensive than mitigating carbon dioxide emissions (US EPA 2006a).

There are two major direct sources of methane from dairies: enteric fermentation and manure management. In California, enteric fermentation (52.7 percent) and manure management (43.1 percent) comprise 95.8 percent of total agricultural methane emissions (CCCC 2006f, Bemis and Allen 2005). Dairy methane emissions are influenced by a number of variables, including animal husbandry and feeding practices, ambient temperature and humidity, and manure storage times and processing techniques.

Cattle, like other ruminant animals, produce methane during a digestive process called enteric fermentation, in which fibrous plant matter is transformed into digestible nutrients. While all ruminants produce methane, the majority of global methane emitted due to enteric fermentation comes from cows used for beef and dairy production. Global estimates of methane emissions from enteric fermentation alone range from 80 to 86 million tonnes¹ per year (HSUS 2007, Steinfeld et al. 2006, US EPA 2005). There are a number of potential options for reducing the quantity of methane emitted during the digestive process, including improving nutrition through feed choice and quality, feed supplementation, antimethanogen vaccines, and intensive grazing practices (DeAngelo et al. 2006, US EPA 2006a).² The most effective means of capturing enteric methane emissions is to enclose animal confinement facilities and vent them to

¹ One tonne is a metric unit of measurement equivalent to 1,000 kilograms or 2,205 pounds.

² Any reductions in enteric fermentation methane due to increased efficiency or productivity must be balanced against all associated increases in emissions and other environmental/public health impacts, including but not limited to emissions of greenhouse gases in the production of these feeds and supplements (*see, e.g.,* Kumar et al. 2005, Lee et al. 2007, HSUS 2007, Garnett 2007, Koneswaran and Nierenberg 2008). Similarly, the greenhouse gas reduction benefits of many efficiency- and production-oriented strategies only take effect if milk and meat production is held constant and the number of animals is thereby reduced. EPA notes that, if the number of animals is held constant, "intensive grazing" practices are more effective at reducing total livestock methane emissions than any of the other strategies analyzed (including increased feed efficiency, propionate precursors, antimethanogens, digesters, improved feed conversion, antibiotics, and bST) (EPA 2006a). Several comprehensive greenhouse gas emissions analyses reveal higher overall emissions from animal confinement facilities than range-based systems, due to such factors as higher manure methane emissions and other greenhouse gas emissions associated with feed production and facilities operation (EPA 2006a, HSUS 2007, Subak 1999).

biofilters. As discussed in more detail below, this technology is widely used in the United States and Europe and has been identified as “equivalent to BACT” for large confined animal facilities by the San Joaquin Valley Air Pollution Control District (*see* Rule 4570, § 5.6B-F).

Methane is also generated through the decomposition of animal manure (US EPA 2006a). Livestock manure management accounts for 25 percent of U.S. agricultural methane emissions (Paustian et al. 2006). The FAO estimates that global livestock manure is responsible for 17.5 tonnes of methane emissions per year and notes that the U.S. has the highest manure emissions of any country (1.9 million tonnes in 2004) (Steinfeld et al. 2006). Energy content of feed, frequency of manure removal, storage method and time, humidity, and temperature affect the amount of methane that is produced (*id.*, US EPA 2006a, Pattey et al. 2005, Amon 2006). Manure methane emissions are highest under anaerobic conditions, which commonly occur when liquid manure is stored in lagoons, ponds, tanks, and pits. The trend in the U.S. is to increasingly store manure under these conditions. Uncaptured methane emissions from manure represent a significant air pollutant as well as a waste of a potentially significant energy resource. If best practices for manure methane mitigation were adopted, including the efficient collection and processing of manure methane emissions in anaerobic digesters for use as fuel, total U.S. agricultural methane emissions could be reduced by 20 to 40 percent, and additional greenhouse gas reductions would be achieved through displacement of fossil fuels (Paustian et al. 2006).

The Draft EIR states that, based on 2005 projections, the cumulative methane emissions from the dairy industry in the San Joaquin Valley are approximately 524,706 tons per year. That is equivalent to approximately 11,662,068 metric tonnes of carbon dioxide.³ The Project itself is estimated to release 460.82 tons per year of methane from manure decomposition and animal digestive processes.

Nitrous oxide is a significant greenhouse gas generated by agricultural operations. It is produced when nitrogen found in animal manure and urine is aerobically converted to nitrates or nitrites (nitrification) and/or reduced to nitrogen gas in an anaerobic process (denitrification). Ninety-four percent of U.S. agricultural nitrous oxide emissions result from agricultural soil management, including the common practice of applying dairy and feedlot manure and wastewater to croplands (U.S. EPA 2007a). Application of nitrogen-rich organic matter to soils results in increased nitrous oxide emissions (Li et al. 2005). Dry manure handling systems, where predominantly aerobic conditions are punctuated by rain events or other anaerobic conditions, are another common source of nitrous oxide emissions (US EPA 2006a). Improved manure and wastewater storage and disposal practices, including enclosing and venting manure storage and cattle housing, using anaerobic digesters, increasing the frequency of manure flushing or scraping, and controlling applications of animal waste to soils, can reduce anticipated nitrous oxide emissions from beef and dairy cattle facilities. Nitrous oxide levels from the Project are not quantified at all.

³ A carbon dioxide equivalent is a metric measure used to compare the emissions from various greenhouse gases based upon their global warming potential (GWP). Carbon dioxide equivalents are commonly expressed as "million metric tons of carbon dioxide equivalents (MMTCDE)" or "million short tons of carbon dioxide equivalents (MSTCDE)". The carbon dioxide equivalent for a gas is derived by multiplying the tons of the gas by the associated GWP. $MMTCDE = (\text{million metric tons of a gas}) * (\text{GWP of the gas})$. The GWP for methane is 24.5. This means that emissions of one million metric tons of methane is equivalent to emissions of 24.5 million metric tons of carbon dioxide. http://www.climatechange.ca.gov/glossary/letter_c.html

1 CEQA requires a comprehensive analysis of the global warming impacts of future dairy/feedlot operations, including but not limited to the sources identified above and the carbon dioxide emissions associated with the construction and operation of the dairy, production and transport of animals and animal feed, and transport of dairy and meat products. Curbing greenhouse gas emissions to limit the effects of climate change is one of the most urgent challenges of our time. Fortunately, CEQA sets forth a clear and mandatory process for the District to deal with the Project's greenhouse gas and global warming impacts. As detailed below, the EIR fails to acknowledge the statewide and national significance of the climate crisis or the full expected contribution of Van Der Kooi Dairy to the problem. More specifically, the EIR illegally ignores significant sources of Project greenhouse gas emissions; does not adequately disclose the cumulatively significant impacts from those emissions; inaccurately characterizes or ignores available, feasible, and achieved-in-practice mitigation measures to reduce those impacts; and fails to require offsets for unmitigated emissions. Fortunately, there are a number of technologies and practices that can substantially lessen greenhouse gas emissions from dairies. Sufficient mitigation measures must be adopted to ensure that greenhouse gas emissions generated by the Project are fully mitigated.

2 THE EIR MUST ANALYZE AND MITIGATE THE PROJECT'S GLOBAL WARMING IMPACTS

CEQA is "to be interpreted in such manner as to afford the fullest possible protection to the environment within the reasonable scope of the statutory language." *Laurel Heights Improvement Ass'n v. Regents*, 47 Cal.3d 376, 389 (1988) ("Laurel Heights I"). CEQA contemplates consideration of all potential environmental impacts, including those that may not have been foreseen at the time CEQA was enacted. *See Bakersfield Citizens for Local Control v. City of Bakersfield* (2004) 124 Cal.App.4th 1184, 1196, 1204-1205 (tracing judicial recognition of CEQA application to urban blight impacts and noting that "[w]ater contamination and air pollution, now recognized as very real environmental problems, were once scoffed at as the alarmist ravings of environmental doomsayers."). Accordingly, a project impact must be assessed if it has "an effect on the environment within the meaning of CEQA." *See Protect the Historic Amador Waterways v. Amador Water Agency*, 116 Cal.App.4th 1099, 1111 (2004). *See also Cadiz Land Co. v. County of San Bernardino*, 83 Cal.App.4th 74, 85-86 (2000) (an EIR must "evaluate all potential effects on those physical conditions and resources" within the project area). CEQA defines "environment" as "the physical conditions which exist within the area which will be affected by a proposed project, including land, air, water, minerals, flora, fauna, noise, objects of historic or aesthetic significance." Pub. Res. Code § 21060.5. Global warming affects the "environment" as defined by CEQA because it directly impacts and alters physical conditions throughout California, including in the project area. As the California Legislature has declared:

Global warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California. The potential adverse impacts of global warming include the exacerbation of air quality problems, a reduction in the quality and supply of water to the state from the Sierra snowpack, a rise in sea levels resulting in the displacement of thousands of coastal businesses and residences, damage to marine

ecosystems and the natural environment, and an increase in the incidences of infectious diseases, asthma, and other human health-related problems.

California Global Warming Solutions Act of 2006 (Heath & Safety Code § 38501(a)). By expressly acknowledging the existence of adverse impacts associated with greenhouse gas emissions, the State of California recognized that greenhouse gas emissions have a profound environmental effect. Because greenhouse gas emissions impact the environment, and CEQA's fundamental purpose is to "demonstrate to an apprehensive citizenry that the agency has in fact analyzed and considered the ecological implications of its action," an assessment of impacts from a project's greenhouse gas emissions falls squarely within CEQA's purview. *Sundstrom v. County of Mendocino* (1988) 202 Cal.App.3d 296, 310.

2 The legislature recently eliminated any doubt that a global warming analysis is required under CEQA with the passage of SB 97, which requires the Office of Planning and Research to prepare guidelines "for the mitigation of greenhouse gas emissions or the effects of greenhouse gas emissions *as required by* [CEQA], including, but not limited to, effects associated with transportation or energy consumption." (SB 97, codified as Pub. Res. Code § 21083.05). As noted in its legislative analysis, SB 97 "confirm[s] that GHG emissions are a significant adverse effect under" CEQA. Thus, SB 97 constitutes Legislative recognition that an analysis of greenhouse gas emissions, and mitigation for those effects, is required under CEQA. (SB 97 Senate Bill Analysis stating that "[t]he analysis of GHG impacts under laws like CEQA, and its federal counterpart NEPA, is not new, nor did it commence with the passage of the California Global Warming Solutions Act of 2006.")

In order to properly address the Project's climate change impacts, the EIR should: (a) provide a regulatory and scientific background on global warming; (b) assess the Project's contribution to climate change through a comprehensive emissions inventory; (c) determine the cumulative significance of the Project's GHG contribution; (d) mandate implementation of all feasible mitigation measures; and (e) require the dairy to purchase offsets for any remaining unmitigated emissions. The Project's EIR fails on each of these counts.

A. The EIR Fails to Provide an Adequate Scientific and Regulatory Context for Addressing Global Warming

3 In order to provide the necessary context for an assessment of a project's impacts on global warming, the EIR should first discuss the impact of global warming on California by providing an accurate summary of the scientific literature on climate change. The scientific literature on the impact of greenhouse gas emissions on California (and the world) is well developed and can provide the context for this discussion.⁴ The summary should make a good faith effort at full disclosure and avoid minimizing or discounting the severity of global warming's impacts. See Guidelines § 15151; *San Joaquin Raptor/Wildlife Rescue Center v. County of Stanislaus*, 27 Cal.App.4th 713 (1994).

The California Climate Change Center ("CCCC") has evaluated the present and future impacts of climate change to California and the project area in research sponsored by the

⁴ See, e.g. CA EPA 2006, CCCC 2006e, IPCC 2007a-b. Additional reports issued by California agencies are available at <http://www.climatechange.ca.gov>, and IPCC reports available at <http://www.ipcc.ch/>.

California Energy Commission and the California Environmental Protection Agency (*see, e.g., CCCC 2006a-2006d*). Some of the types of impacts and estimated ranges of severity are summarized as follows:

- A 30 to 90 percent reduction of the Sierra snowpack during the next 100 years, including earlier melting and runoff.
- An increase in water temperatures at least commensurate with the increase in air temperatures.
- A 6 to 30 inch rise in sea level, before increased melt rates from the dynamical properties of ice-sheet melting are taken into account.
- An increase in the intensity of storms, the amount of precipitation and the proportion of precipitation as rain versus snow.
- Profound impacts to ecosystem and species, including changes in the timing of life events, shifts in range, and community abundance shifts. Depending on the timing and interaction of these impacts, they can be catastrophic.
- A 200 to 400 percent increase in the number of heat wave days in major urban centers.
- An increase in the number of days meteorologically conducive to ozone (O₃) formation.
- A 55 percent increase in the expected risk of wildfires

There is also robust, peer-reviewed literature on estimating the social costs of climate change and quantifying the cost of greenhouse gas emissions (Stern 2006). The Stern Review of the Economics of Climate Change, a comprehensive report commissioned by the British government, recently concluded that allowing current emissions trajectories to continue unabated would eventually cost the global economy between 5 to 20 percent of GDP each year within a decade, or up to \$7 trillion, and warned that these figures should be considered conservative estimates (Stern 2006). By contrast, measures to mitigate global warming by reducing emissions were estimated to cost about one percent of global GDP each year, and could save the world up to \$2.5 trillion per year (Stern 2006). If we take no action to control emissions, each ton of carbon dioxide that we emit now is causing damage worth at least \$85 (Stern 2006). As economic and social costs of a physical change may be used to determine the significance of physical changes to the environment, the EIR should incorporate the costs of the emissions generated by the Project into its analysis. *See* CEQA Guidelines 15131(b).

Recent peer reviewed works emphasize the urgent need to reduce greenhouse gas emissions immediately; just ten more years of “business as usual” emissions may commit us to climate feedbacks and impacts which would entirely transform the planet as we now know it (Hansen et al. 2007). As aptly noted in a report commissioned by the California EPA:

Because most global warming emissions remain in the atmosphere for decades or centuries, the choices we make today will greatly influence the climate our children and grandchildren inherit. The quality of life they experience will depend on if and how rapidly California and the rest of the world reduce greenhouse gas emissions (CCCC 2006f).

3 California has embraced a mandate to reduce emissions to 1990 levels by 2020 and a goal of further reducing emissions to 80 percent below 1990 levels by 2050. Achievement of state mandated emissions reductions will be severely impeded if agencies across the state continue to approve projects that fail to mitigate their GHG emissions.

B. The EIR's Analysis of the Project's Greenhouse Gas Emissions is Incomplete and Inadequate

The greenhouse gas emissions analysis in the Project's EIR is completely inadequate and dramatically understates total Project GHG emissions by excluding a number of important sources. The greenhouse gas inventory for a project must include a complete analysis of all of a project's substantial sources of greenhouse gas emissions. In conducting such an inventory, all phases of the proposed project must be considered. *See* 14 Cal. Code Regs. § 15126. A basic requirement of CEQA is that "[a]n EIR should be prepared with a sufficient degree of analysis to provide decision-makers with information which enables them to make a decision which intelligently takes account of environmental consequences." 14 Cal. Code Regs. § 15151.

A greenhouse gas inventory for the project must include the project's direct and indirect greenhouse gas emissions. *See* 14 Cal. Code Regs. § 15358(a)(1) ("Indirect or secondary effects may include growth-inducing effects and other effects related to induced changes in the pattern of land use, population density, or growth rate, and related effects on air and water and other natural systems, including ecosystems."). Consequently, a complete inventory of a project's emissions should include, at minimum, an estimate of emissions from the following:

- 4
- Digestive processes of dairy animals;
 - Waste products generated by the animals and dairy operations, including waste collection, storage, processing, and disposal;
 - Cultivation, processing, transport, and storage of feed consumed by dairy animals;
 - Site preparation, construction, and dairy operation using vehicles and machinery;
 - Manufacturing and transport of building materials;
 - Electricity generation and transmission for the heating, cooling, lighting, cleaning, and other energy demands of project;
 - Water supply and transportation to the project;
 - Fossil fuel combustion required for live animal, animal product, and employee transport; and
 - Any outsourced activities and contracting.

Methodologies are readily available to inventory the emissions from the proposed project. The Intergovernmental Panel on Climate Change (IPCC) has produced guidelines for calculating greenhouse gas emissions inventories for livestock facilities, including enteric fermentation and manure management (IPCC 2006); these guidelines are used by the U.S. Environmental Protection Agency in their 2007 Inventory of U.S. Greenhouse Gas Emissions and Sinks (US EPA 2007a). Tulare County recently used U.S. EPA methane emissions factors to estimate emissions rates in the 2006 Draft Supplemental Program EIR for its Animal Confinement Facilities Plan (112.56 pounds per head per year for manure methane and 320.56 pounds per head per year of enteric methane; *see* Tulare County 2006 (excerpts), attached). The California Climate Action Registry General Reporting Protocol provides guidance on reporting other types

of emissions, such as mobile emissions generated by increased vehicle trips, stationary combustion sources, and refrigeration systems (particularly relevant for dairies) (CCAR 2007a). Livestock-specific reporting and certification protocols are also available from the CCAR (CCAR 2007b, CCAR 2007c).

4 Research has shown that methane represents only a fraction of the total GHG emissions from dairies, which are also significant sources of nitrous oxide and carbon dioxide (*see, e.g.,* O'Mara 2004). The EIR fails to calculate comprehensive GHG emissions from construction of the facilities, day-to-day operations, or vehicle trips associated with the Project. Without a complete inventory, the EIR cannot adequately inform the public and decision-makers about the air quality impacts of the Project. There is simply no way that the EIR has adequately discussed alternatives, avoidance, and mitigation measures to reduce those impacts. The EIR should have included a full and adequate inventory of greenhouse gas emissions from the Project.

C. The EIR Must Determine the Cumulative Significance of the Project's Greenhouse Gas Pollution and Impact on Global Warming

5 After fully quantifying Project emissions, the EIR must determine the cumulative significance of the Project's greenhouse gas pollution. Climate change is the classic example of a cumulative effects problem; emissions from numerous sources combine to create the most pressing environmental and societal problem of our time. *Ctr. for Biological Diversity v. Diversity v. NHTSA*, 508 F.3d 508, 550 (9th Cir. 2007), (“the impact of greenhouse gas emissions on climate change is precisely the kind of cumulative impacts analysis that NEPA requires agencies to conduct.”). While a particular project's greenhouse gas emissions represent a fraction of California's total emissions, courts have flatly rejected the notion that the incremental impact of a project is not cumulatively considerable because it is so small that it would make only a *de minimis* contribution to the problem as a whole. *Communities for a Better Env't v. California Resources Agency*, 103 Cal.App.4th 98, 117 (2002); *see also Kings County Farm Bureau v. City of Hanford*, 221 Cal. App. 3d 692, 720 (1990) (“Perhaps the best example [of a cumulative impact] is air pollution, where thousands of relatively small sources of pollution cause a serious environmental health problem.”). As noted by former D.C. Circuit Judge Wald in a 1990 dissenting opinion, quoted with unanimous approval by the Ninth Circuit in *Center for Biological Diversity v. Nat'l Highway Traffic Safety Admin.*:

[W]e cannot afford to ignore even modest contributions to global warming. If global warming is the result of the cumulative contributions of myriad sources, any one modest in itself, is there not a danger of losing the forest by closing our eyes to the felling of the individual trees?

508 F.3d at 550.

Importantly, a lead agency cannot justify its failure to evaluate the significance of a project's greenhouse gas impacts due to the lack of established thresholds of significance. Significance thresholds are only “encouraged” under CEQA and are not a prerequisite to an impact analysis. Guidelines § 15064.7. As recognized by the California Air Pollution Control Officers Association (CAPCOA) in *CEQA & Climate Change: Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to the California Environmental Quality Act* (Jan. 2008), “[t]he lack of established thresholds does not relieve lead agencies of their

responsibility to analyze and mitigate significant impacts.” (CAPCOA at 5.) In the future, there may well be an “approved plan or mitigation program which provides specific requirements that will avoid or substantially lessen the cumulative problem” of greenhouse gas emissions and global warming impacts, Guidelines § 15064(h)(3), but until that time, lead agencies must rely on their own “careful judgment ... based to the extent possible on scientific and factual data” in determining whether a project’s global warming-related impacts are significant. Guidelines § 15064(b); *see also Mira Mar Mobile Community v. City of Oceanside*, 119 Cal. App. 4th 477, 493 (2004) (“[A] lead agency must necessarily make a policy decision in distinguishing between substantial and insubstantial adverse environment impacts.”).

5 “Under CEQA, the more severe the environmental problem, the lower the threshold for treating a project’s contribution to cumulative impacts as significant.” *Communities for Better Env’t*, 103 Cal. App. 4th at 120. In light of the magnitude and scope of the climate change impacts facing California and the mandate of both the California Global Warming Solutions Act of 2006 and Executive Order S-3-05 that existing levels of greenhouse gas emissions be significantly reduced, any new emissions generated by a project should be considered cumulatively significant. Indeed, even reducing emissions by 80% below 1990 levels as required under Executive Order S-3-05 is now believed to be insufficient to avoid the worst consequences of global warming because, based on the alarming and unpredicted rate of loss of arctic sea ice and other recent climate change observations, scientists now state that “humanity must aim for an even lower level of GHGs” (Hansen et al. 2008).⁵

While CAPCOA provides several possible approaches to determining the significance of a project’s greenhouse gas pollution, many of these proposed approaches have minimal effectiveness in reducing greenhouse gas emissions. Pages 56 and 57 of the CAPCOA paper provide a table that analyzes the effectiveness of potential thresholds and their consistency with the reduction mandates of AB 32 and Executive Order S-03-05. Under CEQA, even where significance thresholds are established, they do not “determine automatically whether a given effect will or will not be significant” because an agency must “still consider any fair argument that a certain environmental effect may be significant.” *Protect the Historic Amador Waterways v. Amador Water Agency*, 116 Cal. App. 4th 1099, 1108-09 (2004). Accordingly, while a lead agency does have some discretion in evaluating the significance of project impacts, a significance level that is not highly effective in reducing greenhouse gas emissions and consistent with AB 32 and Executive Order S-03-05 does not withstand scrutiny because there is a fair argument that emissions below this level will still have a significant environment effect.

D. The EIR Fails to Adequately Consider Greenhouse Gas Emission Mitigation Measures

6 Because the Project’s greenhouse gas emissions cumulatively contribute to global warming, “the EIR must propose and describe mitigation measures that will minimize the significant environmental effects that the EIR has identified.” *Napa Citizens for Honest Gov’t v.*

⁵ James Hansen, the premier NASA climatologist, now concludes that “[i]f humanity wishes to preserve a planet similar to that on which civilization developed, paleoclimate evidence and ongoing climate change suggest that CO₂ will need to be reduced from its current 385 ppm to at most 350 ppm” (Hansen et al. 2008). An emissions pathway whereby developed countries would reduced emissions to 80% below 1990 levels as envisioned under Executive Order S-03-05 would cap atmospheric concentrations of CO₂ at approximately 450 ppm. *See, e.g.,* UNDP 2007 at 46-50.

Napa County Bd. of Supervisors, 91 Cal.App.4th 342, 360 (2001). CEQA requires that agencies “mitigate or avoid the significant effects on the environment of projects that it carries out or approves whenever it is feasible to do so.” Pub. Res. Code § 21002.1(b). Mitigation of a project’s significant impacts is one of the “most important” functions of CEQA. *Sierra Club v. Gilroy City Council*, 222 Cal.App.3d 30, 41 (1990). Therefore, it is the “policy of the state that public agencies should not approve projects as proposed if there are feasible alternatives or feasible mitigation measures which will avoid or substantially lessen the significant environmental effects of such projects.” Pub. Res. Code § 21002; *see also Laurel Heights I*, 47 Cal.3d at 400-401.

The EIR should propose and analyze a hierarchy of options to avoid, minimize, and offset greenhouse gas emissions. Conveniently, some of the best available control technologies for reducing criteria pollutants are extremely effective at reducing GHG emissions. There are two mitigation technologies for GHG as well as criteria pollutant emission control that are achieved in practice and particularly promising for Tulare County dairies, including (1) anaerobic digester systems and (2) enclosed and connected milk parlors and cow housing units vented to biofilters. These measures must be discussed explicitly with regard to greenhouse gas emissions, with emissions reductions benefits quantified wherever possible. Given that greenhouse gas mitigation is a rapidly developing field of technology, the latest available information must be included and discussed.

Today, anaerobic digesters are widely regarded as the most effective mitigation for manure methane emissions; they are also effective at reducing nitrous oxide emissions from manure (*see, e.g.,* Amon et al. 2006, Paustian et al. 2006, Weiske et al. 2006). The EPA described biogas recovery systems using anaerobic digesters as a “proven technology” as far back as 2002 (US EPA 2002), and as of November 2007, the US EPA reported that 111 operating digesters at US livestock facilities, including 15 in California (US EPA 2007c). Eighty percent of US digesters are used by the dairy industry (US EPA 2007c). Energy generated by anaerobic digesters at US agricultural facilities more than quadrupled between 2000 and 2007 (US EPA 2007c). Existing federal methane recapture programs produce enough energy today to power 20,000 American homes and have reduced methane emissions by 1.5 million tonnes (carbon dioxide-equivalent) (HSUS 2007; *see also* US EPA 2007b, US EPA 2007c, US EPA 2006b).

A number of federal and state resources are available to assist California dairies with selecting and implementing a digester system that is customized to their facility. For example, the federal government has established programs, including AgStar and Methane to Markets, which support the capture and re-use of methane gas from animal agriculture using anaerobic digesters. USDA funding for anaerobic digester systems has exceeded \$31 million since 2003 (US EPA 2007c). The captured and processed methane is then used to power on-site generators or sold back to local utility companies, thereby yielding economic benefits for livestock operations (*see* HSUS 2007, <http://www.epa.gov/agstar/>, AgStar Handbook excerpts (attached), US EPA 2006b, <http://www.epa.gov/methanetomarkets/>). In California, Pacific Gas and Electric Company (“PG&E”) is partnering with dozens of dairies and digester companies to help facilitate the widespread use of this technology and reduce greenhouse gas emissions. (http://www.pge.com/news/news_releases/q1_2007/070320a.html). More information about PG&E’s Net Energy Metering for Biogas Digester Generators program can be found online at http://www.pge.com/suppliers_purchasing/new_generator/ebio/. These programs demonstrate

that capturing manure methane emissions via anaerobic digestion can be a win-win scenario for current and future dairy operations in Fresno County and throughout the San Joaquin Valley.

Vented enclosures, which have been identified as best available control technology (BACT) for cow housing structures, milk parlors, feed storage, and manure storage (SJVUAPCD Rule 4570, § 5.6B-F), are effective in controlling enteric and manure methane as well as nitrous oxide emissions. Enclosed barns are commonly in use in other parts of the country, including the South, where temperatures tend to be high (*see, e.g.,* <http://www.northfloridaholsteins.com/info.html>, SJVUAPCD 2007a-b). Regarding biofilters, the San Joaquin Valley Air Pollution Control District's Dairy Permitting Advisory Group states that "today there are more than 500 biofilters in Germany and in the Netherlands. In agriculture, biofiltration is widely used to control emissions from enclosed swine facilities and have been reported to be used in dairy situations from enclosed, mechanically ventilated housing and manure storage areas" (DPAG 2006 at 20). These technologies have been reported to be used at dairies (*see, e.g.,* SJVUAPCD 2006) and are widely used at swine facilities, which are of the same category or class as dairies. Thus, these technologies are achieved in practice and should be considered feasible under CEQA.

Beyond the primary sources detailed above, facility design and construction practices can generate significant greenhouse gases. The EIR should consider alternative facility designs, construction plans, and operations that reduce those emissions. Examples of such measures include, but are not limited to:

- Using biogas from methane recapture in conjunction with other alternative, renewable energy sources and best available emissions control technologies as needed in facility construction, operations, and project-related vehicles and equipment;
- Designing confinement areas for frequent, resource-efficient cleaning and greenhouse gas sequestration;
- Choosing recycled, low-carbon, and otherwise climate-friendly building materials such as salvaged and recycled-content materials for building, hard surfaces, and non-plant landscaping materials;
- Minimizing, reusing, and recycling construction-related waste;
- Minimizing grading, earth-moving, and other energy-intensive construction practices; and
- Landscaping to preserve natural vegetation and maintain watershed integrity.

All of the above measures should have been discussed explicitly with regard to greenhouse gas emissions. The amount that each measure will reduce emissions must be quantified wherever possible. All feasible measures must be mandatory and enforceable, not aspirational or voluntary. Guidelines § 15065(c)(3), Guidelines § 15126.4(a)(2).

One disturbing aspect of this Project's EIR is that the use of phototrophic lagoons is identified as a mitigation measure for methane generation when these lagoons actually work by converting volatile solids into methane. While these lagoons may be capable of reducing other criteria air pollutants, because no lagoon cover or anaerobic digester system is proposed to accompany these phototrophic lagoons, it is absurd for this type of treatment system to be called a mitigation measure for methane emissions.

E. Unmitigated Emissions Must Be Offset

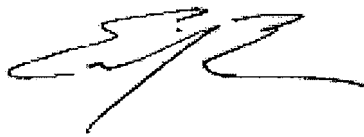
7 After adopting all feasible avoidance and mitigation measures, any remaining emissions must then be offset for each facility through the purchase of credits from a verifiable and transparent source. *See, e.g., Anderson First Coalition v. City of Anderson*, 130 Cal.App.4th 1173 (2005) (fair-share contributions to defined fee-based mitigation program is adequate mitigation if “part of reasonable plan of actual mitigation that the relevant agency commits itself to implementing”). Care should be taken to ensure that offsets purchased are real (additional), permanent, and verified, and all aspects of the offsets should be discussed in the site-specific EIR.

CONCLUSION

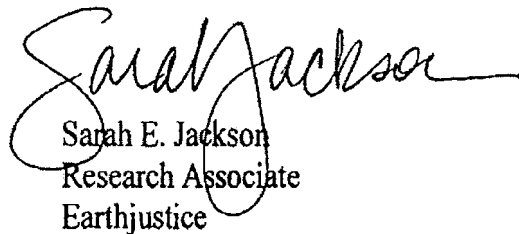
If you have any questions regarding these comments, please do not hesitate to contact Sarah Jackson at (510) 550-6725 or sjackson@earthjustice.org, or Emily Brown at (415) 436-9682 x 312 or ebrown@biologicaldiversity.org. We look forward to working with the San Joaquin Valley Unified Air Pollution Control District now and in the future to reach our shared goals of reducing greenhouse gas emissions and protecting biological diversity, public health, and our environment. Thank you for your time and consideration of our concerns.

Please place us on the mailing/notification list for all future environmental decisions regarding the Van Der Kooi Dairy (email preferred).

Sincerely,



Emily R. Brown
Research Associate



Sarah E. Jackson
Research Associate
Earthjustice

Enc: The accompanying CD includes the references below, which should be carefully considered and included in the administrative record.

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March 24, 2008

VIA ELECTRONIC MAIL AND OVERNIGHT MAIL

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Re: Notice of Preliminary Decision - Authority to Construct, Project No. C-1053434

Dear Mr. Warner:

Earthjustice submits these comments on the Notice of Preliminary Decision on the Authority to Construct Permit ("ATC permit") for the expansion of the Van Der Kooi Dairy located in Riverdale, CA, on behalf of the Center for Biological Diversity (the "Center"). Earthjustice is a non-profit public interest law firm that works on behalf of its community, public-health, and environmental clients to defend their right to a healthy environment. The Center is a non-profit conservation organization dedicated to the protection of native species and their habitats through science, policy, and environmental law.

We are deeply concerned about air quality impacts from large confined animal facilities such as the proposed Van Der Kooi Dairy, especially given the very serious air pollution problems in the San Joaquin Valley—one of the most polluted air basins in the United States. According to the ATC permit, the project proponent has applied to the San Joaquin Valley Air Pollution Control District ("District") for an authority to construct permit to increase the number of milking cows on an existing dairy facility from 1,700 to 3,200, with a corresponding increase in support stock that brings the total herd size to 6,120.

Large confined animal feeding operations like the Van Der Kooi Dairy release large quantities of ammonia and particulate matter, as well as volatile organic compounds and oxides of nitrogen, both precursors to the formation of ozone, for which the Valley is currently classified as an extreme nonattainment area (the worst possible classification). Dairies also release air toxics, such as hydrogen sulfide and methanol, and greenhouse gases, such as methane and nitrous oxides.

As more and more large dairies move into the Valley, the District must take a hard look at the true impacts from these sources and require best available control technology to mitigate the impacts on the already polluted air. The ATC permit has a number of flaws that need to be addressed before any kind of permit can be issued for the Van Der Kooi Dairy.

A. Project Emissions Are Grossly Understated

2 The District's analysis significantly underestimates the emissions that will occur due to this project. First, the analysis ignores "potentially significant emissions" from the feed handling and storage operation with no explanation whatsoever. The District cannot ignore potentially significant emissions and must provide a best estimate of these emissions together with appropriate mitigation measures. Likewise, the District ignores emissions from the solid manure handling system. Solid manure can represent a significant percentage of all manure generated by the Project, and yet pollutants generated by solid manure are ignored and assumed to be zero due to a lack of emissions factor for the solid manure management system. The lack of an established emissions factor for solid manure systems is not an excuse to ignore known emissions sources.

Further, the so-called "control-efficiencies" assumed by the District to determine the "controlled emission factors" for PM-10 are arbitrary and cannot be supported. The District must analyze what reductions will actually be gained by the specific mitigation measures that will be required in the operating permits for the Van Der Kooi Dairy and should not rely on a poorly supported memorandum (see SJVUAPCD Draft Memorandum – Dairy and Feedlot PM-10 Mitigation Practices and their Control Efficiencies, cited at ATC Application Review at 14) in which control efficiencies are determined generally over the industry as a whole.

Lastly, the reductions that result from feeding according to NRC guidelines are already factored into the emission factors (SJVAPCO 2005 at 3-4). Therefore, the District's analysis double-counts VOC reductions from this control measure, which in turn means that the post-project estimate for VOC emissions is underestimated and the assumption that mitigation measures bring the source down below the CEQA significance threshold of 10 tons VOC appear to be in error.

B. Van Der Kooi Dairy is a Major Source of Methanol and Thus the District Must Require MACT.

3 The Van Der Kooi Dairy emits methanol (also known as wood alcohol) from cows' enteric emissions, freshly excreted manure, and decomposing feed stored at the dairy. Methanol is on the Clean Air Act § 112(b) list of hazardous air pollutants ("HAP"). EPA has cited numerous potential human health risks from methanol exposure, including decrease in gestation time, an increase in the number of required caesarian-section births, and, in prenatally exposed offspring, instances of a severe wasting syndrome, concentration-related delay in sensorimotor development and lower performance on an infant intelligence test. Methanol is also a volatile organic compound ("VOC") which forms low-level ozone.

Section 112(g)(2)(B) of the Clean Air Act states:

After the effective date of a permit program under subchapter V of this chapter in any State, no person may construct or reconstruct a major source of hazardous air pollutants in such State unless the Administrator (or the State) determines that the maximum achievable control technology emissions limitation under this section for new sources will be met. Such determination shall be made on a case-by-case basis where no applicable emissions limitations have been established by the Administrator.

42 U.S.C. § 7412(g)(2)(B).

The construction of the Van Der Kooi Dairy constituted the construction of a major source within the meaning of Clean Air Act § 112(g)(2)(B) and 40 C.F.R. § 63.41, because the Van Der Kooi Dairy is a stationary source located on contiguous property and under common control that emits more than 10 tons per year of methanol. The Van Der Kooi Dairy will include a total of 3,200 milk cows, 480 dry cows, and 2,060 heifers between the ages of 3-24 months (for a total of 2,540 dry cows). While the District cites a 2005 study claiming that the emission factor for methanol is 1.35 lbs/milk cow-yr, a more recent 2006 study shows that a lactating cow and its waste emit 11.12 lbs/milk cow-yr of methanol (Mitloehner 2006 at 32). A dry cow and its waste emit 3.09 lbs/milk cow-yr of methanol (*id.* at 31).

Therefore:

$3,200 * 11.12 = 35,584 \text{ lbs/yr (17.79 tons/yr)}$

$2,540 * 3.09 = 7,849 \text{ lbs/yr (3.9 tons/yr)}$

Total = 43,433 lbs/yr (21.7 tons/yr)

Because the total methanol emissions from the proposed expansion will be over 10 tons/yr, the District must require the Van Der Kooi Dairy to comply with MACT.

EPA has adopted regulations implementing this provision of the Act. 40 C.F.R. §§ 63.40 through 63.44. Like the Act itself, these rules provide as follows:

Prohibition. After the effective date of section 112(g)(2)(B) (as defined in § 63.41) in a State or local jurisdiction and the effective date of the title V permit program applicable to that State or local jurisdiction, no person may begin actual construction or reconstruction of a major source of HAP in such State or local jurisdiction unless:

- (1) The major source [is regulated by a standard issued under subsections 112(d), (h) or (j) of the Act and complies with such standard]; or
- (2) The permitting authority has made a final and effective case-by-case determination pursuant to the provisions of § 63.43 such that emissions from the constructed or reconstructed major source will be controlled to a level no less stringent than the maximum achievable control technology emission limitation for new sources.

40 C.F.R. § 63.42(c). The latest possible effective date of Section 112(g)(2)(B) is June 29, 1998. See 40 C.F.R. § 63.41. EPA gave final approval to California's Title V permit programs on December 7, 2001. See 66 Fed. Reg. 63503 (Dec. 7, 2001). After settling a lawsuit with San Joaquin Valley air quality advocates, EPA partially withdrew approval of California's Title V permit programs because Cal. Health & Safety Code § 42310(e) (2003) exempted "equipment used in agricultural operations used in the growing of crops or the raising of fowl or animals" from the duty to obtain a permit. 67 Fed. Reg. 63551 (Oct. 15, 2002). Effective January 1, 2004 and once California passed Senate Bill 700, which deleted the exemption, EPA granted full approval to California's Title V permit programs. 68 Fed. Reg. 65637 (Nov. 21, 2003). Because

EPA approved California's Title V programs after June 29, 1998, the effective date of section 112(g)(2)(B) is June 29, 1998.

The federal regulations define the term "construct a major source:"

Construct a major source means: (1) To fabricate, erect, or install at any greenfield site a stationary source or group of stationary sources which is located within a contiguous area and under common control and which emits or has the potential to emit 10 tons per year of any HAP's or 25 tons per year of any combination of HAP[.]

40 C.F.R. § 63.41. Because EPA has not established an applicable emission limitation for emissions of methanol from dairies under Sections 112(d), (h), or (j), section 112 of the Act requires the District to issue a specific determination that the Van Der Kooi Dairy would meet MACT for new major sources of methanol. The District failed to analyze methanol emissions and failed to issue a determination that the Van Der Kooi Dairy would meet the MACT standard for new major sources. The District must go back and analyze methanol emissions before it can grant this ATC permit.

C. The Van Der Kooi Dairy Is a Major Source Under Title V of the Clean Air Act

The District inappropriately concluded that the Project is not a major source of air pollution in the San Joaquin Valley as defined in section 3.25 of District rule 2201 and thereby proposed to allow the source to avoid certain requirements (such as BACT/LAER and offsets) that would further reduce air emissions in the Valley. The District's conclusion is based on its improper decision to categorize the emissions from the dairy's milking center, cow housing, manure storage, and feed storage and handling operations as fugitive. This decision artificially lowered the post-project stationary source potential to emit values in order to avoid a major source determination for the dairy. The District offers as its rationale CAPCOA guidance from 2005 that states: "No collection technologies currently exist for VOC emissions from these emissions units. Therefore, the VOC emissions from these sources are considered fugitive" (ATC Application Review at 46). This guidance, however, is both legally and factually flawed.

First, the CAPCOA guidance, does not apply the correct test for determining if emissions are legally considered "fugitive." EPA defines "fugitive emissions" as "those emissions which could not reasonably pass through a stack, chimney, vent, or other functionally-equivalent opening." 40 C.F.R. §§ 70.2, 71.2. Thus, the test is not whether emissions are collected, but whether they could be collected. EPA has interpreted this definition to mean whether emissions can be reasonably collected or captured.¹ When determining whether emissions can be reasonably collected, EPA construes "reasonableness" broadly.²

Emissions can be classified non-fugitive for a number of reasons. If emissions actually pass through a stack, chimney, vent or other functionally equivalent opening, they are non-fugitive.³ When emissions do not actually pass through one of the listed openings, it is presumed that they

¹ Letter from William Wehrum, U.S. EPA Acting Assistant Secretary, to Terry Stokes, National Cattlemen's Beef Association, Nov. 2, 2006.

² U.S. EPA, "Interpretation of the Definition of Fugitive Emissions in Part 70 and 71," 2 (Feb. 10, 1999) available at <http://www.epa.gov/region07/programs/artd/air/title5/t5memos/fug-def.pdf>.

³ *Id.*

4 can be reasonably collected if they are actually being collected by other analogous sources.⁴ This means that if there is currently technology in use by other dairies to capture emissions, these emissions are presumed non-fugitive. Moreover, even if other dairies are not currently using technology, the “collection of specific pollutant-emitting activity can create a presumption that collection is reasonable for a similar pollutant-emitting activity.”⁵ Therefore, if similar activities, such as CAFOs containing different animals, are currently capturing these supposedly “fugitive” emissions, there is a presumption that those emissions are non-fugitive. It is important to understand that this is not a best available control technology (“BACT”)-type analysis of whether the emissions at the specific source being permitted should be required to be captured and controlled, but only whether or not those emissions are fugitive and should be included in the BACT analysis. The test for fugitive emissions is not a source-by-source test. If these emissions are, or can be, captured at similar sources, that is the end of the analysis.

The following sections demonstrate that emissions from the identified sources *are* reasonably capable of being captured, notwithstanding CAPCOA’s outdated, conclusory claims.

Milking Parlors

The draft ATC permit claims that emissions from milking parlors are fugitive because they cannot be reasonably captured. The District acknowledges that the mechanical system for the milking parlors can capture emissions but argues that this would require the holding area to be entirely enclosed. BACT Analysis at 3. The District’s conclusion that these emissions are fugitive is undercut by its own rule 4570, which demonstrates that these emissions are reasonably capable of being captured by these sources. That rule includes, among other requirements, the option of enclosing the milk parlor and venting to a VOC device in the list of class two mitigation measures.⁶ In the District’s staff report for rule 4570, the District cited studies showing that enclosing parlors and venting to a biofilter “might achieve the highest VOC reductions of all the management practices . . . combined.”⁷ Therefore, since the District includes enclosed milking parlors in its CAFO rule, the District has already concluded that this technology is capable of capturing these emissions.

Furthermore, contrary to the District’s assertion that “no facility currently encloses the holding area,” *id.*, the staff report for rule 4570 describes the Hauls Dairy, an 1,100 head⁸ dairy in Montana that encloses its animals in buildings and then vents the buildings to a biofilter.⁹ The Hauls Dairy example shows both that enclosing milking parlors is possible and that there is a facility in use that encloses the holding area. Since there are already dairies using this control technology, the presumption is that emissions at milking parlors are non-fugitive sources. Because the Van Der Kooi Dairy does not have any unusual circumstances that might rebut such a presumption, emissions from its milking parlors may not be ignored as fugitive and must be

⁴ *Id.*

⁵ *Id.*

⁶ Rule 4570, § 5.6B.

⁷ SJVUAPCD Final Draft Staff Report: Proposed Rule 4570 (Confined Animal Facilities), at 28 (May 18, 2006) (“SJVUAPCD Rule 4570 Staff Report”).

⁸ Since CARB’s threshold for dairy Large Confined Animal Facilities is 1,000 head, Hauls would be considered a Large CAF if located in CA.

⁹ SJVUAPCD Rule 4570 Staff Report, at 28.

counted toward its Major Source determination. This would add 1,530 lbs/yr of VOCs and 2,040 lbs/yr of NH₃ based on the District's calculation of the dairy's baseline emissions.¹⁰

Cow Housing

The District claims that only smaller dairies have enclosed freestall barns and that these dairies do not vent the exhaust through a collection device.¹¹ In addition to this assertion, the District claims that sufficiently high airflow requirements could not be achieved that would be needed to protect herd health. Both of these assertions are again disproved by the District's rule 4570 analysis and quick research on other similar operations.

In its section entitled "Housing Animals in Buildings", the staff report notes that the Hauls Dairy, an 1,100 head dairy in Montana, encloses its animals in buildings and then vents the buildings to a biofilter.¹² The staff report adds that by enclosing its dairy facilities, Hauls Dairy "increased milk production, decreased calving interval by over a month, reduced the number of cattle with symptoms of heat stress, and reduced odor at the facility."¹³ In addition, the North Florida Holsteins Dairy in Bell, Florida houses its entire herd of 6,400 cows, with 3,700 milking cows, in tunnel ventilation barns. See <http://www.northfloridaholsteins.com/info.html>.

Since there are already dairies enclosing cow housing areas and capturing these emissions, the presumption is that emissions at cow housing areas are not fugitive. Because the Van Der Kooi Dairy does not have any unusual circumstances that might rebut such a presumption, emissions from its cow housing areas should count toward its Major Source determination. Based on the District's own calculations of the Van Der Kooi Dairy's post-project potential to emit, this would add 16,153 lbs/yr of PM₁₀ and 59,613 lbs/yr of VOCs to the District's Major Source Determination chart on page 32 of the ATC permit.

Manure Storage Areas

The District claims that it was "not able to find any facility which currently captures the emissions from the storage or handling of manure piles."¹⁴ Emissions from manure storage areas can be captured with technologies such as aerated static piles, enclosures, or digesters that are vented to a biofilter. SJVUAPCD Rule 4570 Staff Report at 27-31. Again, the District's own rule 4570 includes, among others, all three of the above mentioned control technologies coupled with VOC device in the list of class two mitigation measures.¹⁵ In the staff report to the rule, the District notes that anaerobic digestion via methane digesters has been used on swine and dairy operations for solid waste handling and has achieved up to 90% control efficiency when vented to a secondary control.¹⁶ In addition to the operations mentioned in the staff report, other dairies like that of Dennis Haubenschild in Minnesota have successfully installed methane digesters.¹⁷

¹⁰ SJVUAPCD Proposed Authority to Construct Van Der Kooi Dairy, at 33 ("Van Der Kooi Proposal").

¹¹ Van Der Kooi Proposal at 31.

¹² SJVUAPCD Rule 4570 Staff Report, at 28.

¹³ *Id.*

¹⁴ Van Der Kooi Proposal at 31.

¹⁵ Rule 4570, § 5.6E.

¹⁶ SJVUAPCD Rule 4570 Staff Report, at 31.

¹⁷ *Prize Winning Anaerobic Digester Generates Interest in Biogas*, 22 Western Area Power Administration, Energy Services Bulletin, Feb. 2003, available at <http://www.wapa.gov/es/pubs/esb/2003/03Feb/esb029.htm>.

Since there are already dairies using this control technology, the presumption again is that emissions from manure storage areas are not fugitive. Because the Van Der Kooi Dairy does not have any unusual circumstances that might rebut such a presumption, emissions from its manure storage areas must be counted toward its Major Source determination.

Feed Handling and Storage

4 The District claims that while there are significant emissions from feed handling and storage, a “system has not been designed to extract gases from the face of the [feed] pile to capture them.”¹⁸ The District’s claims, however, run counter to the District’s analysis in rule 4570, which identified technologies such as enclosing silage in a bag and venting to a VOC control device, enclosing silage in a weatherproof structure and venting to a VOC control device, and eliminating silage from the animal diet altogether as options for capturing and/or controlling these emissions.¹⁹

Since the District has concluded that it is feasible and reasonable to capture emissions from feed handling and storage areas, emissions from these areas must be counted toward its Major Source determination. It is unclear how much of an increase in emissions this would cause because the District failed to even quantify emissions for feed handling and storage areas. However, the District concedes that emissions from feed handling and storage are “potentially significant.”²⁰ Therefore, the District should establish an emission factor for the Van Der Kooi Dairy’s feed handling and storage areas and include these emissions in its Major Source determination.

When all of these emissions are included, the Van Der Kooi Dairy’s emissions exceed the major source threshold²¹ of 50,000 lbs of VOC per year. Therefore, the project will make the Van Der Kooi Dairy a major source, and the District must regulate it accordingly.

D. The September 21, 2006 Version of District Rule 2201 Requires the Purchase of Offsets for Criteria Pollutants

5 District Rule 2201 states that, “[u]nless exempted pursuant to Section 4.6, offsets shall be required if the post-project Stationary Source Potential to Emit (“SSPE2”) equals or exceeds the...offset threshold levels” the relevant of which are 20,000 lbs/year of VOC and 29,200 lbs/year of PM10. The SSPE2 emission levels for VOC and PM10 at the Van Der Kooi Dairy are 69,826 lbs/year of VOC and 32,098 lbs/year of PM10 (ATC Permit at 29). This is well above the threshold levels and should trigger requirements for the source to purchase offsets.

The District erroneously claims that agricultural sources are exempt from the requirement to purchase offsets under Section 4.6.9 of Rule 2201 and therefore does not require the Project to fully offset the net increases of PM-10 and VOC emissions pursuant to that rule. However, contrary to the District’s belief, no blanket exemption from offset requirements exists for

¹⁸ SJVUAPCD Proposed Authority to Construct Van Der Kooi Dairy, at 31 (“Van Der Kooi Proposal”).

¹⁹ Rule 4570, § 5.6B.

²⁰ SJVUAPCD Proposed Authority to Construct Van Der Kooi Dairy, at 31 (“Van Der Kooi Proposal”).

²¹ The District’s analysis illegally uses the major source threshold of 25 tons per year that applies to severe ozone nonattainment areas even though the District was reclassified as an extreme ozone nonattainment area effective May 17, 2004, see 69 Fed. Reg. 20550 (April 16, 2004), and is required to have VOC thresholds of 10 tons per year.

agricultural sources in Rule 2201. The District points to an exemption in its rule pursuant to California Health & Safety Code Section 42301.18(c), which says:

A district may not require an agricultural source to obtain emissions offsets for criteria pollutants for that source if emissions reductions from that source would not meet the criteria for real, permanent, quantifiable, and enforceable emission reductions.

The District claims that because it has not yet established protocols for verifying that offsets meet the above criteria, that state law prohibits it from requiring offsets from agricultural sources (SJVUAPCD Draft Staff Report: Rules 2020 and 2201, Attachment A, at 2 (Aug. 17, 2006)). However, 42301.18(c) does not require the District to come up with these protocols, as they are already well-established and understood. What the District must do is make a determination of whether emissions from agricultural sources satisfy the criteria in order to be creditable—something the District has already done in the affirmative by seeking state implementation plan (“SIP”) approval for its Agricultural Conservation Management Practices Program (Rule 4550) and its Confined Animal Facilities Rule (Rule 4570). The California Air Resources Board has confirmed this interpretation of state law:

We believe that section 42301.18(c) does not ask whether or not the District has a regulatory protocol to verify whether ERC’s offered by agricultural source [sic] are creditable, but rather sets forth the objective, generic criteria that must be satisfied by an agricultural source seeking credits for its emission reductions. If the proffered reductions are real...the District may, therefore, require the source to provide offsets....The existence of a District rule allowing such offsets to be generated is not germane to determining whether emission reductions from a given agricultural source “would” meet the criteria for real, permanent, quantifiable, and enforceable.

CARB 2007 at 8-9 (Letter from W. Thomas Jennings, ARB Chief Counsel, to Brent Newell, CRPE, May 30, 2007). The applicant should, therefore, be required to offset all net increases in VOC and PM-10 emissions from the project. The failure to do so has a detrimental effect on air quality.

E. The December 19, 2002 SIP-Approved Version of District Rule 2201 Does Not Exempt Agriculture from Offset Requirements

Rule 2201 requires a new or modified stationary source of air pollution or emissions unit to purchase offsets for VOC when emissions exceed 10 tons per year. Rule 2201, § 4.5. EPA approved Rule 2201 as part of the State Implementation Plan. 68 Fed. Reg. 7330 (Feb. 13, 2003); 69 Fed. Reg. 27837 (May 17, 2004). Once approved by EPA, the rule became a federally enforceable strategy.

On January 1, 2004, California Senate Bill 700 removed the agricultural exemption from Health & Safety Code § 42310(e). Section 11 of SB 700 added section 42301.18 to the Health & Safety Code, which states:

A district may not require an agricultural source to obtain emissions offsets for criteria pollutants for that source if emissions reductions from that source would

not meet the criteria for real, permanent, quantifiable, and enforceable emission reductions.

Health & Safety Code § 42301.18(c).

6 The District analysis (ATC Application Review at 59) cites Health & Safety Code § 42301.18(c) as reason not to require purchase of offsets. However, neither the version of District Rule 2201 that EPA approved as part of the SIP nor the Clean Air Act provide an exemption for agricultural sources from the duty to obtain offsets. As such, section 42301.18(c) conflicts with the federally-approved SIP and the Act itself and is preempted. *See Safe Air for Everyone v. EPA*, 475 F.3d 1096, 1105 (9th Cir. 2007); *Sierra Club v. TVA*, 430 F.3d 1337, 1346-47 (11th Cir. 2005) (A state may not unilaterally modify a requirement in a SIP without submitting the proposed change to the EPA for approval.)

That agricultural sources must obtain offsets pursuant to the federally-approved District rule 2201 was recently upheld in *Association of Irrigated Residents v. C & R Vanderham Dairy*, No. 1:05-CV-01593 (OWW), 2007 WL 2815038 (E.D. Cal. Sept. 25, 2007).

F. The District's Best Available Control Technology Analysis Is Flawed

Rule 2201 §3.9 defines best available control technology as the most stringent of technologies “achieved in practice for such category and class of source.” There are two BACT technologies that are achieved in practice and particularly promising for this project. Dairy emissions are controllable using (1) enclosed and connected milk parlors and cow housing units vented to biofilters, and (2) anaerobic digester systems. Because these technologies are achieved in practice, the District must require them as BACT.

7 A significant number of anaerobic digesters are in use in California and in other parts of the United States, primarily at dairies, and they are in widespread use in Europe (US EPA 2007c, USEPA 2006b). The EPA described biogas recovery systems using anaerobic digesters as a “proven technology” as far back as 2002 (US EPA 2002). Thus, digesters are an “achieved in practice” technology and are required pursuant to the EPA-approved SIP rules. The District cannot simply ignore the law, and must require digesters as BACT as an “achieved in practice” technology.

The District's BACT analysis for the Van Der Kooi Dairy goes one step further with enclosed milking parlors and cow housing units vented to incinerators or to biofilters, identifying them as technologically feasible but subsequently eliminating them from consideration on the basis of cost-effectiveness (BACT Analysis at 3-8). This is in direct conflict with District policy regarding this technology. District Rule 4570 identifies vented enclosures as Class 2 Mitigation Measures equivalent to BACT (*see* 4570-2 – 4570-3) for cow housing structures (4570-10), milk parlors (4570-9), feed storage (4570-8), and manure storage (4570-11) (Rule 4570, § 5.6B-F). Furthermore, in its BACT Analysis, the District notes that “[t]he District has found that the mitigation measures required by District Rule 4570 are cost effective and technologically feasible for confined animal facilities.” (BACT Analysis at 8).

As stated above and according to the District's own analyses for other, similar projects, enclosed barns are commonly in use in other parts of the country, including the South, where temperatures tend to be high (SJVAPCD 2007a, South Lakes Dairy Application Review

Appendix D at 13). Regarding biofilters, the Dairy Permitting Advisory Group, convened by the District, states that “today there are more than 500 biofilters in Germany and in the Netherlands. In agriculture, biofiltration is widely used to control emissions from enclosed swine facilities and have been reported to be used in dairy situations from enclosed, mechanically ventilated housing and manure storage areas” (DPAG 2006 at 20). These technologies have been reported to be used at dairies and are widely used at swine facilities, which are of the same category or class as dairies.

7 Thus, these technologies are achieved in practice and are required pursuant to the EPA-approved SIP. However, the District did not even carry out an achieved in practice determination for the technologies. The District cannot legally eliminate these technologies on the basis of cost-effectiveness alone. If a control technology is achieved in practice, that control is required regardless of cost. A cost-effectiveness analysis is only performed when technologically feasible control technologies are not achieved in practice for a category and class of source and must therefore be evaluated on a case-by-case basis to determine whether they can be used at the applicant source. Though the District claims that a settlement agreement with the dairy industry prevents it from making a determination that *any* control technology is achieved in practice for San Joaquin Valley dairies (BACT Analysis at 1), a settlement agreement does not trump the requirements of the District’s federally-enforceable Rule 2201 nor the factual record.

G. Other Concerns

8 We are concerned with the calculations that went into the District’s Ambient Air Quality Analysis – Risk Management Review for the Van Der Kooi Dairy. First, the District has not justified the use of its so-called “Interim Significance Level” for determining whether the project will contribute significantly to a violation of the 24-hour standard for PM-10. EPA’s established a significance level of 5 $\mu\text{g}/\text{m}^3$ while the District has now established a 10.4 $\mu\text{g}/\text{m}^3$ threshold of significance. Conveniently, while making only a minor reduction in the total increase in PM-10 from the project (16,910 lbs/year in a June 16, 2006 analysis went down to 15,357 lbs/year in the final February 27, 2007 analysis), the Facility Totals plummeted from 33.7 $\mu\text{g}/\text{m}^3$ in the 2006 analysis (well above EPA’s significance threshold) down to 5.73 $\mu\text{g}/\text{m}^3$ in the 2007 analysis (still above EPA’s threshold, but below the District’s new “interim significance threshold.” These calculations are suspect and should be explained.

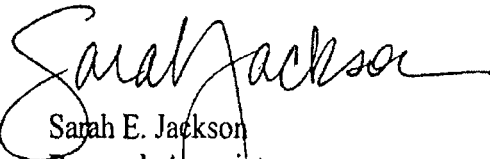
We are further concerned that the potentially dramatic underestimation of air emissions and impacts to air quality from the project made for a flawed CEQA analysis. Attached to this letter are comments documenting our concerns with regard to the CEQA process that has yet to be completed.

CONCLUSION

If you have any questions regarding these comments, please do not hesitate to contact Sarah Jackson at (510) 550-6725 or sjackson@earthjustice.org. We look forward to working with the San Joaquin Valley Unified Air Pollution Control District now and in the future to reach our shared goals of reducing air pollution emissions and protecting public health, biological diversity, and our environment. Thank you for your time and consideration of our concerns.

Please place us on the mailing/notification list for all future environmental decisions regarding the Van Der Kooi Dairy (email preferred).

Sincerely,



Sarah E. Jackson
Research Associate
Earthjustice