DET NORSKE VERITAS

VCS Methodology Element Assessment Report as First Validator

Sustainable Community Service Promoters

Report for Gedden Inc.

DNV report number: 2011-9254

Revision 01

DET NORSKE VERITAS

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VCS METHODOLOGY ELEMENT ASSESSMENT REPORT

Date of first issue: 31 May 2011	Project No.: PRJC-294957-2011-CCS-USA
Approved by: Miguel Rescalvo Santandreu Regional Manager Iberia	Organizational unit: DNV Climate Change and Environmental Services
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Name of Methodology: Sustainable Community Service Promoters
Version: 2.0
Assessment Phases:
☒ Desk Review
☒ Follow up interviews
☒ Resolution of outstanding issues
Assessment Status
☐ Corrective Actions Requested
☐ Clarifications Requested
☒ Full Approval by DNV
☐ Rejected

In summary, it is DNV's opinion that the proposed VCS methodology element "Sustainable Community Service Promoters," as described in Version 2.0 of 26 May, 2011, meets all relevant VCS requirements for VCS methodology elements. DNV thus recommends the methodology element for approval and requests that VCSA approve the methodology element.

Note:

DNV reviewed version 3 of 6 February, 2012 of the proposed VCS methodology element after the methodology element finishes its assessment by the second validator. The major change of the proposed methodology element is:

1 – A maximum abatement threshold of 20,000 tCO_2e/yr has been established. Each instance can claim up to 10,000 tCO_2e/yr from EE activities, and up to10,000 tCO_2e from waste diversion activities.

DNV confirmed that the change is acceptable and that all the conclusions in this report are still valid. DNV thus recommends the methodology element of version 3 of 6 February, 2012 for approval.

Report No.: 2011-9254	Subject Group: Environment
Report title: Sustainable Community Service Promoters VCS Methodology Validation	

Indexing terms

Key words
VCS
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Abbreviations

ANSI	American National Standards Institute
CAR	Corrective action request
CDM	Clean development mechanism
CDM EB	CDM Executive Board
CH_4	Methane
CL	Clarification request
CO_2	Carbon dioxide
DNV	Det Norske Veritas
ECM	Energy conservation measures
GHGs	Greenhouse Gases
GWP	Global warming potential
ICT	Information and communication technology
IPMVP	International Performance Measurement and Verification Protocol
ME	Methodology element
MED	Methodology element documentation
N_2O	Nitrous oxide
PD	Project document
PM	Proposed methodology.
SCSP	Sustainable Community Service Provider
SWDS	Solid waste disposal sites
VCS	Verified Carbon Standard
VCSA	VCS Association
VCU	Verified Carbon Unit

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1 ASSESSMENT STATEMENT

DNV Climate Change Services AS (DNV) has performed an assessment of the proposed Verified Carbon Standard (VCS) methodology element, "Sustainable Community Service Promoters." The assessment was performed on the basis of VCS criteria for methodology development.

The review of the methodology element documentation and the subsequent follow-up interviews has provided DNV with sufficient evidence to determine the fulfillment of the stated criteria.

The methodology element (ME) was prepared based on the requirement of VCS Version 3 and Methodology Approval Process Version 3.

The methodology element belongs to the sectoral scopes energy demand (3) and waste handling and disposal (13).

In summary, it is DNV's opinion that the methodology element "Sustainable Community Service Promoters," as described in the Methodology element documentation (MED) Version 2.0 of 26 May, 2011, meets all relevant VCS requirements for VCS methodology elements. DNV thus recommends that VCSA approve the methodology element.

2 INTRODUCTION

Gedden Inc. has commissioned DNV Climate Change Services AS (DNV) as the first validator to perform an assessment of the methodology element "Sustainable Community Service Promoters." This report summarizes the findings of the assessment of the methodology element, performed on the basis of VCS criteria for methodology elements. VCS criteria refer to VCS Version 3 and the Methodology Approval Process Version 3 /2//3/.

3 METHODOLOGY

The assessment consisted of the following three phases:

1. A desk review of the proposed methodology element.
2. Follow-up interviews.
3. Resolution of outstanding issues and the issuance of the final assessment report and opinion.

The following sections outline each step in more detail.

3.1 Desk Review of the New Methodology

The documentation that was reviewed during the assessment is shown below:

/1/	Gedden Inc. & ICF Marbek, Methodology element documentation "Sustainable Community Service Promoters", Version 1.1 of 10 November, 2010, Version 2.0 of 26 May, 2011.
/2/	VCSA, Verified Carbon Standard, Version 3.0, 8 March, 2011.
/3/	VCSA, Methodology Approval Process, Version 3.0, 8 March, 2011.
/4/	CDM EB, Combined tool to identify the baseline scenario and demonstrate additionality, Version 3.0.0.
/5/	CDM EB, Methodological Tool "Tool to determine methane emissions avoided from disposal of waste at a solid waste disposal site," Version 05.
/6/	CDM EB, Methodological Tool "Tool to calculate the emission factor for an electricity system", version 02.
/7/	Efficiency Valuation Organization, International Performance Measurement and Verification Protocol (IPMVP), Volume 1, 2010.

3.2 Follow-up Interviews

	Date	Name	Organization	Topic
/8/	February – May 2011	Chad Hamre	ICF International	1. The methodology element's eligibility criteria 2. The baseline approach and additionality.
/9/	February – May 2011	Deepika Mahadevan	ICF International	
/10/	February – May 2011	Braydon Boulanger	ICF International	

				3. Project boundary. 4. Emissions, including leakage. 5. Monitoring, data and parameters.
/11/	February – May 2011	Duncan Rotherham	ICF International	
/12/	February – May 2011	Christophe Kaestli	CertiConseil	

3.3 Resolution of Outstanding Issues

The objective of this phase of the assessment was to resolve any outstanding issues that needed to be clarified prior to DNV's positive conclusion on the methodology element. The assessment findings relate to the methodology element as documented and described in the initial methodology element documentation (MED) /1/.

In order to ensure transparency, the issues raised and the ME developer's response are documented in Appendix A.

Findings established during the assessment can either be seen as a non-fulfillment of VCS criteria or where a risk to the fulfillment of ME objectives has been identified. Corrective action requests (CARs) are issued where:

- Mistakes have been made with a direct influence on methodology application.
- VCS specific requirements have not been met.

A clarification request (CL) may be used where additional information is needed to fully clarify an issue.

Table 1 summarizes the process of resolving CARs and CLs.

Table 1 - Resolution of Corrective Action and Clarification Requests

Draft report clarifications and corrective action requests	Summary of methodology element developer response	Assessment conclusion
If the conclusions from the draft assessment are either a CAR or a CL, these should be listed in this section.	The responses given by the methodology element developer during the communications with the assessment team should be summarized in this section.	This section should summarize the assessment team's responses and final conclusions.

3.4 Internal Quality Control

The assessment report underwent a technical review before DNV approved the methodology element. The technical review was performed by a qualified technical reviewer in accordance with DNV's qualification scheme.

3.5 Assessment Team

Listed below are the members of the assessment team, their roles, and the nature of their involvement.

Role/Qualification	***Last Name***	***First Name***	***Type of involvement***					
			Desk review	Interviews	Reporting	Supervision of work	Technical review	Expert input
Project Manager	Silon	Kyle		√		√		
VCS Validator	Yang	Weidong	√	√	√			
Technical Reviewer	Warmerdam	John					√	
Sector Expert (energy demand sector)	Arends	Jim						√
Sector Expert (waste sector)	Díaz Pesce	Danae						√

4 ASSESSMENT FINDINGS

The findings of the assessment are stated in the following sections. The final assessment findings relate to the methodology element as documented and described in the revised MED.

4.1 Applicability Conditions

The eligibility criteria for the methodology element are clearly defined in the MED. DNV was able to confirm that the eligibility criteria were appropriate and that adequate requirements for the organization of project activities, project technology, facilities, types of greenhouse gases (GHGs), and the functional equivalence are all defined clearly and properly. The eligibility criteria were defined as shown below /1/:

- Project Scale:
  An individual instance can claim up to 10,000 tCO_2e/yr from EE activities, and up to 10,000 tCO_2/yr from waste diversion activities. Therefore, the maximum combined abatement threshold for an instance within a grouped project is 20,000 tCO_2e/yr.

- Project organization:
  The MED only applies to grouped projects. The organizer of the grouped projects, defined as "Sustainable Community Service Provider (SCSP)" in the MED, needs to use a consolidated and ICT (Information and Communication Technology) enabled data monitoring and collection system to track project activity data.

- Types of Facilities:
  This may include various types of buildings; specific examples are given in the MED, including commercial, institutional, and industrial buildings/facilities.

- Types of Project Activities:
  Two types of activities are included: energy efficiency and waste diversion. For energy efficiency, all of the activities that can result in a reduction of energy use per unit of productivity are applicable; these may include construction of new facilities, the retrofit of existing facilities, and fuel switching or process/management changes of existing facilities. For waste diversion, all diversion of waste for other productive uses and alternative disposal options are applicable; these options include recycling, organic composting, biomethanation, and using more proximate waste handling facilities.

- GHGs Included:
  Three types of GHGs are included: carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O).

- Functional Equivalence:
  The project activities and the baseline scenario should provide the same function and quality of products or services, based on a common metric or unit of measurement for comparison between the project activities and baseline scenario.

In addition, the MED defines the following requirements for projects using the MED:

- Duration of Crediting Period:
  For project activities including energy efficiency, project proponents must document the useful life and remaining useful life of energy conservation measures (ECMs) to ensure that the crediting period of the project does not exceed the ECMs' useful life. For project activities not related to the facility lifetime, the duration of the crediting period shall be defined according to the relevant requirements of VCS.

- Ownership of carbon credit:
  The SCSP needs to provide legal contracts to demonstrate its ownership of the generated carbon credit from a project.

4.2 Project Boundary

DNV can confirm that the project boundary and emission sources and sinks are clearly and properly defined in the MED, as described below.

Sub-grouping of Project

The grouped projects are to include activities in a cluster of small companies or business units, defined as Client Facility in the MED. Client Facilities in a grouped project can further be divided into different "territories" to take into account common industrial or geographic conditions.

General Requirements

One single project boundary is not provided by the MED, as the grouped projects can include many different types of activities. Therefore, the MED requires project proponents to clearly define the most appropriate boundary for each territory of Client Facilities included in the grouped project. Nevertheless, the MED provides detailed and clear guidance for identifying emission sources and sinks for both energy efficiency activities and waste diversion activities in order to assist project proponents in properly defining project boundaries /1/.

Project Boundary for Energy Efficiency Activities

Two options are defined for determining the project boundary for energy efficiency activities:

- Option A – Isolated Parameter Measurement
  For this option, the project boundary is limited to the ECM affected system only, rather than the entire facility to which the ECM affected system belongs.

- Option B – Whole Facility Measurement
  For this option, the project boundary is defined as the entire facility to which the ECM affected system belongs.

Criteria for using either option are described properly in the MED.

Project Boundary for Waste Diversion Activities

Only Option B described above can be used to determine the project boundary for waste diversion activities. This is proper, since waste can be generated from many activities within a facility.

Emission Sources and Sinks of Energy Efficiency Activities in Project Scenario

Emission sources and sinks related to the following activities are identified for definition of the project boundary:

- Delivery and onsite combustion of fuel.
- Offsite production of electricity.
- Maintenance, construction and decommissioning.

The sources of gases and types of emissions (controlled, related or affected) included in the above activities are clearly listed in the MED.

Emission Sources and Sinks of Waste Diversion Activities in Project Scenario

Emission sources and sinks related to the decomposition of solid waste in landfills are identified for definition of project boundary. The emission sources and sinks and types of emissions (controlled, related or affected) are clearly listed in the MED.

Emission Sources and Sinks in Baseline Scenario

Emission sources and sinks of energy efficiency activities and waste diversion activities in the baseline scenario are also identified and listed in the MED, using a similar approach as for the emission sources and sinks of energy efficiency activities and waste diversion activities used in the project scenario.

Emission Sources and Sinks Selection for Baseline and Project Scenario

The MED determines and lists all of the relevant emission sources and sinks for the project and baseline scenario, based on the threshold (materiality) of 1%, with proper justification for inclusion or exclusion of a specific emission / sink source. However, the MED requires the project proponent to confirm that any excluded emissions do not exceed the 1% threshold for a specific project.

4.3 Procedure for Determining the Baseline Scenario

The MED requires use of the CDM tool "Combined tool to identify the baseline scenario and demonstrate additionality" to identify the baseline scenario.
In addition, the MED defines the following requirements for determining the baseline scenario:

- The baseline alternatives should be determined against each territory included in a grouped project.

- Energy efficiency baseline for new facilities, including additions or expansions to existing facilities, needs to be determined by the lowest energy usage level based on current regulation and legal obligations.
- Potential alternatives need to be analyzed in the baseline determination.
- Regulatory compliance needs to be taken into account in the identification of realistic and credible alternatives.
- Barrier analysis is required to conduct in combination with additionality assessment.

DNV can confirm that the above requirements are proper, as each territory has its own specific conditions and the baseline scenario should meet regulatory requirements.

4.4 Procedure for Demonstrating Additionality

The MED requires that additionality shall be demonstrated by applying the latest version of the "Combined tool to identify the baseline scenario and demonstrate additionality"/2/. The MED requires that investment analysis be performed.

DNV can confirm that the procedure for demonstrating additionality is properly defined since the CDM combined tool is accepted by VCSA for additionality assessment.

4.5 Emissions Reductions

DNV checked all of the assumptions for baseline emissions, project emissions, and leakage and was able to confirm that they are acceptable. All of the equations and parameters for calculating baseline emissions, project emissions, and leakage can also be confirmed as being proper.

4.5.1 Baseline Emissions

General Requirements

The determination of baseline emissions needs to consider the following factors:

- Baseline Period
  - The period of time chosen represents typical operation of the facility or system before implementation of an ECM or waste diversion activities.
  - Baseline period may need to be determined for different project activities to ensure the appropriateness of the selected baseline period.
  - Data from the baseline periods are to be used to calculate baseline emissions.
- Adjustment
  - Functional Equivalence and Unit of Productivity
    - Functional equivalence means the baseline scenario is to provide the same function and quality of products or services as in the project scenario. Baseline emissions are to be calculated by incorporating the functional equivalence.
    - The functional equivalence is to be reflected by the unit of productivity, which needs to be defined and justified by the project proponents to account for any non-production sensitive components.
  - Routine Adjustments and Non-routine Adjustment

The definitions of routine adjustments and non-routine adjustment and the approaches are provided properly in the MED, based on the relevant requirements in IPMVP /7/.

Baseline Emissions of Energy Efficiency Activities

The baseline emissions consist of emissions from all energy consumption from the building/system, maintenance, and unit operations of various processes, such as biological, chemical, and mechanical processes, prior to implementation of ECMs.

The baseline emissions are to be adjusted according to the conditions in the project scenario, as explained in the above "General Requirements".

The emissions included are:

- Emissions of carbon dioxide, methane, and nitrous oxide from fuel consumption.
- Emissions of carbon dioxide from electricity consumption.
- Emissions of carbon dioxide from thermal energy.

Baseline Emissions of Waste Diversion Activities

The baseline emissions consist of emissions from all energy consumption from waste processing and emissions from waste decomposition and methane release, prior to the waste diversion activities.

The baseline emissions are to be adjusted as described in the above Section "Baseline Emissions of Energy Efficiency Activities."

The emissions included are:

- Emissions of carbon dioxide, methane, and nitrous oxide from fuel consumption.
- Emissions of carbon dioxide from electricity consumption.
- Emissions of carbon dioxide from thermal energy.
- Emissions of methane from waste decomposition and methane release.

Calculation Equations for Baseline Emissions

The baseline emissions related to energy consumption are calculated by multiplying the energy consumption by the corresponding emission factor; this is a generally accepted and commonly used approach for emission estimates. Therefore, DNV was able to confirm that the equations are proper.

The baseline emissions related to waste decomposition are calculated using the equation in the CDM tool "Tool to determine methane emissions avoided from disposal of waste at a solid waste disposal site;" the equation was properly modified to reflect the project situation, that is, only the emissions from the waste delivered from the baseline scenario need to be considered /5/.

Data and Parameters Available at Validation

Emission factors for thermal energy and fuel are determined *ex-ante*. The MED requires the project proponent to identify the most appropriate sources for the emission factors. Regional data should be used if available; otherwise, data from the IPCC Guidelines for National Greenhouse Gas Inventories can be used.

Factors used to calculate emissions from waste decomposition are determined *ex-ante* according to the "Tool to determine methane emissions avoided from disposal of waste at a solid waste disposal site" /5/.

4.5.2 Project Emissions

Project Emissions of Energy Efficiency Activities

The project emissions consist of emissions from the same emission sources as in the baseline scenario; therefore, the calculations for project emissions are similar to those used for the baseline emissions, as described in the above section "Baseline Emissions."

Project Emissions of Waste Diversion Activities

The project emissions consist of emissions from all energy consumption from waste processing and emissions from energy consumed from alternative processing of waste/use, and process emissions from alternative processing of waste in the project scenario.

The emissions included are:

- Emissions of carbon dioxide, methane, and nitrous oxide from fuel consumption.
- Emissions of carbon dioxide from electricity consumption.
- Emissions of carbon dioxide from thermal energy.
- Emissions of methane/carbon dioxide from waste decomposition and methane release.

Calculation Equations for Project Emissions from Waste Diversion Activities

The project emissions related to energy consumption are calculated by multiplying the energy consumption by the corresponding emission factor; this is a generally accepted and commonly used approach for emission estimates. Therefore, DNV was able to confirm that the equations are proper.

The project emissions related to waste decomposition are calculated using the equation in the CDM tool "Tool to determine methane emissions avoided from disposal of waste at a solid waste disposal site;" the equation was properly modified to reflect the project situation, that is, only the emissions from the waste delivered from the baseline scenario need to be considered /5/.

The process emissions from alternative processing of waste are calculated by summing the process emissions of carbon dioxide, methane, and nitrous oxide, which will be monitored or estimated by mass balance. DNV can confirm that the calculation approaches are acceptable.

Data and Parameters Available at Validation

These are the same as described in the above section, "Baseline Emissions."

4.5.3 Leakage

No specific leakage is determined in the MED; however, the MED describes the most possible leakage from the project and requires the project proponent to assess the likelihood of leakage based on the specific project activities. DNV can confirm that this approach is acceptable.

4.5.4 Quantification of Net GHG Emission Reductions

The net GHG emission reductions are calculated by subtracting the project emissions from the baseline emissions. In addition, the MED allows using the approach "Verified Data Feedback Loop" to increase the confidence interval on any estimated values included in the baseline or project scenarios by replacing regional factors for a specific facility with a more accurate waste or energy profile of the specific Client Facility based on the measured and verified data. DNV can confirm that this approach was acceptable, as it makes the emission reduction calculations more accurate.

4.6 Monitoring

The activity parameters to be monitored for emission reduction calculations are defined appropriately and clearly listed in the MED, which will ensure that the emission reductions from the project activity will be estimated properly. The activity parameters to be monitored and the corresponding monitoring methods are as follows:

- Energy consumption (fuel, electricity, and thermal energy):

  Monitored through third party custody invoices or calibrated meters.

- Grid Emission factor

  Re-calculated annually using CDM tool "Tool to calculate the emission factor for an electricity system" /6/.

- Waste disposed:

  Direct measurement or invoice reconciliation.

- Fraction of methane captured in the SWDS and flared, combusted or used in another manner :

  To be determined as required in the CDM Tool "Tool to determine methane emissions avoided from disposal of waste at a solid waste disposal site" /5/.

- Mass of carbon dioxide, methane, and nitrous oxide from process emissions:

  Direct measurement or estimates from mass balance.

Quality assurance measures have also been properly prescribed for all monitoring activities to further ensure the accuracy and reliability of the emission reduction estimates. The defined quality assurance measures cover areas such as the protection of monitoring equipment and monitoring data, checking data integrity, and training and competence requirements.

Sampling requirements, including sampling eligibility, confidence interval, and sampling size are defined in the monitoring plan section of the MED. DNV can confirm that the requirements are relevant to the project activities under a grouped project.

4.7 Data and Parameters

Both monitored and un-monitored data and parameters used in the emissions calculations are defined in the MED clearly and appropriately, making it possible for the emission reductions to be estimated and verified.

The data unit, description, and sources of data for each parameter are described clearly and proper justification is provided for the selection of data and data sources.

The monitored parameters include those related to the project activity level, such as consumption of energy (fuel, thermal energy, and electricity), and the generation of waste. The un-monitored data include emission factors of different types of energy and the data related to the estimate of emissions from waste decomposition.

4.8 Adherence to the Project-level Principles of the VCS Program

The MED was developed in line with the project-level principles of VCS Version 3, as elaborated above. It is also deemed by DNV that the principles of relevance, completeness, consistency, accuracy, transparency, and conservativeness are properly addressed in the MED.

4.9 Relationship to Approved or Pending Methodology

The relationships of the MED with approved or pending methodologies under the VCS program and CDM were thoroughly analyzed in the MED. No similar methodologies were found. Therefore, DNV can confirm that the MED is eligible for application as a new VCS methodology.

4.10 Comments by Stakeholders

No comments were received.

4.11 Evidence for DNV's Fulfillment of Eligibility Requirements

DNV Climate Change Services AS (DNV) has accreditation for performing validation for all 15 sectoral scopes under CDM. DNV, therefore, is eligible under the VCS Program to perform the assessment for the MED, which falls under the sectoral scopes of energy demand and waste handling and disposal.

According to VCS sectoral scopes mapped against ANSI project level groups, sectoral scope of energy demand belongs to ANSI group 1, "GHG emission reductions from fuel combustion," which covers the following VCS sectoral scope:

- 1. Energy Industries (renewable / non-renewable sources).
- 2. Energy distribution.
- 3. Energy demand.
- 4. Manufacturing industries.
- 6. Construction.
- 7. Transport.

Sectoral scope of waste handling and disposal belongs to ANSI group 6, "Waste Handling and Disposal," which covers the following VCS sectoral scope:

- 8. Mining/Mineral production.
- 10. Fugitive emissions from fuels (solid, oil and gas).
- 13. Waste handling and disposal.

DNV has completed validation of more than 10 registered CDM projects each under ANSI groups 1 and 6; 10 of these projects from each group are listed below.

For Group 1

Name of Project	**Date the Validation Report was Issued**	**Date the Project was Registered**	**Name of the GHG Program**
BRT Bogotá, Colombia: TransMilenio Phase II – IV.	21 September, 2006	7 December, 2006	CDM
Modal Shift from Road to Train for transportation of cars.	29 September, 2010	4 February, 2011	CDM
Kuyasa low-cost urban housing energy upgrade project, Khayelitsha (Cape Town; South Africa).	28 June, 2005	27 August, 2005	CDM
Moldova Biomass Heating in Rural Communities.	5 December, 2005	20 January, 2006	CDM
Moldova Energy conservation and greenhouse gases emission reduction.	12 December, 2005	29 January, 2006	CDM
Reduction in steam consumption in stripper reboilers through process modifications.	4 March, 2006	2 June, 2006	CDM
Improvement in Energy Consumption of a Hotel.	25 September, 2006	18 November, 2006	CDM
Optimization of steam consumption by applying retrofit measures in blow heat recovery system.	11 September, 2006	24 December, 2006	CDM

Optimization of steam consumption at the evaporator.	29 September, 2006	12 January, 2007	CDM
GHG emission reduction through the installation of energy efficient vacuum creating system in the vacuum distillation column of petroleum refinery.	18 December, 2006	1 April, 2007	CDM
For Group 6			
Name of Project	**Date the Validation Report was Issued**	**Date the Project was Registered**	**Name of the GHG Program**
Landfill gas extraction on the landfill Villa Dominico, Buenos Aires, Argentina.	06 July, 2005	17 September, 2005	CDM
Rio Azul landfill gas and utilization project in Costa Rica.	28 June, 2005	13 October, 2005	CDM
Onyx Landfill Gas Recovery Project – Trémembé, Brazil.	07 September, 2005	24 November, 2005	CDM
Cosmito landfill gas project (Improvement of Gas Extraction System in Old Cosmito Dump)	16 September, 2005	03 December, 2005	CDM
Copiulemu landfill gas project (Center for the Storage and Transfer, Recovery and Control of Waste, Treatment and Disposal of Industrial and Household Waste)	16 September, 2005	03 December, 2005	CDM
Nanjing Tianjingwa Landfill Gas to Electricity Project	11 October, 2005	18 December, 2005	CDM
Olavarría Landfill Gas Recovery Project	30 November, 2005	06 January, 2006	CDM
Hiriya Landfill Project	24 November, 2005	06 February, 2006	CDM
El Molle – Landfill gas (LFG) capture project	08 December, 2005	19 February, 2006	CDM

Bandeirantes Landfill Gas to Energy Project (BLFGE)	05 December, 2005	20 February, 2006	CDM

APPENDIX A

RESOLUTION OF CORRECTIVE ACTION AND CLARIFICATION REQUESTS

Clarifications and corrective action requests by assessment team	Methodology developer response	Assessment team conclusion
CAR 1 **Relationship to Approved or Pending Methodologies** The following issues need to be corrected; based on the corrections, the relevant conclusion needs to be re-evaluated.		
• The sectoral scope for energy demand should be 3 instead of 4 as mistakenly determined in the proposed methodology (PM). In addition, on page 2 of 84, the methodologies compared are relevant to sectoral scope 4 as noted in the CDM Methodology Booklet (i.e. AM0025, 0041, 0049, 0055, 065, etc.).	Agreed. V1.2 has been corrected to SS 3. Approved VCS Methodology VM0008, Version 1.0 "Methodology for Weatherization of Single Family and Multi-family Buildings - Sectoral Scope 3" It has been added.	VCS methodologies approved or pending need to be checked as well; at least the following VCS methodology is not included. Approved VCS Methodology VM0008, Version 1.0 "Methodology for Weatherization of Single Family and Multi-family Buildings -Sectoral Scope 3" The CAR is open. – Weidong Reviewed the revision again on 2011-04-07. The list of methodology is completed. The CAR is closed - Weidong

• The following evaluations of similar methodologies for sectoral scope 3 should be evaluated (i.e. AM0020 Pumps, AM0044 Boilers, AM0060 Chillers, AM0017 Steam System, AMS-II.C Demand-side energy efficiency, AMS-II. Energy efficiency and fuel switching measures for agricultural, etc.) as noted on page 15 of 212 of the CDM Methodology Booklet -Table VI-1. Methodology Categorization in the Energy Sector.	Agreed. 15 methodologies have been added and analyzed for relationship to the PM.	The similar methodologies evaluation for sectoral scope 3 section was reviewed in the current PM and all 15 additional similar methodologies were observed in the PM and after review the methodologies added are acceptable. The PM is trying to use a concept of community center to promote emission reductions; this concept cannot be realized through the methodologies identified in the list. This portion of the CAR is closed – Arends

• Sectoral scope 7 (transport) does not need to be included for the PM, as the PM only includes the emissions related to energy consumed in transportation, but does not include any emissions related to a change of transport activities.	Disagreed. The intent is to allow for change in transport activities. We have however realized that SS B13 was incorectly defined in the PM, as was the quantification methodology table associated with this SS. SS B13 has not been updated. ICF has removed the opportunity to quantify waste transportion related emission reductios from the scope of the protocol. This required a number of changes throught the methodolgy.	Weidong: Then, the PM needs to have the following requirements: (if you refer to those methodologies of Transport referenced in this PM, you will find each of them refers to a specific change of transport) 1. The specific changes of transport can be included in the PM (applicability) 2. The project boundary; 3. the baseline determination 4. the emission sources 5. the emission calculations The above list is not meant to be exhaustive; you need to provide information as detailed as in other two activities included in the PM – energy efficiency and waste treatment. Note: Some pending VCS methodologies under scope 7 need to be included in the list. The CAR is open. – Weidong Reviewed the revision again on 2011-04-07. The transport has be excluded from the PM and the relevant parts through the PM have been properly revised by checking the revised PM The CAR is closed - Weidong

• For sectoral scope 13 (waste handling and disposal), not all approved methodologies are listed, such as, CDM approved consolidated baseline methodology ACM0001 "Consolidated baseline and monitoring methodology for landfill gas project activities"	Agreed. 21 methodologies have been added and classified.	All the methodologies within this scope (CDM, CAR and VCS) have been included in the list and the relationships between the PM and these methodologies were reasonably assessed. The PM is trying to use a concept of community center to promote emission reductions; this concept cannot be realized through the methodologies identified in the list. The CAR is closed. - Weidong
CAR 2 **Sources**		
A number of references are listed under the "Sources" section; the relevant reference should also be given in the specific part of the PM where the reference is cited.	A footnote has been added to the sources explaining how the documents have been references throughout using their short form reference.	The versions and dates have been provided and can be confirmed correct through reviewing the revised PM. The CAR is closed. - Weidong
• In addition, the version/dates of the cited references need to be provided.	Agreed. This information has been added.	The versions and dates have been provided and can be confirmed correct through reviewing the revised PM. The CAR is closed. - Weidong
• The PM refers to the CDM methodology AM0039; hence, the tool referenced in AM0039 should be also included in the reference list (Tool to determine methane emissions avoided from disposal of waste at a solid waste disposal site).	Agreed. Added	The Tool to determine methane emissions avoided from disposal of waste at a solid waste disposal site was added and referred in page 7, 51 and 53, therefore the CAR is closed.
CAR 3 **Summary Description of the Methodology/Revision**		

While the background information provided under this section is helpful, the focus of this section should be the following, as required by the methodology template: *Provide a brief summary description of the methodology/revision, including the main methodological steps.*	Agreed. Section 2 has been re-written. Understood. Examples and transport have been removed.	The revised section of the PM was reviewed and found proper. However, referring to the above CAR 1, in this section, it is described that "In future iterations however, it is possible that other activities, such as transportation, water treatment, and ODS reduction, could be written into, or appended to an updated version of the methodology"; activities intended for future versions of the PM cannot be defined as the sectoral scope for the current PM. The CAR is open. – Weidong Reviewed the revision again on 2011-04-07. Refer to the above CAR 1. The CAR is closed - Weidong
CAR 4 **Definitions** The following issues need to be corrected:		

• The definition of Group Projects is not consistent with the definition given by VCS, version 3. The definition given in the PM is "A number of projects and their related methodologies included in a single VCS Project Description ***at the time of the validation***", while the definition in the VCS, version 3 is "Grouped projects are projects structured to allow the expansion of a project activity ***subsequent to project validation***." In addition, as confirmed during the kick-off meeting, the PM will be based on the VCS, version 3 of the VCS; thus, the reference to VCS 2007.1 in this definition needs to be deleted.	Agreed. The definition and reference has been updated. VCS Version 3 definitions used.	The revised definition was reviewed and can be confirmed to be consistent with the definition given by VCS, version 3. For the new version of VCS, the VCSA finally decides to use "VCS, version 3", not the original "VCS 2011"; the PM needs to be revised accordingly. The CAR is closed upon the revision of the above mentioned issue. – Weidong Reviewed the revision again on 2011-04-07. The version number has been changed. The CAR is closed - Weidong
• The definition of Territory refers to "production factors"; please define "production factors" to assist the understanding and use of the PM.	The term has been replaced with"regional conditions" and examples have been provided. This has been corrected.	The revised term and examples provided are reviewed and found proper. However, in the below CAR 14, the term "production factors" is still used' this needs to be corrected. The CAR is closed upon the revision of the above mentioned issue. – Weidong Reviewed the revision again on 2011-04-07. This has been corrected – referring to the below CAR 14. The CAR is closed - Weidong

• The definition of Functional Equivalence refers to the Project Guidance Document for the Alberta Offset System. The reference needs to be cited.	The "refer to" was not mark-up that was accidentally left in the document. The line has been removed.	The revised part of the PM was reviewed and the reference was found removed properly. The CAR is closed. - Weidong
• IPMVP Volume 1, 2007 is referenced in several definitions. The latest version 2010 of IPMVP Volume 1 needs to be cited.	Agreed, the latest version has now been used. The definitions and references have been updated. (EVO 10000-11, 2010)	The latest version 2010 was used by reviewing the revised PM. The CAR is closed. - Weidong
• "SC" is used in the PM without definition.	A definition has been added. - Added PG 16 SC is an abbreviation for Sustainable Community. This abbreviation has now been introduced in the DEFINITION section.	The definition has been added properly. The CAR is closed - Weidong
• In addition, several general definitions of waste management are missing, i.e. municipal solid waste, industrial solid waste with their characteristics, local waste management, etc.	Agreed. Key definitions have been added. - Added Municipal Solid waste definition on pg 18 I think this has now been resolved.	DDIAZ: The definitions are correct however a separation of municipal waste (or household waste as expressed in the applicability conditions) and chemical waste should be include it, as in the baseline emissions section, the chemistry waste is out of the scope. The definitions should be in line with the scope. DDIAZ 030411. The definitions between municipal and household waste has been separated as well as the chemistry waste definition are now in the general scope of the methodology. The CAR is closed.
CAR 5 **Applicability Conditions – 1**		
The crediting period for a CDM project activity is prescribed in the PM; however, VCS, version 3 has a different definition of the crediting period. The definition from VCS, version 3 needs to be applied in the PM.	Agreed. The section has been updated.	The revision was reviewed as proper. The CAR is closed. - Weidong

On page 16 - The crediting period is listed as either 7 years (renewable two times) or 10 years. VCS, version 3 also states: **"A crediting period shall not extend beyond the operational lifetime of the CDM programme activity."**	Agreed. The section has been updated.	The CDM related descriptions, which are not relevant, have been revised properly. The CAR is closed – Weidong.

ECM's may require a complete regular overhaul of the ECM system. Adjustments for decreases or increases in operation and maintenance costs should be included in the analysis and discussion.	We agree, however we are unceratin how the costs would be used for assessing the GHG reductions. This sounds resolved to me.	After further review of the revised PM the description for "P8 Maintenance" on page 22 of the revised PM includes appropriate definition of the requirements to evaluate preventive overhaul and maintenance of the ECM system. Therefore the revised PM provides an acceptable method of evaluating overhauls of ECM systems. This portion of the CAR is closed. - Arends
ECM's will have widely varied useful lives. How will the methodology factor in different lifetimes to ensure the credit period shall not exceed the useful life of the ECM?	Agreed, a clarifing poing has been added in this section.	The current PM was reviewed and the useful life of the ECM is now included in the determination of creditable life as observed in the PM and is acceptable. This portion of the CAR is closed - Arends
The "secondary and tertiary manufacturing" described under this section needs to be explained.	Agreed, a definition has been added as footnote. Conceiving changd to designing.	The footnote was reviewed as proper. The CAR is closed. – Weidong
The applicability conditions should also include the Territory characteristics as stated in section 3. Regarding waste diversion eligibility project description, the definitive alternative options and the normal productive uses in place should be included in order to clearly understand the alternative disposal options in the project implementation.	Agreed. This has been corrected.	Observed that one of the sustainability communities is referred to household waste, not to waste in general. The waste diversion eligibility project description is adequate. DDIAZ 030411, the sustainability communities is referred to waste in general and the waste diversion eligibility project description is adequate, therefore the CAR is closed.
CAR 6 **Applicability Conditions – 2**		
The requirements for grouped project in the PM are referenced to VCS Guideline 2007.1. References to VCS, version 3 should be used.	Agreed. Corrected.	The version was corrected. The CAR is closed. – Weidong
CAR 7 **Project Boundary - 1**		

The PM needs to describe the project boundary clearly under the "Project Boundary" section.	Clarified.	The requirement for defining specific project boundary by the project proponent is acceptable as the PM can include various activities and it is not proper for the PM to define project boundary. In addition, the PM provides guidance to define project boundary. The CAR is closed. – Weidong
The PM needs to define if municipal and/or chemical solid waste will be included in the project. Similar to section 4, only anaerobic waste degradation is cited, but no information related to chemical waste management is in place.	Clarified. CAR 5 has been resolved.	Clarified in the definition, however observed that for CAR 5 household waste is used. DDIAZ 030411. Household waste is not used, and the definitions related to municipal waste has been updated, therefore the CAR is closed.
CAR 8 **Project Boundary - 2**		
In the Table 5.3 "Selection of SS'S", the following issues need to be corrected. • While justification/explanation for "Excluded" is given, justification is not given for "Must be included". • If there is no "Other" gas, this can be simply deleted instead of "N/A" being filled in. This has been corrected.	Justifications are provided.	The justification and change were reviewed and found proper. The CAR is closed – Weidong
In addition, the term "Whole Facility Measurement" is defined to determine site boundaries; the methodology should describe this term and its applicability in a project with waste diversion options.	Further clarification has been added.	The clarification is adequate and describes its applicability in a project with a range of different waste options; therefore the CAR is closed (page 26).
CAR 9 **Procedure for Determining the Baseline Scenario** The following issues need to be corrected:		

• The requirement as per the VCS methodology template for this section is: *Describe the criteria and procedures for identifying alternative baseline scenarios and determining the most plausible scenario.* However, the requirements under this section, including the guidance, are mainly about the calculation of baseline emissions. In addition, the concept of baseline scenario given by IMPVP is not necessarily consistent with that defined by VCS, version 3. As such, the PM needs to refer to the relevant requirements of VCS, version 3 to define the requirements under this section.	Understood. The section has been worked on. In V1.4, Section 6 has been completely re-worked. All changes have been tracked since the changes had repercussions elsewhere in the document, including collapsing Section 7 into Section 6. - The cost savings from utilities have been included in Step 3 (investment analysis). See sub-step 3b in particular. - All CDM references have been replaced with the appropriate VCS equivalent. - The reference has been corrected. - Typos as indicated	The revised section was reviewed. While some revisions were found proper, the following steps defined for baseline scenario selections were not correct: STEP 1. Identification of alternative scenarios; STEP 2. Barrier analysis; STEP 3. Investment analysis; STEP 4. Common practice analysis. The PM needs to be revised as per the requirement of CDM additionality tool, which was referenced in the PM. The CAR is open. – Weidong Reviewed the revision again on 2011-04-18. The following aspects in the re-worked sections need to be justified/corrected: - The project activity mainly includes energy efficiency and waste diversion as defined in Section 4 ”Applicability Condtions” of the PM, though the data monitoring and collection system enables the emisisons be estimated. Hence, the methodology developer needs to justify that the investment analysis can be conducted from the prespective of the SCSP only (e.g. simple cost analysis). - The PM is meant for VCS program; hence all the description related to CDM needs to be changed (such as, CDM, CER. PDD). - The PM is referring the Combined Additonality Tool to select baseline and assess additionality; however, the Tool for the demonstration and assessment of additionality is also referenced on page 34 of the PM. - Typos as indicated in the PM needs to be corrected.

• While it is correct to say in the PM that "the fundamental responsibility of determining an appropriate baseline scenario is that of the project proponent", the PM needs to prescribe requirements and provide guidance for baseline scenario determination.	Agreed. This has been removed in the new Section 6.	The removal is acceptable as the MED is simply using the CDM additionality tool for additionality assessment. The CAR is still open. - Weidong
• On Page 9 of 84, the reference to the Baseline Adjustment due to changes in "any waste characteristic" needs additional clarification, as this is a very broad statement.	Elaborated.	The statement related to waste characteristics has been updated and additional information has been included in page 42, the answer is considered adequate, therefore the CAR is closed.
• The selection of the baseline scenario should be in compliance with the waste management practices in place for municipal and chemical waste.	Agreed. Changes made.	Additional information included in page 42 complies with the waste management practices presented in the baseline scenario. The answer is considered adequate therefore the CAR is closed.
• As emissions due to waste transportation is also included in the methodology, information related to fleet, fuel and emission factors –including their calculation- should be described in the baseline scenario.	Waste transportation emissions have been removed from the scope of this protocol.	The CAR is not relevant anymore. CAR is closed. - Weidong
CAR 10 **Quantification of GHG Emission Reductions and Removals - 1**		
Pending the final publication of VCS methodology template, the template needs to be followed for the PM, including Section 8 -11 in the template.	Adopted. The methodology is now using the new VCS 3 Methodology template and Numbering.	The section numbering and sequence are not in line with the published VCS template; the PM needs to revise this. The CAR is open. – Weidong Reviewed the revision again on 2011-04-07. The section numbering and sequence have been revised and found to be in line with the VCS template. The CAR is closed - Weidong

CAR 11 **Quantification of GHG Emission Reductions and Removals - 2**		
Detailed equations and their application need to be described under this section, though they have been given under the section of monitoring of the PM.	Done.	The equations have been described under this section and found proper. The CAR is closed. – Weidong
CAR 12 **Quantification of GHG Emission Reductions and Removals - 3**		
• Specific sources need to be provided in the PM for several estimated parameters. For example, the following descriptions are not specific: "From National GHG Inventory reference documents", "Using IPCC guidelines", "Calculated based on IPCC and CDM guidelines", "Estimations based on IPCC and industry accepted method", and so on.	More specific references have been provided. Changed. Section 9.1 has been updated yet again.	The revisions were reviewed and it was found that specific references had been given properly. However, the PM needs to justify why data from US DOE or EPA were applicable to other regions of the world, considering the PM can be used globally. The CAR is open. – Weidong Reviewed the revision again on 2011-04-07. The revision has be reviewed and deemed reasonable. The CAR is closed. - Weidong
• Inclusion of the equation "Emissions (Waste Decomposition and Methane Release)" needs to be justified.	Justification was originally provided.	DDIAZ 030411: The parameter "Waste decomposition and methane release" is justified in the equation, therefore the CAR is closed.
• The procedure for determination of grid emission factor needs to be specified. The description of "official electricity generation and transmission company statistics should be used to determine the value" is not clear.	Done.	CDM "Tool to calculate the emission factor for an electricity system (Version 2)" was used for the determination of grid emission factor. This was acceptable. The CAR is closed. – Weidong

• The calculation of the parameter Emission $_{adjusted\ Baseline\ WASTE}$ refers to municipal waste as including methane release and transportation to landfill. However, the methodology states that chemical waste will be included in the project as chemical manufacturing facilities are Client Facilities. As the characteristics, emissions and treatment of these two different kinds of waste are different, the baseline calculation should reflect these differences in emissions and waste processing.	Chemical waste has been indicated as out of scope. Definitions and applicability section have been updated to remove chemical waste references.	DDIAZ: As the chemical waste would be out of the scope, this should be aligned with the applicability conditions and the definitions section. DDIAZ 030411: the parameter Emission $_{adjusted\ Baseline\ WASTE}$ is adequate and includes municipal waste only, therefore the CAR is closed.
• Please provide more detail regarding the description of the baseline emission related to waste transportation, including fuels used, emission factor and others.	More info has been provided. Transportation has been removed from scope.	Not satisfied. Incise d) was included (d. Since transportation is within the scope of waste diversion emission reductions of this methodology, any project proponent choosing to claim emission reductions from reduced transportation of waste must quantify the emissions of the baseline scenario for how waste has been (and would have continued) to be transported for disposal under the baseline condition.); however, no information regarding the parameters to calculate the baseline is included. The answers should be enhanced. DDIAZ 030411. The description of the baseline emissions related to waste transportation has been excluded from the methodology, the answer is considered adequate and the CAR is closed.
• In the parameter Emissions $_{Process\ Emissions\ from\ Alternative\ Waste\ Processing}$, a description of the alternative waste, as well as emissions related to the process, must be described in the methodology.	Definition provided in definition section. To make more clear all references to “alternative waste processing” have been changed to “Alternative Processing of Waste”	Not satisfied. As alternative processing definition is included, alternative waste definition should be also included. In waste general description “alternative waste” is not included. DDIAZ 030411. A semantic update has been done in the parameter Emissions $_{Process\ Emissions\ from\ Alternative\ Waste\ Processing}$ in order to clarify alternative process for waste management. The CAR is closed.

CAR 13 **Monitoring - 1**		
Pending the final publication of the VCS methodology template, the template needs to be followed for the PM, including "Data and Parameters Not Monitored", "Monitoring Description", and "Data and Parameters Monitored".	Done The methodology is now using the new VCS 3 Methodology template and Numbering.	Refer to the above CAR 10. The section numbering and sequence are not in line with the published VCS template; the PM needs to revise this. The CAR is open. – Weidong Reviewed the revision again on 2011-04-07. Referring to the above CAR 10. The CAR is closed - Weidong
CAR 14 **Monitoring - 2**		
On page 67 of the PM, it is described that "The SCSP data collection and storage shall be centrally controlled and administered and demonstrate its capacity to identify those Project Units whose data ***impact inappropriately the confidence interval*** of the SC; these Project Units shall either be audited or excluded from the SC." The PM needs to define "inappropriately" and the "confidence interval".	Definitions have been added to the definitions section. Inappropriately: data collected which, when compared to regional conditions, fall outside acceptable range (defect). This definition has been added as a footnote.	The revised PM was reviewed and it was determined that the definition has been added properly. The CAR is closed – Weidong.
CAR 15 **Monitoring - 3**		
On page 67 of the PM, there is a description "when the ***overall interval confidence*** of the SC data overpass the ***target value.***" The PM needs to define the "overall interval confidence" and "target value".	This has been added as a foot note.	The foot note was reviewed as proper. The CAR is closed. – Weidong

CAR 16 **Monitoring - 4**		
On page 66 of the PM, there is a requirement for the "retention of copies of logs and all logged data for a period of 7 years". This is not consistent with the requirement of VCS, version 3, which states that "*The project proponent shall keep all documents and records in a secure and retrievable manner for at least two years after the end of the project crediting period.*"	Agreed. This has been corrected.	The revision was reviewed and found to be in line with the requirement of VCS, version 3. The CAR is closed. – Weidong
CAR 17 **Appendix A:**		
Beginning on page 68 Why is the full document included in the Appendix instead of just a reference to the document? Appendix A: CDM, "Tool for the demonstration and assessment of additionality", (Version 05.2).	Good point. The appendix has been removed.	The current PM was reviewed and the removal of the text was verified and inclusion of the reference was also verified as observed in the PM. CAR 17 is closed – Arends
CAR 18 **TABLE 5.1: PROJECT SS'S & TABLE 9.1: QUANTIFICATION PROCEDURES**		
• The word Steamed should be Steam.	The error has been corrected.	
• Also, there are district energy plants other than steam plants that distribute and sell other energy commodities, such as chilled water and hot water. For example, the city of Phoenix, Arizona has an independent provider of chilled water for downtown buildings: like banks, hotels, sports center and office buildings.	Agreed. Steam has been replaced with a more generic term "thermal energy" which could encapsulate all the sources listed in the CAR.	The revised PM was reviewed and all references to steam observed in the PM were replaced by the term thermal energy. Therefore, the revised PM will provide a broader use of various thermal energy systems. CAR 18 is closed – Arends
CAR 19 **TABLE 5.3: SELECTION OF SS'S -1**		

B8 Maintenance is listed as "Excluded" for CO2, CH4 and N2O gases. They are noted as "Excluded since emissions from building of the equipment are expected to be negligible over the lifetime of the project." • In order to be classified as negligible the emissions should be defined as a maximum allowable percent over lifetime emissions. • The manufacturing of the certain types of equipment types may result in significant emissions (i.e. batteries, fuel cells, etc.).	Incorrect. In the table, B8 Maintenance is marked as included	The revised PM was reviewed and the revised table observed in the PM has been corrected to a status of included. CAR 19 is closed – Arends
CAR 20 **TABLE 5.3: SELECTION OF SS'S - 2** (page 25)		
B2 Building Equipment is listed as "Excluded" for CO2, CH4 and N2O gases. They are noted as "Excluded since emissions from building of the equipment are expected to be negligible over the lifetime of the project." • In order to be classified as negligible the emissions should be defined as a maximum allowable percent over lifetime emissions. • The manufacturing of the certain types of equipment types may result in significant emissions (i.e. batteries, fuel cells, etc.).	Negligible was defined as less than 1% of lifetime emissions in aggregate.	The revised PM was reviewed and the added definition observed in the PM now defines negligible as 1% of the lifetime emissions. CAR 20 is closed - Arends
CAR 21 **TABLE 5.3: SELECTION OF SS'S - 3** (page 25)		
The reference of the term negligible should be defined as a percentage of the lifetime emissions.	Done. It has been defined as 1% of lifetime project emissions.	Similar to CAR 20, the revised PM was reviewed and the added definition observed in the PM now defines negligible as 1% of the lifetime emissions. CAR 21 is closed – Arends.
CAR 22 page 25 **TABLE 5.3: SELECTION OF SS'S** - 4 (page 25)		

B6 Electricity Generation & Delivery is noted as "Excluded" because it is expected to be greater during the baseline period. If this component is large it may be worthwhile to give consideration to capture this credit.	Following the principle of conservativeness, this has not been added.	After further review and consideration of the revised PM the principle of conservativeness would apply to "B6 Electricity Generation & Delivery:, and the classification of "B6" as excluded is acceptable. CAR 22 is closed. – Arends
CAR 23 **TABLE 5.3: SELECTION OF SS'S** - 4 (page 26)		
B11 Disposal of Equipment is noted as "Excluded" as it is expected to be negligible. Again, this may not be the case for batteries or fuel cells, etc. Also see CAR 21.	A note has been added stating that the project proponent must provide evidence to show that large emission technologies such as batteries would not trip the 1% threshold.	Similar to CAR 20, the revised PM was reviewed and the added definition observed in the PM now defines negligible as 1% of the lifetime emissions. The revised PM now provides a negligible definition to evaluate "Excluded" categories. CAR 23 is closed. – Arends
CAR 24 **TABLE 5.3: SELECTION OF SS'S** - 5 (page 26)		
P2 Building Equipment is noted as "Excluded" as it is expected to be negligible. See CAR 20.	Same as above.	Similar to CAR 20, the revised PM was reviewed and the added definition observed in the PM now defines negligible as 1% of the lifetime emissions. The revised PM now provides a negligible definition to evaluate "Excluded" categories. CAR 24 is closed. – Arends
CAR 25 **TABLE 5.3: SELECTION OF SS'S** - 6 (page 27)		
Are major overhauls included in the "P8 Maintenance "category? How are batteries or fuel cells classified?	Same as above.	Similar to CAR 20, the revised PM was reviewed and the added definition observed in the PM now defines negligible as 1% of the lifetime emissions. The revised PM now provides a negligible definition to evaluate "Excluded" categories. Also additional information is now included in the revised PM to evaluate battery and fuel cell systems. CAR 25 is closed. – Arends.
CAR 26 **TABLE 5.3: SELECTION OF SS'S** - 7 (page 27)		

P11 Disposal of Equipment is noted as "Excluded" however batteries may represent significant emissions from disposal.	Same as above.	Similar to CAR 20, the revised PM was reviewed and the added definition observed in the PM now defines negligible as 1% of the lifetime emissions. The revised PM now provides a negligible definition to evaluate "Excluded" categories. CAR 26 is closed. – Arends
CAR 27 **TABLE 5.3: SELECTION OF SS'S** - 8 (page 27)		
P18 Decommission of Site is noted as "negligible", however in the case of some operations this could be very significant. Therefore negligible needs to be defined.	New justification provided.	Similar to CAR 20, the revised PM was reviewed and the added definition observed in the PM now defines negligible as 1% of the lifetime emissions. The revised PM now provides a negligible definition to evaluate "Excluded" categories. CAR 27 is closed. – Arends
CAR 28 **6 Procedure for Determining the Baseline Scenario:** (page 27)		
Example equations should be given in this section for calculating the baseline energy use.	Equations are embedded in the reference EVO 2010 document.	The revised PM was reviewed and the observed addition of references for procedures for determining the baseline energy use was confirmed and is acceptable. CAR 28 is closed. – Arends
CAR 29 **Procedure for Determining the Project Scenario Energy Use** (page 31)		
• A section is need for the "Procedure for Determining the Project Scenario Energy Use". Like the section for Baseline Efficiency.	References provided	The revised PM was reviewed and the observed addition of references for procedures for determining the project scenario energy use was confirmed and is acceptable. CAR 29a is closed. – Arends
• Also example equations should be given in this section for calculating the project energy use.	Reference provided	The revised PM was reviewed and the observed addition of references to equations to calculate project energy use was confirmed and is acceptable. CAR 29b is closed. – Arends

CAR 30 **Leakage** (page 35)		
The following statement should be revised as the last paragraph instructs the project developer to evaluate leakage potential. "The potential for leakage has been assessed for this project type. Neither the activities associated with the anticipated energy efficiency improvement, nor the alternative handling of waste would conceivably result in leakage.	The section has been modified.	The revised PM was reviewed and the revised leakage section observed in the PM is consistent and acceptable. CAR 30 is closed. – Arends
CAR 31 **TABLE 9.1: QUANTIFICATION PROCEDURES (page 38)**		
The reference to steam in the equation below could be replaced by a reference to the use of any district energy source such as steam, chilled water, heating water, etc. see CAR 18. Emissions Building/System Energy Consumption w/o ECM = ∑ [(Vol. Fuel i * EF Fuel i CO2) ; (Vol. Fuel i * EF Fuel i CH4) ; (Vol. Fuel i * EF Fuel i N20)] + [Electricity * EF Grid CO2e] + [Steam * EF Steam CO2e]	Agreed. It has been replaced with "Thermal Energy"	The revised PM was reviewed and the revised formula observed in the PM is now referring to thermal energy instead of steam and the equation is now acceptable. CAR 31 is closed. – Arends
CAR 32 **TABLE 9.1: QUANTIFICATION PROCEDURES** (page 38)		

–Many entries in the furthest column to the right are "Frequency of metering and reconciliation is most frequent as possible". • The value of more frequent meter reading and invoice reconciliation needs to be justified for the purpose of crediting emissions reductions. Monitoring the metered use of energy provides value to the operators of a facility by providing feedback to better manage the facilities. This in return can reduce energy use and associated emissions. • However, more frequent reconciliation of emissions totals will not reduce emissions in of itself.	Agreed. The section has been re-written.	The revised PM was reviewed and the discussion of metering frequency observed in the PM is acceptable. CAR 32 is closed. – Arends
CAR 33 **Sampling (page 67)**		
• References should be included to document the basis of cited sampling requirements.	ANSI/ASQC Z1.4-2008 Sampling Procedures and Tables for Inspection by Attributes and IAF MD 1:2007 IAF Mandatory Document for the Certification of Multiple Sites Based on Sampling.	The revised PM was reviewed and the 0bserved addition of the sampling procedure reference included in the PM is acceptable. CAR 33a is closed. – Arends
• The required confidence levels and confidence intervals should be stipulated.	The Confidence Intervals are set to be 95%.	The revised PM was reviewed and the observed addition of the 95% confidence interval requirement is acceptable. CAR 33b is closed. – Arends
CAR 34 8 Baseline Emissions (page 37 of the revised document)		
The "Emissions $_{\text{Adjusted Baseline EE}}$" equation in the text block incorrectly states with ECM. (i.e. "Emissions $_{\text{Adjusted Building/System Energy Consumption with ECM}}$")	Now corrected on page 39.	The 7 April, 2011 version of the PM has been corrected; as observed in the PM. CAR 34 is closed. Arends 14 April, 2011.
CAR 35 Thermal Energy (page 49 of the revised document)		

• The following statement in "Source of Data" section seems to be incomplete. "If the thermal energy crosses the boundary without a custody caliber meter, only calibrated internal meters can be relied upon."	Completed Now on page 50.	The 7 April, 2011 version of the PM has a revised statement and the revised statement is acceptable as observed in the current version of the PM. CAR 35a is closed. Arends 14 April, 2011.
• There is no requirement listed in the "QA/QC procedures to be applied" section.	QA/QC instructions have now been included for the remaining data sources.	The 7 April, 2011 version of the PM now has an acceptable statement regarding QA/QC procedures as observed in the current version of the PM. CAR 35b is closed. Arends 14 April, 2011.
CAR 36 Blank Data Unit / Parameter: (top of page 50 of the revised document)		
• The first table is missing the "Data Unit / Parameter", and "QA/AC procedures".	Corrected on Page 50	As observed in the 7 April, 2011 version of the PM, the "Data Unit / Parameter " now has an acceptable description for the Mass of Waste Material Sent to Landfill. CAR 36a is closed. Arends 14 April, 2011.
• This table is the only one with an additional row added for comments.	Removed.	As observed in the 7 April, 2011 version of the PM the comment section has been removed. CAR 36b is closed. Arends 14 April, 2011.
CAR 37 R, MassCO2, MassN2O, & MassCH4 (page 50 & 1of the revised document)		
There are no requirements listed in the "QA/QC procedures to be applied" sections.	QA/QC instructions have now been included for the remaining data sources.	As observed in the 7 April, 2011 version of the PM, the PM now includes acceptable QA/QC statements. CAR 37 is closed. Arends 14 April, 2011.
CAR 38 15 References and Other Information (page 52 of the revised document)		
This section is empty.		As observed in the 23 March, 2011 version of the PM, the reference section has been removed and the PM is acceptable. CAR 38 is closed. Arends 1 April, 2011.

CL 1		
Justification for the requirements related to sampling, including “with at least 20% of sample being selected at random” and sample size for the 3 different levels of sampling should be provided.	Sample sizes have been provided in point C of the sampling instructions. Added guidance has been provided in point C. The numbering has been corrected.	The revisions were according to ANSI/ASQC Z1.4-2008 Sampling Procedures and Tables for Inspection by Attributes and IAF MD 1:2007 IAF Mandatory Document for the Certification of Multiple Sites Based on Sampling; the revisions were found proper. The CL is closed. – Weidong

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