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U.S. Livestock Project Protocol Summary of Changes from Version 3.0 to Version 4.0

January 23, 2013

In addition to the incorporation of previously issued errata and clarifications, as well as minor editorial changes, the U.S. Livestock Project Protocol Version 4.0 incorporates the following significant changes from Version 3.0.

- **Updated Project Developer guidance (Section 2.2).** Guidance has been introduced to clarify how the Reserve's Environmental and Social Safeguards Policy (dated September 27, 2012) applies to livestock projects.
- **Updated Start Date language (Section 3.2).** The start date definition has been adjusted to maintain consistency between the U.S. Livestock Project Protocol and the Organic Waste Digestion Project Protocol Version 2.0. The new start date language reduces uncertainty by changing the condition precedent for the start date from being the time when biogas is first created to the time when manure is first loaded into the biogas control system (BCS).
- **Updated Anaerobic Baseline requirements (Section 3.4).** The section was renamed to "Uncontrolled Anaerobic Baseline" and split into several sections to better highlight the core elements of the section. A more specific definition for Greenfield projects was introduced, along with new standardized baseline management system assumptions. Clarified guidance was provided for centralized digesters.
- **Updated Legal Requirement Test (Section 3.5.2).** The Reserve has introduced a more stringent Legal Requirement Test, whereby if project activities become legally required during a project's second crediting period, the project will only be eligible to receive CRTs up to the date that the system is required to be operational.
- **Updated Regulatory Compliance requirements (Section 3.6).** This section has been updated in line with the Reserve's Environmental and Social Safeguards Policy (dated September 27, 2012).
- **Updated Quantification of GHG Emission Reductions (Section 5).** Guidance with respect to prorating of emission reductions for incomplete calendar months in reporting periods was introduced. Guidance on the definition of key parameters was also updated and expanded. The MS parameter has been updated to introduce default solids separation factors. Project BCS effluent must now be calculated using site-specific calculations, rather than MCF default values. Further guidance was provided for quantifying the emissions associated with effluent storage systems.
- **New optional site-specific testing for maximum methane generating potential of manure (Section 6.1).** A new procedure for the determination of site-specific values for the maximum methane generating potential (B_0) of eligible manure streams at dairy farms has been introduced.

- **Updated Monitoring Requirements (Section 6.2).** Updated guidance regarding periods where one or more destruction devices were not functioning correctly.
- **Updated Biogas Measurement Instrument QA/QC requirements (Section 6.3).** Updated guidance regarding multiple aspects of biogas measurement instrument QA/QC requirements, including new guidance with respect to temporary stationary meters, has been provided.
- **Updated Missing Data methodology (Section 6.3.1).** Updated to include express reference to instances where data is corrupted, rather than missing. A requirement to prorate reporting periods to remove days with missing data, in certain circumstances has been introduced.
- **Updated reporting documentation requirements (Section 7.1).** Updated to include requirement to submit a Project Diagram, in accordance with Reserve policy memo *Project Diagram Required at Verification* (dated February 13, 2012). Introduced requirement to submit completed Reserve Livestock Calculation Tools, when used. Introduced requirement to submit a signed Attestation of Voluntary Implementation during second crediting period.
- **Updated Summary of Eligibility Criteria table (Section 8.6.2).** Updated summary of Eligibility Criteria to reflect changes to Legal Requirement Test. (Table 8.1)
- **Updated Quantification Verification Items (Section 8.6.2).** Updated table of Quantification Verification Items to include new items regarding verification of baseline lagoon cleaning frequency and B_0 values and remove MCF effluent item. (Table 8.3)
- **Updated guidance on Emission Factors (Appendix B).** Updated emission factor guidance for liquid slurry to define when manure can be considered liquid.
- **Updated guidance on Typical Animal Mass (Appendix B).** Updated default values for Typical Animal Mass. (Table B.2)
- **New guidance on Biogas Collection Efficiency factors (Appendix B).** New guidance has been added regarding Biogas Collection Efficiency factors for BCSs employing partial covers or two stage systems.
- **Updated Volatile Solids default values (Appendix B).** Updated Volatile Solids default values. (Table B5a, B5b, and B5c)
- **Updated Summary of Performance Standard Development (Appendix C).** This analysis was re-visited during the development of Version 4.0 of the protocol and, although there was no recommended change to the performance standard, this appendix has been updated to reflect more recent data and analysis.
- **New guidance on benefits stacking (Appendix C).** Introduced new guidance regarding projects that seek to concurrently generate CRTs and access other benefits such as loans, grants or the creation of RECs, etc., but no associated restrictions on receiving such co-benefits. (Section C.3)
- **New summary of Development of the B_0 Sampling and Analysis Methodology (Appendix E).** Introduced a summary of the methodology underlying, and the process undertaken to develop, the option to conduct site-specific B_0 sampling and analysis.