

VALIDATION REPORT FOR FULTON COUNTY MUD ROAD LANDFILL CARBON OFFSET PROJECT



Document Prepared By First Environment, Inc.

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Prepared By	First Environment, Inc.
Contact	91 Fulton Street Boonton, New Jersey 07005 Tel: 973-334-0003 www.firstenvironment.com
Approved By	James Wintergreen
Work Carried Out By	Michael Carim Jeff Daley Natali Ganfer Heather Moore Iris Caldwell

Summary:

The Fulton County Department of Solid Waste (FCDSW) owns and operates a landfill gas collection and control system at the Mud Road Sanitary Landfill located in the Town of Johnstown, New York. The project activity consists of the installation of an active gas collection and control system which collects landfill gas and sends it to a landfill gas to energy facility for destruction. The destruction of methane in LFG that otherwise would be vented to the atmosphere results in a net reduction in CO₂-equivalents.

The validation process consists of the independent third-party assessment of the project design and greenhouse gas (GHG) emission reduction assertion against the criteria stated in the Verified Carbon Standard (VCS) Standard, 1 February 2012, v3.2 and the approved Clean Development Mechanism (CDM) methodology ACM0001, Version 11.0. During the validation process, First Environment, Inc. issued several clarification and corrective action requests—all of which were addressed sufficiently by FCDSW. In summary, First Environment is reasonably assured that the Project meets all relevant VCS Version 3, v3.2 requirements and correctly applies the VCS-approved CDM methodology ACM0001.

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1 INTRODUCTION

This report is provided to Fulton County Department of Solid Waste (FCDSW) as a deliverable of the Verified Carbon Standard (VCS) project validation process for the Fulton County Mud Road Landfill Carbon Offset Project (the Project). This report provides a description of the steps involved in conducting the validation and the findings of the validation performed against the VCS Standard, as well as criteria given to provide for consistent project operation, monitoring, and reporting of greenhouse gas (GHG) emission reductions. This validation report summarizes the findings of the validation.

As outlined in the VCS Project Description (VCS PD), the VCS-approved methodology applied to the project activity is the Clean Development Mechanism (CDM) methodology ACM0001 – *Consolidated baseline and monitoring methodology for landfill gas project activities*, Version 11.0 (ACM0001). The Audit Team was provided the initial version of the VCS PD on November 10, 2011. Based on this documentation, a document review and desktop audit took place which resulted in corrective action requests (discussed later in this report) and revisions to the VCS PD. The final version, May 23, 2012, serves as the basis of the final conclusions presented herewith.

1.1 Objective

The purpose of validation is to have an independent third party assess the Project's design. In particular, the Project's baseline, monitoring plan, and the Project's conformance with VCS requirements are validated. This is to ensure that the VCS PD, as documented, is sound and reasonable and meets the identified criteria. Validation objectives also include an assessment of the likelihood that the Project will achieve the emission reductions estimated by FCDSW. Validation is a requirement for all VCS projects and is seen as necessary to provide assurance to stakeholders of the quality of the Project and its intended generation of emission reductions.

1.2 Scope and Criteria

The validation scope is defined as an independent and objective review of the VCS PD. The VCS PD was reviewed against the following criteria:

- Verified Carbon Standard: VCS Version 3, 1 February 2012, v3.2 (VCS); and
- approved VCS Methodology ACM0001, *Consolidated baseline and monitoring methodology for landfill gas project activities*, Version 11, including all methodological tools referenced therein.

1.3 Level of assurance

First Environment, Inc. (First Environment) and FCDSW have agreed that a reasonable level of assurance be applied for the Project.

1.4 Summary Description of the Project

The Fulton County Department of Solid Waste (FCDSW) owns and operates a landfill gas collection and control system at the Mud Road Sanitary Landfill located in the Town of Johnstown, New York. Environmental Capital, LLC (Environmental Capital) serves as the carbon advisor for FCDSW and was the primary point of contact during the validation process. The project activity consists of the installation of an active gas collection and control system which collects landfill gas (LFG) and sends it to a landfill-gas-to-energy facility for destruction. The landfill also uses a flare to destroy LFG, however, the flare is considered outside the project boundary and no emission reductions are claimed for flared LFG. The destruction of methane in LFG that otherwise would be vented to the atmosphere results in a net reduction in CO₂-equivalents.

The VCS PD provides additional details regarding the project activity.

2 VALIDATION PROCESS

2.1 Method and Criteria

The following validation process was used:

- conflict of interest review;
- selection of validation team;
- initial interaction with FCDSW;
- development of the validation plan;
- desktop review of the project design and the baseline and monitoring methodology and other relevant project documentation;
- site visit;
- follow-up interaction with FCDSW and other project personnel for supplemental information and corrective action as necessary; and
- report development and issuance of final validation statement.

The validation process was utilized to evaluate whether the Project’s approach, as outlined in the VCS PD, is consistent with the VCS Standard and the ACM0001 methodology. A validation conformance checklist was developed for the Project which summarizes the criteria used to evaluate the Project, the Project’s conformance with each criterion, and the Audit Team’s validation findings.

Conflict of Interest Review

Prior to beginning any validation project, First Environment conducts an evaluation to identify any potential conflicts of interest associated with the project. No potential conflicts were found for this project.

Audit Team

First Environment’s Audit Team consisted of the following individuals who were selected based on their validation experience, as well as familiarity with landfill operations:

- Michael Carim – Lead Auditor
- Jeff Daley – Auditor
- Natali Ganfer – Auditor
- Heather Moore – Auditor
- Iris Caldwell - Auditor
- James Wintergreen – Internal Reviewer

Audit Kick-off

The validation process was initiated with a kick-off conference call on November 14, 2011 between First Environment, the primary FCDSW contacts, Jeff Bouchard and Josh Brown, and the primary Environmental Capital contact, Denise Farrell. The communication focused on confirming the validation scope, objectives, criteria, schedule, and the information required for the validation.

Development of the Validation Plan

The Audit Team formally documented its validation plan as well as determined the sampling plan. The validation plan was informed by the kick-off meeting where key elements of the plan for validation were discussed including project team members, project level of assurance, materiality threshold, and standards of reporting and validation. The validation plan also provided an outline of the validation process and established project deliverables. A separate sampling plan was designed to review all project elements in areas of potentially high risk of inaccuracy or non-conformance.

Desktop Review

The Audit Team performed a desktop review of the VCS PD and supporting documentation, as further described in Section 2.2 below.

Site Visit

Heather Moore performed a site visit on December 7, 2011. The focus of the site visit was to interview relevant site personnel and project stakeholders; review the Project’s operations, data collection procedures, and information management systems; as well as to assess the Project’s controls for sources of potential errors and omissions.

Corrective Actions and Supplemental Information

The Audit Team requested clarification and supplemental information as well as corrective action during the validation process. The corrective action and clarification requests, and the responses provided, are summarized in Section 2.5.

Validation Reporting

Validation reporting, represented by this report for FCDSW, documents the validation process and identifies its findings and results.

2.2 Document Review

The Audit Team conducted the validation using the VCS Standard and ACM0001 methodology as the evaluative criteria. Additionality, eligibility requirements, baseline scenario(s), project emissions, the monitoring plan, and other pertinent areas of assessment were assessed to evaluate the Project’s approach as outlined in the VCS PD against the validation criteria. Discrepancies between the VCS PD and the validation criteria were considered material and identified for corrective action. Any deviations from the validation criteria required appropriate justification.

2.3 Interviews

Through the course of validation activities, First Environment interviewed the following project personnel to inform the validation process:

- Jeff Bouchard – FCDSW
- Josh Brown – FCDSW
- Denise Farrell – Environmental Capital, LLC
- Christina Magerkurth – Magerkurth Associates, Inc.

2.4 Site Inspections

As described above, Heather Moore performed the site visit on December 7, 2011.

2.5 Resolution of Any Material Discrepancy

As described above, the Audit Team requested clarification and supplemental information as well as corrective actions during the validation. The corrective action requests and the responses provided are summarized in the table below.

Corrective Action Request	Summary of Participant Response	Validation Conclusion
The Project Start Date identified in the VCS Project Description (PD) is inconsistent with records provided.	The PD was updated to be consistent with start date documentation provided, identifying a start date of June 4, 2010	Response is acceptable.
The crediting period identified in the VCS PD exceeds the 10-year maximum crediting period duration allowed by VCS.	The crediting period identified has been revised, and no longer exceeds the 10-year maximum allowed crediting period.	Response is acceptable.
The parameter BECH4,SWDS,y is not identified in Section 4.1 of the VCS PD	The parameters identified were added to Section 4.1 of the VCS PD.	Response is acceptable.
<p>The following parameters are not identified in Section 4.2 of the VCS PD:</p> <ul style="list-style-type: none"> • LFG_{total,y} • T • P • EL_{LFG} • PE_{flare} • PE_{FC} • PE_{EC} • EF_{propane} • NCV_{propane} 	All monitoring parameters required by ACM0001 have been appropriately defined in Section 4.2 of the VCS PD. Parameters associated with the flare have not been included in the PD because the flare is outside the project boundaries. Additionally, electricity from landfill gas (EL _{LFG}) is not included in Section 4.2 because the project is not claiming credits for displaced grid electricity.	Response is acceptable.
Please justify why power generation alternatives were not assessed in the determination of the baseline scenario.	Baseline alternatives related to power generation (P1-P6) were incorporated in the discussion of the determination of the baseline scenario	<p>Response is acceptable.</p> <p>See discussion in Section 3.2.4 and 3.2.5 below.</p>
The common practice analysis does not identify sufficient essential distinctions between the project activity and other similar landfill activities.	The common practice analysis has been revised to sufficiently identify essential distinctions between the project activity and similar landfill gas destruction activities in the Project's region and concluded that the project activity does not represent common practice.	<p>Response is acceptable.</p> <p>See discussion in Section 3.2.5 below.</p>
Provide transparent and documented justification for the selection of a 10 percent discount rate. Specifically, explain why options (a) through (d) of the discount rate selection in the additionality tool are not applicable.	The County provided sufficient evidence to demonstrate that options (a) through (d) (discount rate selection) in the Additionality Tool were not applicable to the specific circumstances of FCDSW's investment decision. Therefore, option (e) was selected. The county demonstrated under option (e) (other indicators) that the 10 percent discount rate is the most appropriate indicator.	Response is acceptable.

Corrective Action Request	Summary of Participant Response	Validation Conclusion
The VCS PD does not identify MD _{project,y} as being the lesser of either the sum of the LFG destroyed or the total quantity of methane generated annually.	Section 3 of the VCS PD has been revised to identify the comparison of the measured LFG destroyed to the total quantity of methane generated in order to select the appropriate value for MD _{project} .	Response is acceptable.

Clarification Request	Summary of Participant Response	Validation Conclusion
Please clarify the standard temperature and pressure to which the Thermal Instrument flow meters (SN 2011171 and 2011172), and the Veris Verabar (SN V2306.01.1) correct flow measurements from ambient conditions.	The Thermal Instrument flow meters correct gas flow measurements from ambient conditions to a standard pressure and temperature of 60°F and one atmosphere of pressure, respectively.	Response is acceptable. The Veris Verabar instrument is used to monitor flow to the flare, which was determined to be outside the project boundary; therefore, no response is required relative to this meter.

3 VALIDATION FINDINGS

3.1 Project Design

The Project applies the ACM0001 methodology, which is applicable to the project activity because it falls within the scope of the approved methodology. Specifically, the project activity involves landfill gas collection and combustion to produce electricity.

The project is located at 847 Mud Road, Johnstown, New York (latitude and longitude are 43°00' 38.00" N and 74° 28' 22.44" W, respectively). The project technology consists of the collection system (landfill gas extraction wells, horizontal collection piping, air operated dewatering pumps) and two Caterpillar G3520C internal combustion engine-generator sets, including associated monitoring equipment. Prior to the project, LFG was collected and destroyed in an open flare. As such, the project accounts for pre-project destruction of LFG as discussed in Section 3.2.6 below.

The project start date is June 4, 2010, which is the date on which landfill gas was first combusted in project engines. In order to confirm the Project Start Date, the Audit Team reviewed records of project monitoring data as well as an e-mail from US Transmission Commercial Services National Grid confirming the date that the Project was interconnected and energized on National Grid's transmission system in New York State. Additionally, a letter confirming grid connection from the New York Independent System Operator was reviewed. The first crediting period is June 4, 2010 to June 3, 2020. The forecasted emission reductions during the first crediting period are 365,720 mt CO₂e.

The Project complies with relevant laws and regulations. The Audit Team reviewed copies of permits as well as interviewed project personnel during the site visit in order to confirm that necessary regulatory requirements were met.

FCDSW is correctly identified as a project proponent because it owns and operates the landfill generating methane emissions and the LFG collection system. IES is also identified as a project proponent because they operate the facility where methane collected by FCDSW is destroyed. Jointly, both have overall control and responsibility for the project activity and right of use over any emission reductions created by it.

The Audit Team reviewed an attestation signed by FCDSW stating that FCDSW has not attempted to register the Project with another GHG program other than VCS, and the Project is not a part of any emissions trading programs or other binding emission limits or targets.

Commercially sensitive information related to project investment and finances has been redacted from the public version of the VCS PD. The Audit Team reviewed all business confidential information and determined that the classification as “commercially sensitive” is appropriate.

3.2 Application of Methodology

3.2.1 Title and Reference

The VCS-approved methodology applied to the project activity is the CDM methodology ACM0001, *Consolidated baseline and monitoring methodology for landfill gas project activities*, Version 11.0, including all methodological tools referenced therein.

3.2.2 Applicability

The project activity complies with the applicability requirements of ACM0001. The table below lists the relevant applicability requirements and identifies how the Project meets them.

ACM0001 Requirement	Project Conformance	Comments/Findings
The methodology is applicable to landfill gas capture project activities, where the baseline scenario is the partial or total atmospheric release of the gas and the project activities include situations such as: <ul style="list-style-type: none"> • flaring of captured gas; • use of captured gas to produce energy; and/or • use of captured gas to supply customers through the natural gas distribution network. 	Yes	The project baseline is defined as the partial release of landfill gas and the proposed project activity is the use of captured gas to produce electric power.

3.2.3 Project Boundary

The project boundary is defined by the geographical extent of the Fulton County Mud Road Sanitary Landfill, where the landfill gas is collected, and the landfill-gas-to-energy plant to which the landfill gas is exported. The project does not claim emission reduction credit for the displacement of fossil fuels from electricity exported to the grid; therefore, grid-connected power plants are excluded from the GHG Project Boundary. As stated in Section 1.4 above, the on-site flare is considered outside the project boundary and no emission reduction credit is claimed for LFG destroyed in this combustion device.

3.2.4 Baseline Scenario

The baseline scenario is defined in accordance with the ACM0001 methodology and is determined using the CDM “*Combined tool to identify the baseline scenario and demonstrate additionality*”, Version 4.0.0 (Combined Tool).

The baseline scenario is defined as the continuation of the pre-project conditions (landfill gas collection and destruction by flaring with no collection system expansions or upgrades). Because the Combined Tool is utilized, the selection of the baseline scenario is made simultaneously with the demonstration of additionality and both are discussed in Section 3.2.5 below.

3.2.5 Additionality

Project additionality is demonstrated through an investment analysis performed according to the approach defined in the Combined Tool and considering the requirements of ACM0001. The VCS PD applies the stepwise procedure as further described below:

Step 1: Identification of Alternative Scenarios

Sub-step 1a: Define alternative scenarios to the proposed project activity

The VCS PD identifies three alternative scenarios for consideration:

- I. continuation of pre-project conditions;
- II. active venting without landfill gas collection and destruction; or
- III. carrying out the project activity without seeking carbon credits.

The alternatives identified provide the same level of service, namely the operation of the landfill and solid waste management. The alternatives identified meet the requirements of the Combined Tool and sufficiently account for the scenarios identified as alternatives S1-S6 in the Combined Tool and power generation alternatives P1-P6 in ACM0001. Power generation alternatives were evaluated to determine if a plausible baseline alternative for power generation exists. Scenarios two through five were eliminated based on various technological and financial considerations. The only remaining plausible power scenario is the project without registration as a VCS project activity (P1) and existing and/or new grid-connected power plants (P6). P1 is encompassed by Alternative 3 in the baseline analysis and is evaluated concurrently with that scenario. The analysis demonstrates that the project activity would not be implemented in the baseline scenario for the purposes of electricity generation.

1b: Consistency with mandatory applicable laws and regulations

All alternatives identified are consistent with mandatory applicable laws and regulations including federal, state, and local regulatory requirements, ordinances, and permitting requirements.

Step 2: Barriers Analysis

Step 2 of the Combined Tool requires the identification of barriers that would prevent the implementation of alternative scenarios (from Step 1 above) and elimination of those alternative scenarios, which are prevented by the identified barriers.

Alternative 1 does not face any significant barriers as this is the pre-project activity which was already occurring. Alternative 2 is eliminated since it would require discontinuing use and removing existing systems and equipment that are already in place at the landfill. This alternative would impose unnecessary costs associated with equipment removal and would run counter to the facility's prior efforts to prevent any potential odor issues. Alternative 3 and P1 face significant barriers associated with financial capital and technical expertise required to design, install, and operate a landfill gas to energy plant. However, they are not unrealistic to overcome. Thus, Alternatives 1, 3, and P1 do not face any significant barriers that would prevent either scenario from occurring. Because more than one alternative remains, an investment analysis is applied.

Step 3: Investment Analysis

Because Alternative 3 and P1 generate revenues from the sale of LFG to IES, an investment analysis is appropriate. An investment analysis comparison is performed to evaluate remaining alternatives using the Net Present Value (NPV) as a financial indicator. The NPV was chosen as a financial indicator because two financial movers exist among the alternatives, namely revenue from the sale of LFG and incurred project and maintenance costs. A NPV comparison was determined to be most appropriate to inform the investment analysis.

The NPV of each scenario is estimated over an 18-year period (number of years remaining in the contract between IES and FCDSW) based on capital costs, operation and maintenance costs, and revenues from the sale of LFG to IES. First Environment reviewed supporting documentation for the discount and inflation rates applied in the analysis as well as the capital costs, operation and maintenance costs, and historical and projected LFG flow volumes. First Environment also evaluated the investment analysis spreadsheet provided by FCDSW to confirm that the NPV was calculated correctly for each scenario evaluated. Several immaterial misstatements were identified, but these did not affect the outcome of the investment analysis.

The results of the investment comparison analysis demonstrate that the NPV is zero for the continuation of pre-project conditions (Alternative 1) and negative for implementation of the project activity without seeking carbon credits (Alternative 3 and P1). Therefore, the project is not the most financially attractive option.

Step 4: Common Practice Analysis

The VCS PD includes an assessment of common practice among several similar landfills in the New York region. Specifically, landfills that have a beneficial use project—specifically power generation—and are not mandated to collect and control landfill gas are considered similar and are assessed further. Using these criteria, only one landfill is considered similar to the Mud Road Sanitary Landfill. The VCS PD identifies essential distinctions between this landfill and the Project related to the financing of their respective beneficial use projects. The Audit Team reviewed evidence to support these essential distinctions, including appropriate justification that these represented benefits to the other landfill that were not available to the FCDSW.

Based on the review of the investment and common practice analyses and all supporting documentation, the Audit Team concluded that VCS PD correctly applies the Combined Tool and that the Project is additional.

3.2.6 Quantification of GHG Emission Reductions and Removals

The VCS PD presents a procedure for quantifying GHG emission reductions that is consistent with the procedures described in ACM0001 and the relevant CDM tools referenced therein. The equations are correctly identified and the calculation of GHG emission reductions is presented in a transparent manner, incorporating all relevant GHG sources, sinks, and reservoirs.

Baseline emissions are calculated as the total quantity of methane destroyed by the Project ($MD_{\text{project},y}$) minus the quantity of methane that would have been destroyed in the baseline scenario in the year 2006 ($MD_{\text{BL},2006}$), multiplied by the global warming potential for methane.

$MD_{\text{BL},2006}$ is determined through quantifying historic data of the actual amount of landfill gas captured in 2006, which represents the best available data for gas collection in the baseline scenario prior to Project implementation. $MD_{\text{BL},2006}$ is conservatively calculated as the total annual amount of landfill gas sent to the flare multiplied by the average methane fraction of that landfill gas and the density of methane.

$MD_{\text{project},y}$ is estimated ex-ante using the US EPA Landfill Gas Emissions model (LandGEM) and site-specific factors. The Audit Team reviewed the LandGEM model as well as supporting data and assumptions in order to confirm that the estimates were reasonable. Consistent with ACM0001, $MD_{\text{project},y}$ will be determined ex-post by the lesser of either the metered quantities of methane destroyed in the engines or the modeled methane generated values from the LandGEM model.

Project emissions result from the consumption of grid electricity and combustion of fossil fuels by the Project. For the purposes of ex-ante estimation, project emissions are estimated based on actual 2010 electricity consumption and fossil fuel usage records. In accordance with ACM0001, these emissions will be calculated ex-post using the CDM *Tool to calculate baseline, project and/or leakage emissions from*

electricity consumption and the CDM Tool to calculate project or leakage CO₂ emissions from fossil fuel combustion, respectively.

As specified in ACM0001, no leakage emissions are considered. Therefore, total GHG emission reductions are calculated by subtracting total project emissions from total baseline emissions. The Audit Team reviewed the ex-ante estimates in order to confirm that they were correctly calculated.

3.2.7 Methodology Deviations

Deviations between the methodology’s monitoring requirements and the Project’s monitoring plan are presented in the following table:

Parameter	ACM0001 Requirement	Deviation from Requirement	Validation Conclusion
MD _{project, y} - Ex ante estimation of the amount of methane that would have been destroyed or combusted during the year.	Use a first order decay model described in the “Tool to determine methane emissions avoided from disposal of waste at a solid waste disposal site.”	Emission reductions for 2010 through 2020 are estimated using the quantity of waste disposed at the landfill and the US EPA’s LandGEM model.	Deviation acceptable. The EPA model represents a country-specific approach developed for the United States. The gas volumes generated by the LandGEM model are for illustrative purposes only at validation and will be compared to <i>ex-post</i> monitoring data of the Projects performance.
EF _{EL,j,y} – Emission factor for electricity generation for source <i>j</i> in year <i>y</i> .	Following option A2 of the “Tool to calculation baseline, project, and/or leakage emissions from electricity consumption,” a conservative default value of 1.3 tCO ₂ /MWh may be used.	An emission factor for electricity generation (EF _{EL,j,y}) is assigned a value of 0.3093 tonnes CO ₂ per MWh based on US EPA’s eGrid 2010 for NYUP subregion. This value will be reviewed annually upon the release of updated eGrid data.	The 1.3 tCO ₂ /MWh default value provided by the tool is not representative of the emission intensity of grid-connected electricity generation in the US. Further, the Project does not consume a significant quantity of electricity and electricity consumption does not represent a large emission source for the project. As such, this approach is reasonable.

3.2.8 Monitoring Plan

The monitoring plan specified within the VCS PD includes all relevant data and parameters required to obtain a reliable result of generated emission reductions and meets the requirements of ACM0001. The Project applies the approved monitoring methodology described in ACM0001. The primary variables monitored in order to determine and account for emission reductions are shown below.

Parameter	Method of Estimation	Frequency of Measurement	Unit of Measurement	Frequency of Recording
Quantity of landfill gas sent to the engines (LFG _{electricity,y})	TIC Model 62-9/9500 meters located on each engine	Continuous	scf, converted to m ³ in calculations	Every minute; one data point every fifteenth minute is used in calculations
Methane fraction in the landfill gas (w _{CH4})	Siemens Ultramat 23	Continuous	Percentage	Every minute
Operating hours of generating plant	SCADA system and operator logs	SCADA – every minute Logs – during shutdown events	Hours	SCADA – every minute Logs – downtime recorded in field logs as appropriate

The VCS PD includes a complete description of the frequency, responsibility, and procedures for recording, monitoring, measurement, and reporting activities. The monitoring plan ensures the adequate measurement of emissions occurring from GHG sources through the installation of appropriate metering equipment. The monitoring plan also identifies appropriate procedures for quality assurance and quality control of project data and includes procedures for responding to extraordinary events such as operational disruptions.

3.3 Environmental Impact

No environmental impact assessment was required for implementation of the project activity.

3.4 Comments by stakeholders

Because Fulton County is a public entity, County Board meetings, where matters relating to the project and updates are discussed, are open to the public and meeting notices and times are announced publicly. Meeting minutes are available upon request. No comments regarding this project have been received.

4 VALIDATION CONCLUSION

First Environment has performed a validation of the Project's approach, as outlined in the VCS PD, as part of the VCS validation process. The validation was performed on the basis of VCS Standard and the approved CDM methodology ACM0001, *Consolidated baseline and monitoring methodology for landfill gas project activities*, Version 11.0.

The review of the VCS PD and the satisfaction of corrective action and clarification requests have provided First Environment with sufficient evidence to determine the fulfilment of stated criteria.

The Project correctly applies the approved CDM baseline and monitoring methodology, ACM0001, as well as relevant CDM tools referenced therein, with minor deviations as described above. By collecting and combusting the landfill gas that otherwise would have been vented to the atmosphere, the project activity results in reductions of GHG emissions that are real, measurable, and give long-term benefits to the mitigation of climate change. An analysis of the additionality test demonstrates that the proposed project activity is not a likely baseline scenario. Emission reductions attributable to the Project are hence surplus to any that would occur in the absence of the Project.

The total emission reductions from the Project are estimated to be 365,720 metric tonnes of CO₂e over the selected 10-year crediting period. The emission reduction forecast has been checked, and it is deemed likely that the stated amount will be realized given that the underlying assumptions do not change.

In summary, it is First Environment's opinion that the Fulton County Mud Road Landfill Carbon Offset Project, as described in the VCS PD of May 23, 2012, meets all relevant VCS requirements and correctly applies the CDM methodology ACM0001.

The validation of the Project is based on the information made available to us and the engagement conditions detailed in this report. First Environment cannot guarantee the accuracy or correctness of this information. Hence, First Environment cannot be held liable by any party for decisions made or not made based on this report or opinion.

5 LEAD VALIDATOR SIGNATURE



Michael Carim
Associate

6 INDEPENDENT REVIEWER SIGNATURE



James Wintergreen
Senior Associate