



California Air Resources Board
1001 I Street
Sacramento, California

June 30th 2014

RE: Comments on Proposed Rice Cultivation Offset Protocol and Updates to Existing Offset Protocols

To Whom it May Concern:

Thank you for the opportunity to comment on the proposed rice cultivation offset protocol and updates to existing offset protocols. As a project developer which has issued over 300,000 ARBOCs from nine projects and with additional projects listed pending review, Camco wishes to focus its comments on updates to existing offset protocols. Camco has direct experience of the ARB Livestock Protocol (“Protocol”) with one project having received a Positive Offset Verification Statement. In addition we are currently evaluating how to transition our early action offset projects to the Protocol. We provide our comments in respect to the Livestock Protocol and a comment in relation to the Forestry Protocol below:

Livestock Protocol

Monitoring Gas Flows:

The protocol permits the use of a single meter to measure gas to multiple destruction devices but does not seem to permit the use of a single meter to meter gas to non-identical destruction devices. Provided the OPO/APD can show that destruction devices were operational or would not let gas through without being operational then the OPO/APD should be able to claim gas destroyed by multiplying the total amount of gas flowing through the meter by the lowest destruction efficiency of the non-identical devices for the period of operation. This approach is conservative, uses monitored data and provides OPOs/APDs with additional flexibility.

Section 3.5 - Offset Project Commencement Date:

States that compliance offset projects must have an offset project commencement date after December 31, 2006. To avoid confusion with regards to the eligibility of offsets projects transitioning from early-action protocols, it would be helpful to clarify here that early-action projects may have started prior to this date and can be grandfathered into the ARB Protocol. It would also be helpful here for ARB to clarify how it intends to treat projects which will deliver manure to a new BCS which previously sent manure to a digester system which has since shutdown. This is particularly relevant for centralized systems which are able to take manure from multiple farms which may have previously



diverted manure to old BCS'. Provided there is a period of time in between the shutdown and when manure is sent to a new BCS system during which manure was handled in an anaerobic environment, OPOs/APDs should be permitted to begin crediting when manure is added to the new BCS.

Figure 4.1:

Camco is aware of technologies which convert biogas to a liquid. The protocol permits a site-specific destruction efficiency to be used where this occurs but Figure 4.1 does not specify how this should be included in the project boundary. Camco suggests that SSR10 and SSR12 be modified to include the conversion of biogas to liquids.

Section 5.2(e) - Site-Specific Destruction Efficiency:

Requires that OPOs/APDs receive prior written approval from the Executive Officer. There are 76 Livestock projects listed or registered on the Climate Action Reserve. If all of these decide to do site-specific tests – and each site may have more than one destruction device – the ARB may need to process in excess of 6 requests per month. Camco supports the ARB permitting the use of site-specific tests but to make the process easy to manage for OPOs/APDs we encourage the ARB to add language stating that if the ARB has not objected to the use of a site-specific test for destruction efficiency within one-week of it being submitted by the OPO/APD then the test shall be deemed approved. We would also appreciate some clarification as to whether tests need to be undertaken for each device every year or whether they are valid for the duration of a projects' crediting period?

Section 5.2(n) - Site-Specific Bo Values:

While permitting site-specific values for other aspects of a project the ARB does not allow OPOs/APDs to measure Bo values directly from the farm. Camco takes site-specific Bo values for effluent water discharged from the digester for each of its Livestock projects. Where it is possible and practical to use site-specific values we believe they should be encouraged: they better reflect the reality at the farm and avoid penalizing projects with over-conservative defaults. The ARB should permit the use of site-specific Bo values in the project scenario provided these are taken according to a methodology approved by the ARB and processed by a recognized laboratory. We would be pleased to forward our Bo methodology onto the ARB to understand our approach.

Section 5.2(d) & 5.2(i):

These two sections are duplicative.

Section 5.2(k) and Equation 5.6 - Venting Events:

This equation / section only represents what occurs during uncontrolled venting and does not accurately represent emissions during a scheduled shutdown of the digester. Typically, scheduled shutdowns are for the purpose of cleaning and/or major maintenance. During shutdown manure is removed from the digester, no more is added and heating is stopped while work takes place. Gas is typically drawn off and destroyed



in a flare as much as possible prior to the digester being opened up. In these instances it does not make sense to estimate emissions based on the flow of gas for the previous seven days but to require the OPO/APD to account for the venting of the maximum amount of gas which can be stored in the digester and to designate the digester as unable to generate offsets for the period it was shutdown.

Table A.4 – Volatile Solids:

Camco welcomes the update to the Volatile Solids Default but we would like to see the ARB use the most recent dataset for 1990-2012 released in April 2014.

Section 5.2(p):

Requires that MCF(ep) be obtained from Table A.5. However, Table A.5. does not contain a system for covered effluent storage. Dairy farms may store effluent water in lagoons with HDPE covers. These are post-digestion, not heated and not monitored. Camco requests that the ARB clarify that OPOs/APDs can use the liquid slurry w/out natural crust cover where HDPE effluent storage lagoons are in place.

Appendix B - Data Substitution:

Camco asks for clarification on the following aspects to the Data Substitution Methodology:

1. Appendix B(c): we are unsure whether this would deem a project unable to generate emissions reductions if one device is inoperable but all other devices are operable. This also seems to contradict 6.1(d)(1). For example, if the thermocouple for a flare was not working Camco would typically assign a BDE of 0% to any gas flowing through the flare during the period of inoperability but any gas flowing through other devices would be credited as normal, provided operability could be demonstrated. Camco suggests removing the last part of Appendix B(c) so that it reads: *“No data substitution is permissible for data gaps resulting from inoperable equipment that monitors the proper functioning of destruction devices”*.
2. Table B.1: In cases where data are missing for greater than one week the current approach specified in Table B.1. would not enable any credits to be generated and appears to contradict 6.1(d)(1). For example, take a flow meter which has to be sent back to the manufacturer for repair and which normally measures gas to a generator: It should be possible to estimate gas sent to the generator by using the kWh output of the generator for the period the flow meter is missing and the 99% confidence limit for methane concentration. Table B.1. appears to require any gas estimated as sent to the generator to be given a 0% BDE. B(c) already requires that no destruction can be credited if the device is inoperable so there does not seem to be a reason as to why the device should be given a BDE of 0%. Camco suggests the wording is modified to: *“To replace the missing data, use the 99% lower or upper confidence limit of all available valid data for the reporting period, whichever results in greater conservativeness”*.



Forestry Protocol

Eligibility of Projects in Alaska

In slide 12 of the presentation given at the offset protocols workshop on June 20 ARB states that it will consider expanding the forestry protocol to Alaska. Camco notes that in the draft forestry protocol released at the workshop there is no provision to include projects in Alaska. We encourage the ARB to review and incorporate the FIA data for coastal Alaska, which has been available since 2011, in the latest Forestry Protocol update.

We would welcome the opportunity to have further dialogue with ARB staff to discuss these comments and the improvements we suggest.

Yours sincerely,

A handwritten signature in blue ink, appearing to read "C. Purshouse", is written over a light blue circular watermark.

Charles Purshouse
Vice President – Carbon Services