COMMUNITY ALLIANCE *for* RESPONSIBLE
ENVIRONMENTAL STEWARDSHIP

December 5, 2008

Mary D. Nichols, Chair
California Air Resources Board
1001 I Street
Sacramento, CA 95814

Re: Comments on "Climate Change Proposed Scoping Plan," October 2008

Dear Ms. Nichols:

On behalf of the Community Alliance for Responsible Environmental Stewardship ("CARES"), we submit the following comments to the California Air Resources Board regarding the above-reference Proposed Scoping Plan (PSP). CARES is an environmental coalition of California's dairy producer and processor associations, including the state's largest dairy producer trade associations (***Western United Dairymen, California Dairy Campaign*** and ***Milk Producers Council***) and the largest milk processing companies and farmer-owned cooperatives (including California Dairies, Inc., Dairy Farmers of America-California and Land O' Lakes). Formed in 2001, CARES is dedicated to promoting a balance of economic and environmental sustainability for California dairies.

As we previously noted in our October 2, 2008 comments on the earlier Draft Scoping Plan, CARES agrees that voluntary implementation of manure digester systems can be an important element in California's effort to reduce greenhouse gases (GHG) pursuant to AB 32's mandate. We agree with the PSP's assessment (under Section II. "Recommended Actions," p. 66) that "economic incentives such as marketable emission reduction credits, favorable utility contracts, or renewable energy incentives will be needed" in order to make manure digesters an economically viable opportunity for California's dairy farms. With such economic incentives, we believe that California's dairy farms can become an important source of GHG emission reductions in years to come.

However, we are concerned that the identification and enumeration of obstacles to manure digester development California remains significantly understated in the PSP. This is potentially a missed opportunity to identify these barriers and in doing so provide a road map for actions that should be taken in the next five years to assist in removing

Community Alliance for Responsible Environmental Stewardship
915 L Street #C-438, Sacramento, CA 95814
(916) 441-3318
(916) 441-4132
www.dairycares.com

those barriers. We recommend that additional language be included in the final plan that identifies and describes the obstacles in more detail, including but not limited to:

- **Recently increased requirements for pollution control performance on biogas engines.** Newly installed manure biogas digesters, which typically combust the biogas in an engine to generate electricity for on-site use or export to the grid, have recently come under new requirements to meet extremely low levels of emissions for criteria pollutants, especially oxides of nitrogen. These levels of emission control have only come into effect in recent months and are far lower than what was previously required for biogas digester internal combustion engines (ICEs) or what is required for pre-existing biogas ICEs. Meeting these stringent performance standards in most cases add hundreds of thousands of dollars if not millions of dollars to capital and operating costs over the life of a single project. Therefore, all previous economic performance data for digesters in California are essentially out of date; any existing performance data such as that from the California Energy Commission must be viewed through the lens of the newer requirements. Future economic analysis must include not only the capital and ongoing replacement cost of additional gas treatment equipment and combustion exhaust (catalytic) technology, but also added costs related to maintenance and potential down time due to the learning curves associated with these new and largely untested (on biogas) treatment technologies. At this time, data simply do not exist because these next-generation emissions controls have little or no track record in nearly all cases. Importantly, operating these technologies successfully may go well beyond the ability and expertise of individual dairy operators, who may need to rely on additional, outside and potentially costly expertise to keep digesters operating in a manner that meets air pollution control standards. This fact must be considered in any economic analysis and will likely have a synergistic effect on increasing costs by creating more labor and a greater likelihood that the labor must be outsourced to outside professionals.

- **Successful digester business models of the future will require more complex technologies, sophisticated economic partnerships and larger capital requirements.** As part of an ongoing effort to improve the basic economics of manure biogas digesters (e.g. capital and operating cost per unit of energy produced) while maintaining sound pollution control performance (for all environmental media including air and water quality), entrepreneurs and technology providers are attempting increasingly complex models. These include:

    - above-ground steel and/or concrete manure impoundments for environmental protection and improving efficiency of biogas production
    - wider implementation of new technologies for collecting manure, such as vacuum trucks
    - larger overall economies of scale (larger digesters and/or regional digesters)

- mixing other waste materials such as agricultural processing by-products with manure to improve biogas production and overall economics (co-digestion),
- improved emissions controls on ICEs
- alternatives to ICEs such as fuel cells and microturbines, which produce potentially fewer emissions but remain economically unfeasible and do not yet have a proven track record for manure biogas digesters
- collecting, cleaning, pressurizing and delivering biogas directly (via pipelines) to publicly owned utilities

While many of the above alterations to the overall business and technology models for digesters show promise for long-term success, they remain in relatively early stages of development. Nearly all of them are well beyond the ability of an individual dairy operator to implement on his or her own. These promising new ways of building digesters often require much larger capital investments, and construction, operation and maintenance skills that cover wide and diverse areas of expertise. Many could require complex partnerships with utilities, entrepreneurs, outside technology providers, professional engineers and many others. As such, CARES strongly believes that the most effective way to develop digesters in California is to identify successful business models and incentivize those models to bring together the partners necessary to create environmentally friendly and economically feasible digesters.

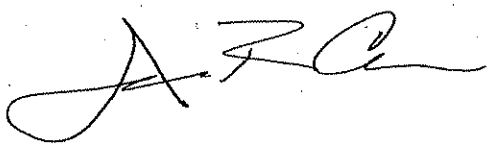
For this reason, CARES further disagrees with and objects to the notion as stated on p. 67 of the PSP that "the voluntary approach will be re-assessed at the five-year update of the Scoping Plan to determine if the program should become mandatory for large dairies by 2020." Such a statement is based on the premise that once the (so far inadequately identified) obstacles are addressed, the digesters will become economically viable and therefore should become mandatory. In fact, the opposite is true: a mandate would worsen the economic obstacles preventing widespread digester development. A substantial potential economic component in digester economics is the creation and sale of greenhouse gas reduction credits, any mandate of digesters in California will eliminate the ability to generate emission reduction credits.

In CARES' view, the more appropriate application of mandates is on the demand side of the equation. By requiring publicly owned utilities to source their energy needs from renewable resources (as the PSP correctly expands), we can create economic conditions that will incentivize digester development and reward those willing and able to develop the complex partnerships to provide the energy. Again, any digester "mandate" aimed at dairy operators in the future would not improve the economics, but worsen them.

We would recommend altering the language on page 67 of the Proposed Scoping Plan to read **"The voluntary, incentive-based approach will be re-assessed in five years to evaluate the success of this approach and to determine the most effective strategies for realizing reductions from large dairies by 2020."**

On behalf of CARES, we look forward to working with your Board to realize the goals outlined in AB 32 and improving the environment and economy for all the people of California.

Sincerely,



J.P. Cativiela
CARES Program Coordinator