



June 30, 2014

California Air Resources Board
1001 I Street
Sacramento, CA 95814
Via web submission

RE: Comments on the Potential Updates to the Compliance Offset Protocol for Livestock Projects (June 20, 2014 discussion draft)

Thank you for the opportunity to provide these comments regarding the updates to the Protocol for Livestock Projects. Origin Climate is a San Francisco-based company whose mission is to combat climate change by bringing emission reduction projects to fruition. Over the past decade, Origin Climate (formerly TerraPass) has been working with dozens of domestic livestock offset projects to issue credits on high-quality registries such as the Climate Action Reserve. We are the Authorized Project Designee on several livestock compliance projects and will be listing several more over the coming months.

We are pleased to offer the following comments on the Proposed Updates to the Compliance Offset Protocol for Livestock Projects:

Most Critical Issues

Section 5.1(i), Ambient temperatures: While it may be appropriate to specify that a weather station should be used with an elevation difference of no more than 300 feet from the project location, the language does not allow for cases in which access to such a weather station is unattainable. It may be a good idea to clarify that data from such a weather station must be used “if available.”

Section 5.1(k), Drainage and cleaning / zeroing out VS: The language here is sufficiently broad to allow many interpretations of what it means to drain and clean a digester. Consistency between verifications could be improved if the text “drainage and cleaning of the anaerobic storage/treatment system” was modified to “*complete* drainage and cleaning *of solid buildup from* the system.” It is common practice for **liquids** to be partially or fully removed from the system for use in irrigation; by contrast, the intentional removal of **solids** build-up is the key factor here.

Section 6.1(b)(1), Requirement of a header flow meter: Requiring the total flow of biogas to be recorded is going to provide a challenge for many projects that are currently being developed without a common header pipe. Oftentimes the backup flare, installed for safety reasons, is connected to the BCS from a different location than the header pipe. We know of several projects set up like this. In such a case, a header flow meter will not measure the total flow without major engineering undertakings to reroute the flare piping while maintaining stable backpressure on the system. At many

sites this backup flare was installed solely for safety purposes and is virtually never used. We feel that this new requirement to monitor total flow in addition to individual destruction device flow is going to (a) prevent many Early Action Projects from ever adopting the new version of the protocol, and (b) increase the barriers for new livestock projects to register with ARB.

Section 6.2(a)(2), Field checks: It is specified in this language that the field check either be carried out by using a portable instrument or manufacturer specifications, but these are not the only ways to a field check can be performed. We work with a project that found the pitot tube method to be extremely difficult with the low flow rates experienced at their flare, and manufacturer specification was silent on field checks. For this project we found the best solution was to install a permanent fixture upstream to perform the field checks. While this was a good solution for the field checks, and is in some ways better than a portable solution, the current language does not permit anything but a portable instrument. The language could be improved by specifying an “in-line” instrument instead of specifying portable nature.

Furthermore, it appears as though the option to have the equipment calibrated by the manufacturer or a certified calibration service – instead of performing a field check – has been removed. This was an oft-used provision of the protocol, as (1) sometimes the equipment is due for factory calibration anyway, and (2) some installations simply do not have good options for an in-field check for calibration accuracy. We encourage ARB to keep this option in the protocol.

Section 6.2(b), Failed field checks: The Sage Prime flow meters have a built-in function to test the drift being experienced. According to the manufacturer, this test can be used as an indicator of corrosion build-up, poor sensor alignment, or other issues that do not necessarily mean that the equipment itself is out of calibration. Such a test is intended to work as a troubleshooting technique to be performed after the meter is cleaned and/or adjusted further to confirm that the issue was resolved and the as-found condition returned to within a 5% accuracy. Upon resolution, while application of an adjustment as prescribed in Section 6.2(c) is appropriate, sending the flow meter back in for calibration would be an unnecessary burden on the OPO. The Climate Action Reserve has come to this same conclusion and the language provided in the Errata and Clarifications of January 21, 2014 identifies this important correction that ARB should also adopt.

Section 6.2(d), Portable instrument calibrations: Whereas the language here requires a calibration during each reporting period, this is not necessarily the most appropriate way to line up such activities. There are often third-party service providers who use portable devices for a quarterly field checks. They may own several units of identical equipment but they use whichever is available when called to do the onsite work. Such equipment may have been recently calibrated, and then used for a field check early in a reporting period that does not overlap with the calibration date. This particular meter might not be used again and hence might not be recalibrated during the reporting period.

As such, requiring the equipment to be calibrated within the project's reporting period causes complexities that cannot be resolved when working with third-party service providers who are properly maintaining their equipment and presenting records demonstrating as much. The reporting periods would create a calibration scheduling requirement that would differ for every client, without resulting in improved data assurance. We recommend that language in Section 6.2(d) require an annual calibration of the portable equipment without specifying that the calibration date be within the reporting period.

Other Suggestions:

Section 5.2(d), quarterly methane concentration: The updated language regarding quarterly methane concentration could cause problems if a quarterly methane sample is taken in the first quarter of the first reporting period. Take for example a new project that commences on January 1 and takes its first methane sample in March; the project would have no methane concentration value to be applied in the months of January or February, even though the OPO followed the requirement to take a quarterly sample. The language could be improved by including a provision for this scenario.

Furthermore, it seems that an ordinary "average" of more frequent samples is what was intended here, rather than a "weighted" average, because all observations carry equal weights. Finally, in the event that monthly methane concentration is sampled, or even more so if continuous monitoring is in place, the language of Section 5.2(d) calls for a quarterly average rather than monthly averages which could decrease the accuracy of the quantified project methane emissions. Allowing for monthly averages would better reflect any seasonal variation in methane concentration.

Section 5.2(i), quarterly methane concentration: This section is duplicative of Section 5.2(d).

Section 5.3, Equation 5.11 typo: The number 519.69 shows up in the equation, but it seems that this standard temperature correction should read 519.67.

Section 6.1(f) and 6.1(g), Data substitution: These two paragraphs are both duplicative and contradictory. Section 6.1(f) *allows* data substitution while 6.1(g) *requires* it. We feel that data substitution should not be required.

Section 6.2(a)(1), Quarterly cleaning and inspection: We find that many inspections of flow meters result in the technician finding a probe that looks visually acceptable and shows no sign of corrosion or any operating issues. In these cases – when the meter passes a visual inspection – professional technicians may prefer not to introduce a cleaning solution and wiping material to the sensor for fear that the unnecessary cleaning could do more harm than good. Indeed some flow meters even specify to clean only "as necessary". We suggest that the language be modified to perform quarterly inspections and clean *if necessary*.

Appendix A: Heifers vs. calves: It has become an increasingly common practice for verifiers to issue a finding that calves are not reported when young stock are identified on the site visit. The definition between a calf and a heifer is somewhat unclear, and when the calf becomes a heifer is debatable. Many dairy farmers classify all female bovine that have not borne a calf as a heifer, regardless of age. Yet some verifiers are of the opinion that some of those should be classified according to the tables, and the only young option available is *grazing* calves. So in addition to the ambiguity regarding the difference between a calf and a heifer, it is also awkward to use tables for grazing animals when the young heifer/calf is actually on feed. This ambiguity may need to be resolved by further research and we would be happy to work with the ARB on a solution to this that incorporates the experiences we have been seeing in the field.

Thank you for your ongoing work on the critical issue of addressing climate change, and the opportunity to comment here. If you would like any further material to support anything written here, I would be happy to provide you with any documents you may find helpful.

Sincerely,

Nick Facciola
Director of Carbon Projects
Origin Climate Inc.