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April 01, 2014

Yachun Chow (ychow@arb.ca.gov)
California Air Resources Board
1001 I Street
P.O. Box 2815
Sacramento, CA 95812-2815**Climate Wedge Comments on Informal Draft -
ARB Compliance Offset Protocol for Rice Cultivation**

Dear Ms. Chow,

We are submitting comments on behalf of our client, Climate Wedge, to raise certain concerns Climate Wedge has with respect to the informal discussion draft rice cultivation protocol released by the California Air Resources Board (ARB) for comment on March 14, 2014 (Draft Protocol). Climate Wedge has long been involved in the compliance protocol process, including submitting comments on protocols and participating as a member in the Rice Protocol Technical Working Group.

As an initial matter, we are strongly in favor of the development of the Draft Protocol and applaud ARB for its continued leadership not only in connection with administering the AB 32 statute, but in expanding the opportunities to achieve the statutory goals of reducing greenhouse gas emissions by thoughtfully including the agricultural sector as part of that solution. We believe the Draft Protocol, if properly conceived, has the potential to significantly reduce methane emissions from the rice cultivation sector. This protocol could be a model for others to follow in balancing the economic interests of the agricultural community, the need to achieve commercial scale in the utilization of the protocol (with the accompanying greenhouse gas emission reductions), and the maintenance of critical waterfowl habitat to avoid any significant adverse impacts on migratory birds and other important bird species. We believe the development of compliance protocols like the Draft Protocol to support offset credits is an essential component of a well-functioning cap-and-trade program, capable of delivering emission reductions at the lowest cost.

Climate Wedge is committed to assisting ARB in the preparation of a successful protocol but is concerned that recent changes to the Draft Protocol--namely, the exclusion of rice straw baling as an eligible activity and inability to aggregate individual projects--will significantly diminish the commercial viability of any investment in rice cultivation projects. These comments are intended to strengthen the Draft Protocol and ensure that

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the significant work completed by ARB and the Draft Protocol Work Group members is not inadvertently diminished by these very recent changes to the Draft Protocol. **Thus, we respectfully urge ARB to re-insert rice straw removal after harvest (also known as baling) as an eligible activity and continue to work out the appropriate details for inclusion of aggregation as well.** The issues we raise are not unique to Climate Wedge but instead will be faced by any potential investor, developer or compliance offtaker of rice cultivation projects. By addressing the concerns we describe below, ARB will be ensuring the Draft Protocol is effective and utilized to the maximum extent possible thus fulfilling the goals of the development of the Draft Protocol.

We look forward to engaging with ARB on the development of the Draft Protocol and would welcome the opportunity to further discuss our comments on the Draft Protocol at your convenience.

I. Summary of Comments

- **Rice straw removal after harvest (i.e., baling) should be reinserted as an eligible activity in the Draft Protocol.** The exclusion of baling of rice straw in the Draft Protocol runs counter to the primary objective of achieving the maximum amount of greenhouse gas emissions to support the goals of AB 32. The greenhouse gas emission reductions associated with rice straw baling account for a material amount of the total project emission reductions. Excluding baling and the corresponding decrease in creditable emission reduction may endanger the entire commercial viability of rice projects due to the relatively small amount of methane emissions from individual projects (that are only able to pursue dry seeding or early drainage).
- Climate Wedge recognizes the importance of maintaining critical habitat for migratory birds and other important bird species. To date, however, rice straw baling practices have not been adequately demonstrated to negatively impact such wildlife habitat or wildlife. To our knowledge, the only study regarding impacts on waterfowl habitat from rice straw baling presented to ARB is the study prepared by Point Blue Conservation Science (PBCS). **We do not believe the PBCS study is sufficiently robust to justify the exclusion of baling (and thus the foregoing of significant methane emission reductions).** We intend to further evaluate what, if any, potential impacts on waterfowl might result from the inclusion of rice straw baling under the Draft Protocol and will share with ARB any information gained from this evaluation that may provide a more sound scientific basis for ARB decision-making.
- Project activities eligible for crediting in the Draft Protocol were inaccurately designated as a "Quantification Methodology" in the Draft Protocol. **We recommend that ARB correct this error by removing the "Quantification Methodology" notation in Chapter 2 of the Draft Protocol.** The project activities eligible for crediting are qualitative determinations, not quantification

methods such as formulas or equations. AB 32 does not define the term “quantification methodology” but we think the plain meaning of the word “quantification” refers to a narrower category of ARB decision-making than determining which emission reduction activities should receive credit under the program.

- **ARB should allow the aggregation of projects under the Draft Protocol.** Aggregation allows the protocol to reach the appropriate level of scale needed for commercial investments that deliver meaningful volumes of emission reductions due to the relatively small amount of GHG reductions for any individual rice cultivation project.

II. Detailed Comments

A. Rice Straw Baling Should be Reinserted in the Draft Protocol

1. Removing Baling from the Draft Protocol Ignores Significant Methane Emission Reduction Opportunities

The emission reductions from rice straw baling practices have been well studied and are demonstrated to be a material amount of the total potential project emission reductions from rice cultivation activities. By removing the rice straw prior to flooding each field, such straw does not anaerobically decay under water, which thereby avoids the creation of methane emissions based on such anaerobic decay. As ARB knows, methane is a potent greenhouse gas emission and forsaking such emission reductions from the Draft Protocol runs counter to the underlying purpose of AB 32 and the development of the protocol itself. With the creation of market-based policies that are aligned with environmental and social objectives, there is also a direct correlation between environmental performance and commercial viability. In other words, for each dollar invested into activities under the protocol, the more emission reductions achieved means greater financial return for all investors. This positive correlation is precisely what ARB should be encouraging and is at the heart of why market-based approaches offer such tremendous potential to achieve the scale of emission reductions needed to solve the challenge of climate change. Conversely, when the protocol is altered to significantly reduce the emission reduction potential, it has a direct negative impact on the commercial viability of such protocol.

Baling activities have been an integral part of the development of rice cultivation protocols from their inception. Both the Climate Action Reserve (CAR) and American Carbon Registry (ACR) voluntary rice cultivation protocols include baling activities for all of the reasons discussed above. Even after release of the Draft Protocol, ARB’s own website describing the protocol continued to state that rice straw baling is being considered as an eligible activity under the protocol.

In addition, and particularly relevant for California, significantly more water is required to adequately flood a non-baled field as compared with a baled field. Thus, not only does baling the field reduce direct greenhouse gas emissions by avoiding the creation of methane from organic decay, it also reduces the strain on California's critical water resources by allowing baled fields to be adequately flooded using less water. This is an ancillary, yet important, environmental benefit of including baling practices as an eligible activity (and a related detriment by excluding them). As such, for both environmental reasons and the commercial viability of the protocol, we urge ARB to re-insert rice straw baling into the Draft Protocol.

2. Any Potential Adverse Impacts on Avian Wildlife Have Not Been Adequately Demonstrated

We recognize the importance of maintaining critical migratory bird habitat and the habitat of other important waterfowl species. We understand that concerns have been raised over the impacts that baling activities could have on the behavioral preferences for certain bird species when comparing flooded rice fields that have been baled. We understand that the evidence received by ARB is contained in a four page study prepared by Point Blue Conservation Science (PBCS).

Based upon our initial review of the PBCS study, it does not appear to provide a robust scientific basis upon which ARB should base its decision to remove rice straw baling activities from the Draft Protocol. The study itself notes that the results are preliminary and further work is necessary. The "uncertainty bands" presented in the accompanying charts on the data findings are extremely wide, essentially negating any meaningful conclusions that should be reached from this study. The PBCS study reaches no specific conclusions with respect to any adverse impacts to the environment or avian habitat. Putting aside the overlapping uncertainty bands in baled and non-baled field data, the study observes that shorebird and dabbling duck densities were significantly different in non-baled fields than baled fields *only when considering two years combined*. Notably, for dabbling ducks and shorebirds, the study found that "there were no significant differences between treatments [baling versus non-baling] in either year alone". See PBCS Study, p. 4. In addition, the study did not find a significant difference in use of baled versus non-baled fields by long-legged waders. In fact, if the White-faced Ibis are included in the results, there is actually a preference by long-legged waders *for* baled fields over non-baled fields, or at least according to what this one particular preliminary study would seem to indicate.

In short, the study presents no clear basis to remove rice straw baling as an eligible activity under the Draft Protocol. The data are not significantly different when considered year-to-year. Long-legged waders appear to prefer baled fields or at least appear unaffected by baling. Importantly, the study itself notes that there may be other factors at issue affecting the waterfowl usage that need to be analyzed--in particular the method of post-harvest treatment (e.g., whether stubble straw is incorporated). The study acknowledges that baled fields included in the study were less likely to have stubble

straw incorporated and that stubble straw incorporation is an "important" covariate to consider. Thus, it is possible that stubble straw incorporation or some other variable is the reason for the potential preference by some waterfowl for non-baled fields rather than the baling itself. Climate Wedge intends to further investigate whether there is a more robust analysis on the potential impacts to waterfowl habitat resulting from baling practices, leveraging the existing literature and including a deeper examination of historic trends as well as a review of any insight that can be derived from a more statistically significant geographical data set. We will be happy to share any conclusions that can be reached based upon such further examination.

3. "Eligible Project Activities" Should not be Deemed a "Quantification Methodology" Exempted From the Administrative Procedure Act

In the Draft Protocol, "eligible project activities" in Chapter 2 are designated as a "Quantification Methodology" and thus exempt from the California Administrative Procedure Act (APA). While still subject to public review and the Board adoption process, quantification methodologies can be updated without the need for rulemaking documents. Non-quantification methodologies must go through the full regulatory development process. We believe the designation of "eligible project activities" as a "Quantification Methodology" is in error and should be removed. The term "quantification methodology" on its face refers to formulas or equations, not to qualitative criteria like eligible project activities (i.e. whether a particular project activity is included or not into the protocol as a whole based on non-volumetric considerations, versus what the comparative quantitative effect of that project activity would be). The specific criteria for eligible project activities should be a non-quantification methodology and subject to the full regulatory development process.

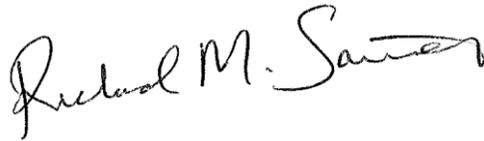
B. The Ability to Aggregate Rice Cultivation Projects Should be Reinserted in the Draft Protocol

To support the full utilization of the rice protocol and to ensure that the maximum benefits under the protocol are achieved for the climate, the rice growers and the investment community alike, ARB should allow aggregation of individual rice cultivation projects. Rice cultivation projects are individually small. It is not feasible or practical to achieve the desired scale of participation under this protocol without the ability to meaningfully aggregate individual parcels under a single project submission. Without some form of aggregation, it is unlikely that this protocol will achieve sufficient levels of credits on a per project basis to make the project commercially viable. Transaction costs will hinder many individual rice growers from proceeding through the time-consuming registration and verification process on their own, especially on a parcel-by-parcel basis. Aggregators play an important role in developing compliance offset projects at scale, which goes hand in hand with achieving a deeper penetration of the improved agricultural practices encouraged by the protocol, and with realizing the economic benefits to the rice growing community. All of this, in turn, is aligned with the

over-arching goal under AB 32 of achieving the maximum amount of greenhouse gas emissions feasible. At the end of the day, this is not a compulsory obligation on rice growers. To the extent the economic benefits to the rice growers are marginal and the administrative costs are high, the protocol will not be utilized to its potential. Offering rice growers the opportunity to maximize their economic returns while reducing their administrative costs at least puts the rice growers in a better position to consider the benefits of participating in this important protocol. We believe that there are a number of ways to ensure that the environmental integrity of the protocol is maintained and ensured while allowing for some form of aggregation. We are happy to further discuss this point with ARB to help strike the appropriate balance in this regard.

On behalf of Climate Wedge, I look forward to engaging with the ARB on the development of the Draft Protocol and would welcome the opportunity to further discuss our comments on the Draft Protocol.

Regards,

A handwritten signature in black ink that reads "Richard M. Saines". The signature is written in a cursive, flowing style.

Richard M. Saines
Partner

cc: Rajinder Sahota, Greg Mayeur