

Climate Action Reserve
2.0 Landfill Project Reporting Protocol
TerraPass Comments – October 23, 2008

Thank you for the opportunity to comment on the revised versions of the California Registry Landfill Project Reporting Protocol.

TerraPass is a leading retailer of carbon offsets to consumers and small businesses. Over the past year, we have developed a specialized practice in the analysis of landfill gas collection and destruction projects and their opportunities for carbon credits. We have analyzed more than 75 US landfills for their carbon credit potential and conducted detailed due diligence, validation, or verification work on more than 30. Our comments reflect this body of experience, and hope they will be useful to you as you improve the landfill protocols.

Please feel free to contact me if you require additional details.

Submitted by:

Erin Craig
Vice President, Carbon Management Services
TerraPass Inc.
erin@terrapass.com

Landfill Project Reporting Protocol Comments

Section 2.3, page 4: We applaud the addition of the EPA's definition of bioreactor landfills.

Section 3, page 5: We encourage the Registry to reconsider its use of an unchanging Project Operation Start Date as an eligibility criterion. We suggest a rolling online date requirement rather than the (somewhat unclear worded and confusing) language around pre-existing projects.

When used as an eligibility criterion, Project Operation Start Date serves as a loose proxy or a very high-level additionality filter. This logic follows from an assumption that projects which began operations before the chosen date are quite unlikely to have been influenced by the possibility of environmental credit revenue; in short, these projects would have happened whether or not such revenue was available because they had no reason to suspect such revenue would become available when they initiated operations.

As time marches forward, however, the connection between the chosen date (even when the date is pegged to a specific action such as the introduction of legislation) and a project's additionality becomes less clear. If a project has been operating for many years without ever seeking carbon revenue, it becomes very difficult to assert that the project was inspired by the

need to mitigate climactic conditions and that the availability of carbon funding influenced the go-forward decision.

The language concerning pre-existing projects appear to try to address this issue, though the language is unclear so we uncertain as to its intention. As written, the language appears to define *any project which is not listed on the Registry as of its operations start date* as a “pre-existing project.” This is confusing because the same paragraph also refers to such projects as “early actors” even though the definition applies equally to projects which come online two, three, five years from now or more. Though the paragraph does not state as much, it appears to require that a project be listed on the Registry prior to its online date to qualify for credits, with a limited exception to cover retroactive projects during the next 12 months.

If we are interpreting this language correctly, we do not recommend its inclusion as written. We do support the notion that an online date eligibility criterion should not be set on a particular historic day for all projects, as described below. However, we believe that forcing project owners to register prior to the operations start date places an unnecessary burden on the project owners. Completing a landfill gas project and ensuring its successful startup is a taxing project management task, and there is no reason why the registration task needs to be completed at that very difficult time.

An alternative approach which would send a much clearer signal to project owners, would be to adopt a “rolling” online date eligibility criterion, such that a project must be registered on the California Registry or another public carbon registry within a limited window (say, between 12 and 24 months) of its online date. This criterion would eliminate retroactive crediting and the attendant monetary windfalls so often cited by the press and public decisionmakers as evidence of flawed carbon credit markets; it may dissuade lawmakers from including arbitrary and differing online dates for offsets in state and regional cap-and-trade regimes; and, it would provide sufficient breathing room for project owners to make decisions regarding their carbon credit monetization plans.

The Voluntary Carbon Standard 2007 has adopted a 2-year rolling online date requirement, which we have found to be a challenging but reasonable expectation in managing carbon credit projects.

Section 3.3.1, page 6: The provisions for managing “baseline” combustion activities – specifically, gas combustion which does not qualify for registry listing due to timing reasons only – have the effect of unnecessarily excluding entire landfills and thus dissuading active collection projects which could greatly increase methane capture and combustion in landfills least likely to engage in them. We encourage CCAR to review the following scenarios and possible approaches to address them.

- 1) We have found that it is relatively common for **small and closed landfills** to make use of small passive flares (“tiki torches”). These flares do not create a vacuum on the landfill, but rather combust whatever rises to their tips; the tips typically have an electronic spark pilot which activates every few seconds. Sometimes these flares are in semi-permanent installations atop vertical or horizontal wells or vents. Sometimes these flares are portable and are moved from time to time to address hot-spots where vegetation growth is inhibited or where ground-level methane is above desirable levels.

We have yet to encounter a passive flare at a landfill which has a meter attached. (Although passive flares with meters are now becoming available in the marketplace, the problem we are encountering related to devices which have been in the field for years already.)

Since the protocol requires that any pre-existing combustion activities be metered, and that the metering continue throughout the installation and operation of the new project so that the earlier combustion may be subtracted from crediting, any landfill which has made use of passive flares appears to be excluded from the population of landfills eligible for credits. This is truly unfortunate, because small landfills and closed landfills are poor candidates for energy revenue so carbon credits could be a powerful motivation at such sites.

The Clean Development Mechanism landfill protocol has a calculation provision which enables pre-existing systems to be subtracted analytically from the new project, rather than subtracted from verified metering. We recognize the difference in philosophy behind these approaches, and understand that unmetered baseline provisions can be abused. Nonetheless, we believe there are ways of ensuring the conservatism in such approaches, and also believe that if the use of these approaches is limited to a subset of “disadvantaged” landfills (e.g. below a certain size threshold or more than a certain number of years after the last waste deposit) that the beneficial results obtained would more than outweigh the introduced calculation uncertainties.

- 2) We have encountered a number of landfills where a “pre-Subtitle D” – unlined, older – landfill site exists on the same property or adjacent to newer, active, lined landfill cells. Frequently, the old site is either unpermitted, or permitted under a separate site number and permit than the new landfill. At these sites, it is not uncommon to find gas collection and/or combustion in place on the “old” landfill site, sometimes as part of a remediation or to prevent potential contamination from reaching property lines.

We would like to request a clarification, that the radius of influence calculations would not be applicable in cases where the old system on an old, unlined landfill and the new Project system in an adjacent new, controlled landfill are physically separated by the landfill liners. In essence, the project boundary would be drawn so as to exclude the old landfill site (and, as appropriate, any gas coming from that site if it is piped into the new system).

Section 5, page 15: The sentence here regarding registration being annual, is inconsistent with language elsewhere in the protocol which allows for registration and verification on a more frequent basis if desired.

Section 6, page 21: The project monitoring requirements provide for calculated discounts when the project uses periodic methane analysis rather than continuous. We have found at least one gas quality analysis method which does not appear to meet either definition and encourage CCAR to consider its inclusion. This third type involves a sampling device which takes a sample of landfill gas every 10 minutes (or similar interval) and deposits the sample into an enclosed cylinder. Every quarter, the cylinder is removed and sent to a certified lab for

analysis. This method provides highly accurate averages over the monitoring period, and is far less sensitive to variations in gas flow and quality in its accuracy. Further, this method eliminates expensive calibration requirements because all actual analysis is performed by a certified lab. We recommend methods similar to this be treated as equivalent to continuous analysis.

Section 6, page 22: Duplicative meters: Finally, we recommend that CCAR address the requirement to install, maintain, and gather data from duplicative flow meters. The protocol requires meters at each end-use, as well as at the header pipe. We recommend that the requirement be made slightly less expensive though no less accurate, by allowing the project owner to reduce the number of meters by 1. In other words, meters would be required at the header pipe and at all but one of the end uses. In this case, for example, if a meter is installed at the header pipe and the generators, a meter would not be needed at the flare. We understand that the project developer would take a risk in this case because redundant data would not be available in the case of meter failure. The CDM Executive Board has made a similar ruling in recent interpretive memos