

Validation Report for the Henrico County Landfill Gas Combustion Project

Voluntary Carbon Standard 2007.1

November 19, 2009

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Validation Report for the Henrico County Landfill Gas Combustion Project	James Wintergreen
Client:	Project Title:
Blue Source LLC	Henrico County Landfill Gas Combustion Project
Summary:	
The Henrico County Landfill Gas Project voluntarily captures and destroys methane from the Springfield Road Landfill located in Henrico County, Virginia. The validation process consists of the independent third-party assessment of the project design and emission reduction assertion against the criteria stated in the Voluntary Carbon Standard 2007.1 (VCS) and approved CDM Methodology ACM0001. During the validation process, First Environment issued several clarification and corrective action requests – all of which were addressed sufficiently by Blue Source. In summary, First Environment is reasonably assured that the Henrico County Landfill Gas Project meets all relevant VCS 2007.1 requirements and correctly applies the CDM Methodology ACM0001, with several minor deviations that were approved during the validation process.	
Work carried out by:	Number of pages:
Iris Caldwell Greg Kozak	14

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1 Introduction

This report is provided to Blue Source, LLC (Blue Source) as a deliverable of the Voluntary Carbon Standard 2007.1 (VCS) project validation process for the Henrico County Landfill Gas Combustion Project (the Project) located in Henrico County, Virginia. This report provides a description of the steps involved in conducting the validation and the findings of the validation performed on the basis of the VCS 2007.1, as well as criteria given to provide for consistent project operations, monitoring, and reporting. This validation report summarizes the findings of the validation.

As outlined in the Project Design Document (PDD), the VCS methodology applied to the project activity was UNFCCC's ACM0001 methodology (Version 10) - *Consolidated baseline and monitoring methodology for landfill gas project activities*. The Audit Team was provided the original PDD on October 23, 2009. 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 PDD. The final version, dated November 17, 2009, 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 design. In particular, the project's baseline, monitoring plan, and the project's compliance with the VCS 2007.1 are validated. This is to ensure that the PDD, 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 asserted by Blue Source. 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 PDD. The PDD is reviewed against the criteria stated in the VCS 2007.1 and the approved CDM methodology ACM0001 (Version 10) and all methodological tools referenced therein, including the *Combined tool to identify the baseline scenario and demonstrate additionality* (Version 2.2).

The Audit Team employed a risk-based approach, focusing on the identification of significant risks for project implementation and the generation of emission reductions.

1.3 VCS Project Description

The Project voluntarily captures and destroys methane from the Springfield Road Landfill located in Henrico County, Virginia. The Project consists of two stages. Stage 1 is the expansion of the pre-existing well-field and replacement of a small candlestick flare with a larger capacity flare station. Stage 2 is the implementation of a beneficial use project where the landfill gas (LFG) is destroyed in an on-site power generation facility and the resulting electricity is exported to the grid. It is anticipated that this stage of the Project will be operational in 2010.

The Project destroys LFG which otherwise would have been emitted directly to the atmosphere or destroyed in the small pre-existing system. The objective of the Project is to proactively manage LFG and reduce GHG emissions.

The PDD provides additional details regarding the site and the LFG collection and destruction system.

1.4 Level of Assurance

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

2 Methodology

The following validation process was used:

- conflict of interest review;
- selection of validation team;
- initial interaction with Blue Source;
- development of the validation plan;
- desktop review of the project design and the baseline and monitoring methodology and other relevant project documentation;
- site visit;
- interviews with relevant project stakeholders;
- follow-up interaction with the Blue Source and site personnel for supplemental information as needed; 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 PDD, is consistent with VCS and the methodology provided above. 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.

Iris Caldwell – Lead Auditor
Greg Kozak – Auditor
Jay Wintergreen – Internal Reviewer

Audit Kick-off

The validation process was initiated with a kick-off conference call on October 27, 2009 between First Environment and the primary Blue Source contact, Kelly B. Campbell. The communication focused on confirming the validation scope, objectives, criteria, schedule, and the information required for the validation.

Development of the Validation Plan

Based on the information discussed during the kick-off conference call, the team formally documented its validation plan and provided the validation plan to Blue Source.

Corrective Actions and Supplemental Information

The Audit Team requested clarification and supplemental information as well as eight corrective actions during the validation. The corrective action requests and the responses provided are summarized in Section 3.1.

Site Visit

Iris Caldwell of First Environment performed a site visit on October 9, 2009. The focus of the site visit was to interview relevant site personnel and project stakeholders and review the Project's operations, data collection procedures, and information management systems, as well as assess the Project's controls for sources of potential errors and omissions.

Validation Reporting

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

2.1 Review of Documents

First Environment conducted the validation using the VCS 2007.1 and the approved CDM ACM0001 methodology (Version 10) - *Consolidated baseline and monitoring methodology for landfill gas project activities*. Additionality, eligibility requirements, baseline scenario(s), monitoring plan, and other pertinent criteria were assessed to evaluate the Project's approach as outlined in the PDD against VCS and the approved CDM methodology referenced above. Discrepancies between the PDD and the validation criteria were considered material and identified for corrective action. Any deviations from the validation criteria required appropriate justification.

2.2 Follow-up Interviews

Through the course of validation activities and during the site visit, First Environment interviewed the following project personnel to inform validation:

- Kelly B. Campbell – Blue Source
- Mahesh Gundappa – Blue Source
- Daniella Gorton – Blue Source
- Linda Richardson – County of Henrico
- Donald Marickovich – Draper Aden Associates
- Nate Matthews – Draper Aden Associates

2.3 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 Section 3.1 of this report.

3 Validation Findings

3.1 Project Design

The Project has adopted the approved CDM methodology ACM0001 (Version 10), which is applicable to the project activity because it falls within the scope of the approved methodology. Specifically, the project activity involves the capture and destruction of LFG where the baseline scenario is the partial or total atmospheric release of methane.

The Springfield Road Landfill is owned by Henrico County. The landfill is comprised of three smaller sanitary landfills: East Fill, West Fill, and Expansion (Phases 1 through 4). In 2001, a LFG collection and destruction system was voluntarily installed in the East Fill landfill and consisted of 14 wells and a candlestick flare. Gas was first flared in March 2002; however, sufficient evidence of this start date could not be provided and therefore, the VCS Project is defined as the system expansion beginning in 2005. Emission reductions from the pre-project system are excluded from the total emission reductions claimed by the Project, which is a conservative approach.

The 2005 system expansion, also called Stage 1 of the Project, involved the installation of an additional 87 wells in the East Fill, West Fill, and Expansion areas. The pre-existing flare was decommissioned in December 2004 and replaced with a larger flare station that began operating in June 2005. Evidence of the Project start date is given by the commissioning report signed by Shaw LFG Specialties, LLC on June 3, 2005 (Attachment A). Five additional wells were added to the Expansion area (Phases 2 and 3) in 2006 and additional well-field expansion is expected in late 2009 or early 2010.

Stage 2 of the Project involves transporting the captured LFG to an on-site power generating facility. The four megawatts power generating facility is currently being designed by Ingenco Distributed Energy (Ingenco). It is anticipated that the facility will be operational in 2010.

Henrico County owns and operates the LFG collection system and flare station. Ingenco will own and operate the power generating system for Stage 2 of the Project. Henrico County transferred their rights to GHG credits to Ingenco Renewable Development, LLC in a July 14, 2009 purchase agreement (Attachment B). As indicated on Page 9 of the purchase agreement, credits attributable to periods prior to July 14, 2009 are also included in the purchase agreement. Blue Source has been contracted by Ingenco to monetize the emission reduction credits associated with Project, as evidenced by Attachment C.

The Springfield Road Landfill has a design capacity of 2.901 million megagrams (Mg) and therefore must submit non-methane organic compound (NMOC) emission calculations to the U.S Environmental Protection Agency (EPA) every five years, as required by the New Source Performance Standards (NSPS) rules. According to the most recent Tier II report completed in January 2009, the landfill's current NMOC emissions are 30.7 Mg per year. This is less than the 50 Mg threshold; therefore, the landfill is not subject to NSPS requirements to capture and control LFG. The summary of the Tier II report is provided as Attachment D. There are no other applicable state or local mandates which require Henrico County to install an active collection and control system.

The forecasted emission reductions from the Project are 538,073 metric tonnes of CO₂e during the first crediting period, which started January 1, 2009 and is for a period of 10 years. If the voluntary nature of the Project no longer applies due to federal rules or other requirements to which the Project is subject, the crediting period will be adjusted accordingly.

The Project qualifies in all aspects to be considered as a VCS project. The table below lists the VCS 2007.1 eligibility requirements and identifies how the Project meets them.

VCS 2007.1 Eligibility Conformance Checklist

Requirement	Project Conformance	Comments/Findings
Project began after January 1, 2002	Yes	Supporting documents provide evidence of a December 2004 construction agreement, January 2005 work authorization, and November 2008 payment for services to Shaw LFG Specialties, LLC. Additionally, the Shaw Flare Installation Documentation also indicates a utility flare installation date of June 3, 2005 (Attachment A).
Eligible emissions reductions are those after March 28, 2006	Yes	Emission reductions from the Project are only claimed from January 1, 2009 forward.
A VCS PDD is developed in accordance with the requirements of the protocol and ISO 14064-2:2006 clause 5.2	Yes	PDD was developed in accordance with the VCS template.
Clear demonstration of GHG credit ownership	Yes	Rights to the GHG credits (including those from gas destroyed since January 1, 2009) were transferred to Ingenco Renewable Development, LLC per the July 14, 2009 purchase agreement (Attachment B). Blue Source, in turn, purchased the emission reduction benefits from Ingenco in the contract dated October 22, 2009.
Proof that credits are not used in other GHG program(s)	Yes	Blue Source provided an attestation letter stating that emission reduction credits generated by the Project will only be registered with the VCS and will not be registered with any other program or market other than the VCS.
VCS program approved methodology is applied	Yes	The VCS program approved methodology applied to the project activity is UNFCCC's ACM0001 methodology (Version 10).

Corrective Actions and Requests for Clarification

First Environment identified several differences between the Project's approach, as outlined in the PDD and VCS, and the underlying CDM methodology that would constitute nonconformities or require approval from VCS as a revision. Corrective action requests were issued accordingly. Additionally, First Environment requested several clarifications and supporting documentation in relation to items in the PDD.

Through communications with the Audit Team, Blue Source was able to resolve all corrective action and clarification requests made by First Environment during the validation process.

The following tables summarize the corrective action and clarifications requested, as well as the client's response.

ID	Corrective Action Request	Participant Response	Validation Conclusion
1	The PDD does not include all the power generation alternative scenarios in its analysis of potential baseline scenarios, as required by ACM0001. Please revise.	Section 2.5.1 of the PDD was modified to include consideration of alternatives for energy generation. Additional information has been added surrounding the baseline options for energy generation.	Response to CAR is acceptable.
2	In order to apply the simple cost analysis, the investment analysis must demonstrate that the project scenario incurs costs while the other alternative does not. Please justify the assertion that alternative odor and surface emissions controls would not have required investment.	Detail was added to Section 2.5.3 of the PDD. While actions may have been taken by Henrico to reduce the potential for odors and subsurface gas migration, odor and gas migration management is an on-going management activity at the Landfill (as with most landfills). Further, Henrico was not required to take action, therefore, it is also possible that no investment or action to reduce odors and gas migration may have been taken under the baseline scenario. As a result, no incremental costs between the project and baseline are attributed to these activities.	Response to CAR is acceptable.
3	The PDD does not clearly identify the roles and responsibilities of the project proponents. Please revise and provide evidence of the contractual agreement between Blue Source and Henrico County.	Section 1.14 of the PDD was modified to identify the roles and responsibilities of the project proponents. Contractual agreements between Henrico County and Ingenco as well as Ingenco and Blue Source were provided.	Response to CAR is acceptable.
4	Please justify the use of the 80 and 90 percent collection efficiencies of the system.	Additional detail was added in Section 1.3. The percent coverage values are based on the Landfill Operator's best estimate of the system coverage.	Response to CAR is acceptable.
5	Please justify the chosen values for k and L ₀ and provide a copy of the LandGEM model used to determine the project methane generation rates.	For simplicity, the Inventory Conventional default k (0.04) and L ₀ (100) values from LandGEM were applied. The description of these parameters in Section 3.3.2 of the PDD were modified accordingly.	Response to CAR is acceptable.
6	Please justify the use of the 98 percent destruction efficiency applied to flow volumes from 2010 onwards.	The definition in Section 3.3.2 was modified. The flare efficiency is justified on the basis that it is more accurate for equipment and conditions in the United States (versus ACM0001). Further, the flare is designed and operated in accordance with 40 CFR 60.18. This standard specifies requirements for flare operating variables (i.e., Btu content, exit velocity) that must be met in order to achieve a 98% or higher flare destruction efficiency.	Response to CAR is acceptable.
7	Please justify the use of 5 percent of total projected emission reductions to estimate project emissions.	Five percent was selected as an arbitrary value but based on a review of similar projects. Pilot fuel and electricity usage is minimal. This value is likely an	Response to CAR is acceptable.

ID	Corrective Action Request	Participant Response	Validation Conclusion
		overestimate and is used to be conservative. Even with the addition of the electricity generation component of the project, emissions are still anticipated to be under five percent.	
8	On page 13, the PDD states, "landfill gas to energy projects may even face lower economic and financial barriers to implementation than flaring projects, due to the incremental revenue achieved from the sale of energy." This appears to contradict an earlier statement (on Page 10) that Henrico County could not justify the capital costs associated with constructing a landfill gas to energy project, yet the County chose to invest in a gas collection and flaring system. Please justify.	Comment on page 13 of the PDD was removed.	Response to CAR is acceptable.

3.2 Baseline and Additionality Assessment

In accordance with ACM0001 (Version 10), the selected baseline scenario was appropriately determined using the CDM's *Combined tool to identify the baseline scenario and demonstrate additionality, Version 2.2* (Combined Tool).

Step 1 of the Combined Tool was satisfied as follows:

The PDD identified several alternative scenarios to the project activity that can be the baseline scenario, including:

1. The landfill operator could continue to operate the existing active LFG capture system in the East Fill landfill and vent the remainder of LFG from the West Fill and Expansion landfills to the atmosphere.
2. The landfill operator could expand the collection system and install a higher capacity destruction device. This scenario represents the project activity without carbon credits.
3. The landfill operator could expand the LFG collection system and implement an LFG-to-energy project (i.e., electricity, thermal heat, or natural gas).

In addition, the PDD identified six alternatives to power generation as outlined in ACM0001:

- P1: existing and/or new grid-connected power plants;
- P2: existing or construction of new on-site or off-site fossil fuel fired cogeneration plant;
- P3: existing or construction of new on-site or off-site renewable based cogeneration plant;
- P4: existing or construction of new on-site or off-site fossil fuel fired captive power plant;
- P5: existing or construction of new on-site or off-site renewable based captive power plant;
- P6: power generation from LFG undertaken without generating carbon credits.

Scenarios P2 through P5 were eliminated from consideration as realistic and credible alternatives to power generation, since the construction of a fossil fuel or renewable energy power plant is outside the scope of business and expertise of Henrico County and the landfill. This leaves scenarios P1 and P6 as the only plausible power generation alternatives. Additionally, scenario P6 was deemed equivalent to Baseline Alternative 3 described above.

All of the alternative scenarios provide the same level of service, namely the operation of the landfill and odor mitigation. Further, each of the alternatives is in compliance with federal, state, and local regulatory requirements, ordinances, and permitting requirements.

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.

Baseline Alternative 3 was eliminated due to the significant time, effort, and cost required to evaluate and implement a gas-to-energy project. There is also a high level of uncertainty associated with the quantity and quality of the LFG proposed for use in electricity generation. Since power generation scenario P6 is equivalent to Baseline Alternative 3, P6 is also eliminated following the same reasoning. Therefore, the baseline power generation scenario is an existing or new grid-connected power plant.

Since more than one scenario remains following the barriers analysis, Step 3 of the Combined Tool requires the consideration of an investment analysis. As allowed by the Combined Tool, a simple costs analysis is applied because neither of the two remaining alternative scenarios generates revenue (apart from the sale of carbon credits), and the alternative that is not the proposed project activity does not incur any incremental costs.

The simple costs analysis clearly identifies Baseline Alternative 1 as the least cost option. The scenario provides the same level of service as Baseline Alternative 2 yet avoids the capital costs associated with expanding the LFG collection system and installing a larger flare station. Therefore, the most likely baseline scenario is the continued operation of the existing LFG collection and destruction system at the East Fill landfill and passive venting of LFG at the West Fill and Expansion landfills.

Step 4 of the Combined Tool requires an analysis of other activities similar to the proposed project activity. According to the Climate Action Reserve's analysis, less than one sixth of landfills not regulated by NSPS have installed LFG collection and flaring projects. It is possible that of these facilities, LFG collection and control systems may have been required by state or local mandates. As Henrico County was not required to install an active collection and control system to meet federal, state, or local requirements, this analysis suggests that the project activity is not common practice and supports the assertion that the Project is additional.

3.3 Monitoring Plan

The project applies the approved monitoring methodology ACM0001 (Version 10). The primary variables measured in order to determine and account for emission reductions are shown below:

Parameter	Method of Estimation	Frequency	Unit
The amount of LFG captured	Flow meter	Continuous	Nm ³

Parameter	Method of Estimation	Frequency	Unit
The amount of LFG sent to flare	Flow meter	Continuous	Nm ³
The amount of LFG sent to engines	Flow meter	Continuous	Nm ³
Methane fraction in LFG being flared	Portable gas analyzer	At least monthly	Nm ³ CH ₄ / Nm ³ LFG
Temperature of flare	Thermocouple	Continuous	°F

The project includes an extensive monitoring system involving staff training and development/implementation of a monitoring plan to maintain the performance of equipment, as well as to ensure the accuracy of measurements and data reported.

The PDD includes all relevant data and parameters required to obtain a reliable result of generated emission reductions and meets the requirements of the ACM0001 Methodology. The details of the monitoring plan are described in Section 3.2 and 3.3 of the PDD where there is a complete description of the frequency, responsibility, and authority for recording, monitoring, measurement, and reporting activities. The monitoring plan described in the PDD ensures the adequate measurement of emissions occurring from GHG sources through the installation of appropriate equipment and devices required for the final balance of emission reductions generated.

Variances between the methodology monitoring requirements and the project's monitoring plan are discussed below:

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 per the CDM Annex 10 "Tool to determine methane emissions avoided from disposal of waste at a solid waste disposal site."	Emission reductions for 2009 through 2018 are estimated using the quantity of waste disposed at the Landfill and the US EPA's LandGEM model.	Deviation acceptable. The gas volumes generated by the LandGEM model are for illustrative purposes only, as emission reductions will be based on <i>ex-post</i> monitoring data of the Project 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 0.515 tonnes CO ₂ per MWh based on US EPA's eGrid 2007 for SRVC 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.

Monitoring records have been retained by Henrico County since LFG was first flared in 2002. All relevant documents will continue to be retained for a period of at least two years following the end of the Project's crediting period. Henrico County personnel are responsible for overseeing monitoring activities and performing regular tasks such as changing out the strip chart recorder and logging temperature and flow data in Microsoft Excel. A third-party

contractor is responsible for taking gas composition readings and performing equipment inspections and maintenance. Ingenco will independently operate the electricity generation system once it is brought online in 2010. Blue Source aggregates all data for the emission reduction calculations.

3.4 Calculation of GHG Emissions

Emission reductions are directly monitored and calculated ex-post using the approach indicated in ACM0001 (Version 10). The formulae were correctly applied and calculation of GHG emission reductions is done in a transparent manner, incorporating all relevant GHG sources, sinks, and reservoirs. For the ex-ante estimation of emission reductions, the expected LFG generation of the landfill is determined using the quantity of waste disposed at the landfill and the US Environmental Protection Agency's (EPA) LandGEM Landfill Gas Emissions model rather than the CDM Annex 10 *Tool to determine emissions avoided from disposal to waste at a solid waste disposal site (Version 4)*. Ex-ante emission reductions were estimated using the LandGEM first order decay model approach considering values of $L_0 = 100 \text{ m}^3 \text{ CH}_4/\text{ton waste}$, $k = 0.04$, an average methane content of 45 percent, and system collection efficiency of 80 percent in 2009 and 90 percent in 2010 through 2018. Emission reduction estimates are discounted by a default flare efficiency of 50 percent in 2009 and 2010. A 98 percent flare efficiency is applied in 2011 through 2018 because the project proponent anticipates the installation of a continuous methane analyzer in 2010. Additionally, historic data was used to estimate emission reductions from the pre-project system and these reductions were subtracted from the overall reductions claimed by the Project.

The emission reduction estimates are provided as Attachment E. The assumptions used to estimate emission reductions are appropriate and are based on typical landfill parameters as well as site-specific information.

3.5 Environmental Impact

An Environmental Impact Assessment is not required as per regulation for the implementation of the Project activity.

3.6 Comments by Stakeholders

Stakeholder consultation has not been conducted for this project, as it is not a requirement under VCS 2007.1.

4 Validation Conclusion

First Environment has performed a validation of the Project's approach as outlined in the PDD as part of the VCS validation process. First Environment used the CDM methodology ACM0001, *Consolidated baseline and monitoring methodology for landfill gas project activities* (Version 10) as the criteria for the validation. The validation was performed on the basis of VCS 2007.1 criteria, as well as criteria given to provide for consistent project operations, monitoring, and reporting.

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

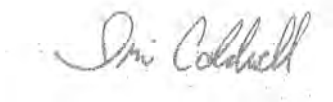
The Project correctly applies the approved CDM baseline and monitoring methodology, ACM0001 (Version 10), *Consolidated baseline and monitoring methodology for landfill gas project activities*, with two minor deviations that were approved during the validation process. By capturing and destroying methane that would otherwise have been released 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 additional to any that would occur in the absence of the project.

The total emission reductions from the Project are estimated to be 538,073 metric tonnes of CO₂e over the selected 10-year crediting period. The emission reduction forecast has been checked and is deemed likely that the stated amount is achieved given that the underlying assumptions do not change.

In summary, it is First Environment's opinion that the Henrico County Landfill Gas Combustion Project in Henrico County, Virginia, USA, as described in the VCS PDD of November 17, 2009, meets all relevant VCS 2007.1 requirements and correctly applies the CDM Methodology ACM0001, with minor deviations that were approved during the validation process.

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 Validator Signature



Iris Caldwell
Engineer II