



1515 CLAY STREET, 20TH FLOOR
P.O. BOX 70550
OAKLAND, CA 94612-0550

Public: (510) 622-2100
Telephone: (510) 622-2131
Facsimile: (510) 622-2270
E-Mail: raissa.lerner@doj.ca.gov

February 29, 2008

Via Facsimile and U.S. Mail

Craig M. Murphy
Supervising Planner
Kern County Planning Dept.
2700 "M" Street, Suite 100
Bakersfield, CA 93301-2370

RE: Draft DEIR for Proposed Corn Ethanol Plant by Cilion, Inc.

Dear Mr. Murphy:

The Attorney General submits these comments regarding the County's draft environmental impact report ("DEIR") for a corn ethanol plant proposed to be built by Cilion near Famoso.¹ The plant will produce up to 55,000 million gallons per year of ethanol from corn imported from the Midwest, and wet distillers' grains to be sold as animal feed within 60 miles of the plant location. The DEIR reflects that plant operations alone will emit 179,000 metric tons of carbon dioxide (CO₂) per year. In addition, greenhouse gases will be generated and released by the energy and transportation requirements of bringing corn feedstock to the plant, producing the fuel and distillers' grains, and shipping finished products to their respective markets, although the DEIR does not take these emissions into account.

The County should fully assess and analyze in the EIR the greenhouse gas emissions of constructing and operating this type of ethanol plant at this location, including not only the CO₂ that operation of the plant will emit at the site, but emissions involved in importing corn from the Midwest and transporting finished products to buyers. The County should consider all feasible mitigation measures to avoid, minimize or offset the anticipated greenhouse gas emissions of operating a corn ethanol plant with imported feedstock at this location.

Global warming presents profoundly serious challenges to California and the nation. While construction of corn ethanol plants in California will provide a local source of alternative fuel, the greenhouse gas emissions associated with its production using corn imported from distant locations must be disclosed and mitigated.

Climate Change

¹ These comments are not made on behalf of any other California agency or office.

Greenhouse gases accumulate in the atmosphere and cause the trapping of heat near the Earth's surface. Increased atmospheric concentration of these gases causes average temperatures to increase, with adverse impacts on humans and the environment.² According to NASA's James Hansen, continuing the current rate of emissions will result in "disastrous effects, including increasingly rapid sea level rise, increased frequency of droughts and floods, and increased stress on wildlife and plants due to rapidly shifting climate zones."³ The impact on human health is expected to be severe, including more widespread incidence of vector-borne diseases such as malaria, declining crop productivity and fish stocks, worsening of ground-level ozone causing adverse pulmonary and cardiovascular health, decreased water supplies, more extreme weather events, flooding and drought with consequent effects on infrastructure.⁴

The atmospheric concentration of CO₂ is now approximately 379 parts per million (ppm), higher than any time in the preceding 650,000 years, and rising.⁵ According to experts, an atmospheric concentration of CO₂ "exceeding 450 ppm is almost surely dangerous" to human life due to the climate changes it will effect, "and the ceiling may be even lower."⁶ Past and current GHG emissions from human activities have pushed the planet close to a tipping point, where strong amplifying effects on the climate are prompted by only moderate additional warming. Experts predict that if we continue "business as usual," atmospheric concentrations of CO₂ will exceed 500 ppm by the end of the century.⁷ Contrary to the equivocal position in the DEIR (at 4.3-71-72), the overwhelming scientific consensus is clear that human activities that release CO₂ to the atmosphere are, and have been, warming the planet.

² Intergovernmental Panel on Climate Change, Fourth Assessment Report (IPCC 4th) (2007), Working Group (WG) I, Frequently Asked Question 2.1, *How do Human Activities Contribute to Climate Change and How do They Compare with Natural Influences?* <http://ipcc-wg1.ucar.edu/wg1/wg1-report.html>

³ <http://www.giss.nasa.gov/research/news/20070530/>; see also Hansen et al., *Dangerous Human-Made Interference with Climate* (2007) 7 Atmos. Chem. Phys. 2287–2312 http://pubs.giss.nasa.gov/docs/2007/2007_Hansen_et_al_1.pdf.

⁴ IPCC, *Climate Change Impacts, Adaptation, and Vulnerability, Working Group II Contribution to the Intergovernmental Panel on Climate Change Fourth Assessment Report, Summary for Policymakers* at 7-9 (2007). <http://www.ipcc-wg2.org/>

⁵ IPCC 4th, WG I, Frequently Asked Question 7.1, *Are the Increases in Atmospheric Carbon Dioxide and Other Greenhouse Gases During the Industrial Era Caused by Human Activities?* <http://ipcc-wg1.ucar.edu/wg1/wg1-report.html>

⁶ See http://www.nasa.gov/centers/goddard/news/topstory/2007/danger_point.html

⁷ Long term scenarios developed by the IPCC project dramatic increases in CO₂ concentrations in the atmosphere, ranging from 535 ppm to 983 ppm by 2100, 41% to 158% higher than current levels. See <http://www.epa.gov/climatechange/science/futureac.html>

With Executive Order S-3-05, and AB 32, the Global Warming Solution Act of 2006, the Governor and Legislature recognized California's vulnerability to the adverse effects of climate change and the urgency of curbing GHG emissions. California is committed to reducing emissions to 1990 levels by 2020, and to 80% below 1990 levels by 2050. Achieving the first benchmark will require California to reduce emissions by at least 29% below projected levels.⁸ And, experts say we have very little time to take decisive action.⁹ According to Rajendra Pachauri, Chairman of the United Nations Intergovernmental Panel on Climate Change ("IPCC"), "If there's no action before 2012, that's too late. What we do in the next two to three years will determine our future. This is the defining moment."¹⁰ Governor Schwarzenegger has stated repeatedly: "The debate is over. We know the science, we see the threat, and the time for action is now."¹¹

Pursuant to these mandates, the California Air Resources Board (CARB) is developing a low carbon fuel standard (LCFS) that will require fuel providers to ensure that the mix of fuel they sell in California meets, on average, a declining standard for GHG emissions. The LCFS will measure the carbon emissions of a fuel on a "lifecycle" or "field to wheel" basis (including upstream feedstock extraction, fuel refining, and transport to market) in order to capture all emissions from fuel production that contribute to global warming. Compared to ethanol made from waste materials, corn ethanol appears to be far less sustainable when viewed through a field to wheel carbon measure,¹² and may not answer California's fuel needs under the LCFS.¹³

⁸ California Energy Commission, 2007 Integrated Energy Policy Report, December 2007, at p. 16. See http://www.energy.ca.gov/2007_energypolicy/index.html

⁹ http://www.nasa.gov/centers/goddard/news/topstory/2007/danger_point.html (continuing business-as-usual "would be a guarantee of global and regional disasters.")

¹⁰ Rosenthal, *U.N. Chief Seeks More Leadership on Climate Change*, N.Y. Times (November 18, 2007).

¹¹ Transcript of Governor Schwarzenegger's remarks at Climate Action Team press conference, April 2006, available at: <http://gov.ca.gov/speech/168/>

¹² See U.S. Dept. of Energy, *Cellulosic Energy Research and Development*, available at: http://www.eere.energy.gov/afdc/fuels/ethanol_research.html#print; Hammerschlag, *Ethanol's Energy Return on Investment: A Survey of the Literature 1990 - Present*, 40 Environ. Sci. Technol. 2006, 1744, at 1749 ("cellulosic ethanol displaces profoundly more nonrenewable energy than corn ethanol."); Hill, *et al.*, *Environmental, Economic, and Energetic Costs and Benefits of Biodiesel and Ethanol Biofuels*, v. 103 PNAS no. 30 (July 2006), at p. 1.

¹³ See, e.g., Governor's Office White Paper, *The Role of a Low Carbon Fuel Standard in Reducing Greenhouse Gas Emissions and Protecting Our Economy* (Jan. 2007) at p. 5, Table 1. See also U.S. Dept. of Energy, *Energy Efficiency and Renewable Energy Biomass Program*, at: www1.eere.energy.gov/biomass/printable_versions/news_detail.html?news_id=10603

Alternative fuels made from plant or waste materials other than food crops grown on productive agriculture lands may not only be carbon neutral, but have potential to be carbon-negative.¹⁴

Assessment of the GHG Contribution of the Proposed Project

Global warming is an “effect on the environment” under the California Environmental Quality Act (“CEQA”), and an individual project's contribution to global warming can be significant or cumulatively considerable.¹⁵ CEQA requires that “[e]ach public agency shall mitigate or avoid the significant effects on the environment of projects that it carries out or approves whenever it is feasible to do so.”¹⁶ This requirement is “[t]he core of an EIR.”¹⁷

At the outset, the DEIR should fully account for the GHG emissions of operating a corn ethanol plant at the proposed location, taking into account the energy and transportation requirements of producing both the ethanol and the distillers grain co-product from imported corn, and bringing those products to their respective markets. This requires a project-specific analysis that estimates the amount of fuel and other energy that will be consumed to operate the proposed ethanol plant, including to produce and transport the plant’s feedstock to the site, and to transport finished products to their destinations. The DEIR lacks any assessment of the GHG impact of the proposed project, beyond acknowledging the CO₂ emissions that will be generated in the fermentation and combustion processes involved in production. This is not an adequate assessment of the environmental impact of the project under CEQA.

CEQA Significance Analysis and Mitigation Measures

The DIER states that because there are no regulatory thresholds available, it cannot be determined whether this project will have a significant impact on global warming, and that it is not possible to assess whether the project’s contribution to global warming would be cumulatively considerable within the meaning of the CEQA guidelines. (DEIR at 4.3-73-74.) Whether or not the state or any agency adopts regulatory thresholds or mitigation guidelines that apply to this type of project, the lack of official mandates does not absolve the County from its obligation under CEQA to determine the significance of, and adopt feasible mitigation for, the anticipated greenhouse gas emissions from the proposed project.

¹⁴ See, e.g., D. Tilman, *et al.*, *Carbon-Negative Biofuels From Low-Input High-Diversity Grassland Biomass*, Science, v. 314 (Dec. 2006) at 1598.

¹⁵ See Cal. Pub. Res. Code section 21083.05, subd. (a); see also Sen. Rules Comm., Off. of Sen. Floor Analyses, Analysis of Sen. Bill No. 97 (2007-2008 Reg. Sess.) Aug. 22, 2007.

¹⁶ Public Resources Code §§ 21002.1(b) and 21081; see also, *Mountain Lion Foundation v. Fish and Game Commission*, 16 Cal.4th 105, 134 (1997).

¹⁷ *Citizens of Goleta Valley v. Board of Supervisors of Santa Barbara County* (1990) 52 Cal.3d 553, 564-65.

The DEIR concludes that current policies suggest that the effect of the project's CO₂ contribution to the atmosphere, to the extent that this effect was assessed, "may be considered cumulatively significant." (DEIR, 4.3-74.) This is appropriate given that CARB's new reporting requirements for AB 32 target "the most significant GHG emissions sources," and include any industrial source that emits over 25,000 metric tons of CO₂ per year from general stationary combustion.¹⁸ A source such as the proposed project that will emit directly 179,000 tons per year, and cause the emission of many more thousands of tons indirectly, would appear to be cumulatively significant.

The requirement that a public agency mitigate or avoid the significant effects on the environment of projects that it approves whenever it is feasible to do so is a critical component of the EIR process. Before approving this project, the County must "examine reasonable, feasible options for mitigating or avoiding the project's contribution" to climate change. Cal. Code Regs., tit. 14, § 15130, subd.(b)(5). The DEIR does not include any mitigation measures aimed at reducing the greenhouse gas emissions of the project, stating such measures are not available, and that future regulations will take care of the issue. The DEIR contains no discussion of the feasibility of any of the mitigation strategies listed at 4.3-74, stating merely that several have been incorporated into the project, and that the only feasible mitigation "may involve the adoption of ordinances or regulations." The DEIR thus leaves unaddressed the project's cumulatively significant contribution to the one of most pressing environmental problems of our day. The County's failure to analyze the feasibility of specific mitigation measures to avoid or reduce or offset the anticipated GHG emissions of the proposed project violates CEQA.

The DEIR should fully assess the feasibility of incorporating into the project specific mitigation measures to reduce the GHG emissions of the project. These could include, in addition to the select CARB strategies mentioned in the DEIR: co-generation, use of renewable energy, energy efficient design and operational protocols, maximizing water efficiency, use of reclaimed water, carbon dioxide capture, design for capability to implement emerging carbon sequestration technologies, design for capacity to switch to waste feedstock or locally produced cellulosic materials, strict truck, train and off-road idling restrictions, use of 2007 and newer model trucks, low emissions vehicles and newest available diesel engines, and other measures that could reduce the carbon impact of transporting corn to the site and finished products to markets, for example. The County, project proponent and its consultants are in the best position to propose and evaluate the feasibility of particular measures. CEQA requires that analysis and discussion in the draft environmental review.

In lieu of, or in addition to, on-site mitigation measures, the project applicant could be required to fund offsite projects that achieve net reductions of GHG emissions as a means of mitigating the significant GHG emissions of this project. There are several opportunities to

¹⁸ CARB Proposed Regulation For the Mandatory Reporting of Greenhouse Gas Emissions, to be added to Title 17, California Code of Regulations, proposed section 95101, subd. (b). Available at: http://www.arb.ca.gov/regact/2007/ghg2007/attachbres07_54.pdf

Craig M. Murphy
February 29, 2008
Page 6

lower emissions of greenhouse gases in the Central Valley that could be funded in this manner. The San Joaquin Valley Air Pollution Control District is prepared to help you identify such projects. We strongly encourage you to contact them to explore this possibility as a means of reducing the cumulative contribution of this project to climate change.

We urge the County to evaluate and discuss in the EIR all reasonable project alternatives and feasible mitigation measures to address the anticipated sources of greenhouse gas emissions of this project including, if necessary to reduce the project's emissions to a level of insignificance, funding of offsite projects that result in net carbon reductions.

Sincerely,

/S/

RAISSA S. LERNER
Deputy Attorney General

For EDMUND G. BROWN JR.
Attorney General