



# JOINT VALIDATION AND VERIFICATION REPORT FOR THE BLUE SOURCE SPARTANBURG COUNTY LANDFILL GAS COMBUSTION PROJECT



Document Prepared by First Environment, Inc.

|                            |                                                                                                                                                              |
|----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Project Title</b>       | Blue Source Spartanburg County Landfill Gas Combustion Project                                                                                               |
| <b>Report Title</b>        | Joint Validation and Verification Report for the Blue Source Spartanburg County Landfill Gas Combustion Project                                              |
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**Summary:**

This report is provided to Blue Source, LLC (Blue Source), and the Project Proponents, Lockhart Power (Lockhart), Milliken & Company (Milliken), and Spartanburg County DPW (Spartanburg) as a deliverable of the Verified Carbon Standard (VCS) project validation and verification process for the Blue Source Spartanburg County Landfill Gas Combustion Project (the Project) located in Wellford, South Carolina. The Project is seeking a second crediting period and therefore undergoing a crediting period renewal validation and joint verification of the reporting period from June 15, 2020 to December 31, 2020.

The Project consists of three phases implemented at the Wellford Landfill. Phase I of the project involves flaring of landfill gas. Phase II involves the transport of landfill gas via pipeline to the Milliken Dewey Chemical Plant where the biogas is combusted in two steam boilers and a hot oil boiler. Phase III consists of destruction of landfill gas via Caterpillar 3520 engine-generator unit to produce electricity. All three Project Phases are currently active, and each achieves a net reduction in CO<sub>2</sub>-equivalents through the avoidance of methane emissions and displacement of fossil fuel that otherwise would have been combusted in the boilers.

The joint validation and verification process consists of the independent third-party assessment of the project design and ex-ante emission reduction estimate against the criteria stated in the Verified Carbon Standard (VCS) Version 4, 22 April 2021, v4.1, and the approved Clean Development Mechanism (CDM) methodology ACM0001, Flaring or use of landfill gas, Version 19.0. The verification process and scope consisted of the independent third-party assessment of the implementation of the project and emission reduction assertion against the criteria stated above as well as the VCS Project Description (VCS PD).

During the validation process, First Environment, Inc. (First Environment) issued two clarification and thirty-one corrective action requests – all of which were addressed sufficiently by the project proponent. During the verification process, First Environment issued three clarification and five corrective action requests - all of which were addressed sufficiently by the project proponent.

In summary, First Environment is reasonably assured that the Project meets all relevant VCS Version 4 requirements and correctly applies the VCS-approved CDM methodology ACM0001, and the VCS PD. No uncertainties were identified during the validation and verification process. The Project claims emission reductions of 46,157 tonnes CO<sub>2</sub>e for the period of June 15, 2020 through December 31, 2020.

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# 1 INTRODUCTION

## 1.1 Objective

This report is provided to Blue Source, LLC (Blue Source) as a deliverable of the Verified Carbon Standard (VCS) project validation and verification process for the Blue Source Spartanburg County Landfill Gas Combustion Project (the Project) located in Wellford, South Carolina. The Project is seeking a second crediting period and therefore undergoing a crediting period renewal validation and joint verification of the destruction of landfill gas, and displacement of fossil fuel during the period from June 15, 2020 through December 31, 2020. This report provides a description of the steps involved in conducting the joint validation and verification, and the findings of the validation and verification performed on the basis of the VCS Standard, as well as criteria given to provide for consistent project operation, monitoring, and reporting of greenhouse gas (GHG) emission reductions.

As outlined in the VCS Project Description (VCS PD), the VCS-approved methodology applied to the project activity is the Clean Development Mechanism (CDM) consolidated methodology ACM0001, “*Flaring or use of landfill gas*,” Version 19.0. The Audit Team was provided the initial version of the VCS PD dated November 2, 2020. Based on this documentation, a document review and desktop audit took place which resulted in corrective action and clarification requests (discussed later in this report) and revisions to the VCS PD. The final version of the VCS PD, Version 1.9, dated June 21, 2021, serves as the basis of the final conclusions presented herewith.

During the joint validation and verification process, Blue Source acted as the Project advisor for Lockhart Power (Lockhart), Milliken & Company (Milliken), and Spartanburg County DPW (Spartanburg), collectively “the Project Proponents.” As such, First Environment communicated directly with Blue Source regarding most verification activities.

## 1.2 Scope and Criteria

The validation scope is defined as an independent and objective review of the VCS PD. The Audit Team employed a risk-based approach, focusing on the identification of significant risks to project implementation and the generation of emission reductions. The validation process was informed by, and the VCS PD was reviewed against the following criteria:

|                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|--------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Standards of Validation</b> | <ul style="list-style-type: none"><li>• VCS Standard: VCS Version 4, 22 April 2021, v4.1 (VCS Standard)</li><li>• Errata &amp; Clarification, 5 February: VCS Standard, v4.0 and Registration and Issuance Process, v4.0</li><li>• Clean Development Mechanism (CDM) methodology ACM0001, Flaring or use of landfill gas, Version 19.0</li><li>• CDM Tool: Assessment of the validity of the original/current baseline and update of the baseline at the renewal of the crediting period, Version 03.0.1</li></ul> |
| <b>Validation Process</b>      | <ul style="list-style-type: none"><li>• VCS Standard</li><li>• VCS Program Guide, Version 4, 19 September 2019, v4.0</li><li>• ISO 14064-3: Specification with guidance for the validation and verification of greenhouse gas assertions, 2006</li></ul>                                                                                                                                                                                                                                                           |

The specific scope metrics for the verification are outlined in the table below:

|                                  |                                                                                                                                                              |
|----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Reporting Period</b>          | <ul style="list-style-type: none"><li>• June 15, 2020 – December 31, 2020</li></ul>                                                                          |
| <b>Emission Sources Verified</b> | <i>Baseline Sources</i> <ul style="list-style-type: none"><li>• CH<sub>4</sub> emission reductions resulting from the destruction of landfill gas.</li></ul> |

|                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                  | <ul style="list-style-type: none"> <li>CO2 emission reductions resulting from displacement of thermal energy generated from fossil fuels.</li> </ul> <p><i>Project Sources</i></p> <ul style="list-style-type: none"> <li>CO2 emissions from on-site fossil fuel consumption in support of the project activity.</li> <li>CO2 emissions from electricity consumption by the project activity</li> <li>CH4 emissions from uncombusted methane</li> </ul> |
| <b>Definition of Materiality</b> | <ul style="list-style-type: none"> <li>Misstatements of greater than five percent of the Project's GHG assertion. The Project activity generated less than 300,000 tonnes of CO2e per year and therefore falls under the "Project" scale.</li> <li>Qualitative non-conformities with Standards of Verification described below</li> </ul>                                                                                                               |
| <b>Standards of Verification</b> | <ul style="list-style-type: none"> <li>VCS Standard: VCS Version 4, 22 April 2021, v4.1 (VCS Standard)</li> <li>Errata &amp; Clarification, 5 February: VCS Standard, v4.0 and Registration and Issuance Process, v4.0</li> <li>VCS Project Description (VCS PD), 21-June-2021</li> <li>Clean Development Mechanism (CDM) methodology ACM0001, Flaring or use of landfill gas, Version 19.0</li> </ul>                                                  |
| <b>Verification Process</b>      | <ul style="list-style-type: none"> <li>VCS Standard</li> <li>VCS Program Guide, Version 4, 19 September 2019, v4.0</li> <li>ISO 14064-3: Specification with guidance for the validation and verification of greenhouse gas assertions, 2006</li> </ul>                                                                                                                                                                                                  |

The Monitoring Report dated 22 June 2021; Version 1.3 titled "Blue Source Spartanburg County Landfill Gas Combustion Project" was also reviewed to inform the verification assessment.

### 1.3 Level of Assurance

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

### 1.4 Summary Description of the Project

The Project is located at the Wellford Landfill at 595 Little Mountain Road (Latitude: 35.001193, Longitude: -82.13042). Spartanburg is the owner and operator of the landfill and flare, while Milliken is the owner and operator of the boilers and Lockhart is the owner and operator of the engine. The Project consists of three phases: (1) expansion of the existing landfill gas collection system and destruction of landfill gas in an open flare; (2) implementation of a beneficial use project by which landfill gas is destroyed in off-site boilers at the Milliken Dewey Chemical plant; and (3) implementation of another beneficial use project by which landfill gas is destroyed in a Caterpillar 3520 engine-generator unit at the Lockhart power facility. These activities result in a net reduction of CO2e emissions. The VCS PD provides additional details regarding the project activity.

## 2 VALIDATION AND VERIFICATION PROCESS

### 2.1 Method and Criteria

The following validation and verification process was used:

- conflict of interest review,
- selection of validation and verification team,
- initial interaction with Blue Source,
- development of the validation and verification plan,
- virtual site visit,
- desktop review of the project design and the baseline and monitoring methodology and other relevant project documentation,
- desktop review and evaluation of raw data, calculations, and supporting documentation for the verification period under review,
- follow-up interaction with Blue Source for supplemental information and corrective action and clarification as necessary; and
- report development and issuance of final validation and verification statements.

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. The verification portion of the process was utilized to gain an understanding of the Project's GHG emission sources and reductions and to evaluate and verify the collection and handling of data, the calculations that lead to the results, and the means for reporting the associated data and results. A validation and verification 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 and verification findings.

### 2.2 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.

### 2.3 Audit Team

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

Jeff Daley – Lead Auditor

James Wintergreen – Internal Reviewer

### 2.4 Audit Kick-off

The joint validation and verification process was initiated with a kick-off conference call on November 3, 2020 between First Environment and Blue Source. The communication focused on confirming the validation and verification scope, objectives, criteria, schedule, and the information required for the validation and verification.

## 2.5 Development of the Validation/Verification Plan

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

## 2.6 Desktop Review

The Audit Team performed a desktop review of the VCS PD and supporting documentation, as further described in Section 2.10 below.

## 2.7 Site Visit

Mr. Jeff Daley conducted a virtual site visit on May 11, 2021. Information Communication Technology (ICT) was utilized to conduct the site visit virtually. Prior to conducting the site visit virtually, First Environment updated the validation and verification risk assessment to incorporate and assess risks associated with using ICT. A detailed site visit agenda was provided to the site personnel prior to the site visit outlining the process and procedures implemented for the virtual site visit. Live video conferencing software was utilized to interview key site personnel directly responsible for project monitoring and data management processes and procedures. The virtual site visit also included review of the Project's operations; data collection procedures and information management systems; as well as assessments of the Project's controls for sources of potential errors and omissions. The site inspection included a virtual tour of the project components, including the landfill gas destruction devices, gas collection system, and all associated metering and monitoring equipment, and data management systems.

## 2.8 Corrective Actions and Supplemental Information

The Audit Team issued requests for supplemental information, corrective action, and clarification during the verification process. The corrective action and clarification requests and the responses provided by Blue Source are summarized in Appendix A.

## 2.9 Validation/Verification Reporting

Joint validation and verification reporting, represented by this report for Blue Source and the Project Proponents, documents the validation and verification process and identifies its findings and results. Validation and verification reporting consists of this report and a separate Deed of Representations to be submitted to Verra.

## 2.10 Document Review

The Audit Team conducted the validation using the VCS Standard and the ACM0001 methodology as the reference criteria. Eligibility requirements, renewal of the baseline scenario, project emissions, monitoring plan, and other pertinent criteria were assessed to evaluate the Project's approach as outlined in the VCS PD against the validation criteria. Deviations required appropriate justification from Blue Source.

Additionally, during the verification process, First Environment reviewed the Project's Monitoring Report, GHG emission reduction assertion, and supporting documentation for the current verification period to ensure consistency with the VCS Standard, ACM0001, and the VCS PD. Discrepancies between project

documentation and the verification criteria were considered material and identified for corrective action. Deviations required appropriate justification from Blue Source. First Environment assessed the GHG emission reduction assertion and underlying monitoring data to determine if either contained material or immaterial misstatements.

The results of the validation and verification reviews are discussed in greater detail below.

## 2.11 Interviews

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

Andre Buiza – Blue Source; Carbon Solutions Analyst

Tooraj Moulai – Blue Source; Director of Engineering & Technical Services

Scott Thompson – Lockhart Power; Operations Manager

## 2.12 Site Inspections

As described above, a site visit was performed on May 11, 2021.

## 2.13 Resolution of Findings

As described above, the Audit Team requested supplemental information and issued thirty-one requests for corrective action and two requests for clarification during the validation process. The Audit Team issued five requests for corrective action and three requests for clarification during the verification process. The corrective action and clarification requests and the responses provided are summarized in the tables found in Appendix A.

### 2.13.1 Forward Action Requests

No forward action requests were issued during the validation and verification processes.

## 3 VALIDATION FINDINGS

### 3.1 Project Details

The Project applies the ACM0001 methodology, which is applicable to the project activity because it falls within the scope of the methodology. The project activity involves an investment to an existing landfill gas capture system to increase the recovery rate and change the use of the captured landfill gas. The captured landfill gas is destroyed for generation of electricity, flared, or is used in boilers to offset fossil fuel usage.

The Project activity is located at the Wellford Landfill at 595 Little Mountain Road (Latitude: 35.001193, Longitude: -82.13042).

The landfill currently consists of six main areas designated as Phases I through VI, with a future Phase VII planned. The Project activity consists of the construction of a new landfill gas collection system and subsequent destruction of collected gas in a flare, generator, or boilers. This activity consists of new gas collection wells, gas collection piping, destruction devices, and all associated ancillary equipment and monitoring devices. Prior to the Project activity, landfill gas was collected from a separately designed gas collection system and gas wells, with collected gas destruction via an open flare. The pre-project gas collection and destruction was specifically designed independent of the project system. Project eligible gas was monitored separately from the pre-project system prior to the gas header lines joining before the flare skid. As of late 2019, the pre-project collection system header line has been physically cut off, capped, and disconnected from the project header line thus further segregating the two gas collection systems. The Project activity does not claim emissions from the displacement of fossil generated electricity.

The Project start date is April 29, 2010, which is consistent with the start date identified in the originally validated VCS PD.

The first crediting period was from June 15, 2010 to June 14, 2020. The second crediting period is from June 15, 2020 to June 14, 2030. The forecasted emission reductions expected over the duration of the second crediting period are 1,351,412 tCO<sub>2</sub>e, which classifies the project scale as “Projects” in accordance with Section 3.9.1 of the VCS Standard.

The Project complies with relevant laws and regulations. The Audit Team reviewed copies of applicable permits as well as interviewed project personnel during the virtual site visit in order to confirm that necessary regulatory requirements were met. The landfill has a permitted capacity above the 2.5 million cubic meter threshold that triggers New Source Performance Standard (NSPS) requirements. As such, the landfill is required to conduct Tier II testing to determine non-methane organic compound (NMOC) emissions. The most recent NMOC emissions calculations identify that the landfill’s current 2020 NMOC emissions rate is below the 34 Megagram (Mg.) per year threshold identified in 40CFR Part 60, Subpart XXX that would require the installation and operation of a gas collection and control system. Additionally, the VCS PD identifies that the NMOC emissions rate will be reviewed when revised emissions rate reports are generated to ensure the Project remains voluntary for the duration of the crediting period.

The County owns and operates the landfill including the landfill gas collection system, gas treatment system, flare, and pipeline to the Milliken Dewey Chemical plant. Lockhart owns and operates the energy facility and contracted with the County to maintain and operate the landfill gas monitoring equipment and pipeline activities. Milliken owns and operates the boilers and all associated equipment for thermal energy generation at their facility. Due to these shared responsibilities, all three entities, i.e., the County, Lockhart, and Milliken, are considered project proponents. The Audit Team confirmed that the project proponents were correctly identified in the VCS PD.

The Audit Team reviewed an attestation stating that the Project is not registered with another GHG programme other than VCS.

The project activity does not claim emission reductions from the displacement of fossil generated electricity. Therefore, double counting of environmental attributes associated with displacement of fossil generated electricity is not applicable.

No information has been deemed commercially sensitive in the VCS PD. First Environment was provided with full copies of all applicable spreadsheets and documents needed to inform the validation and verification.

Overall, the Project Proponent provided an accurate, complete description of the Project providing a comprehensive understanding of the nature of the Project. First Environment has confirmed that the Project has been implemented according to the description provided in the VCS PD.

## 3.2 Participation under Other GHG Programs

During the validation process, First Environment reviewed an attestation from Blue Source confirming that GHG emission reduction credits from the Project have not been, and will not be, registered under another GHG program for the duration of the renewed crediting period.

First Environment concluded that the Project is eligible to participate under the VCS program.

## 3.3 Safeguards

### 3.3.1 No Net Harm

The Project creates no negative environmental or socio-economic impacts.

### 3.3.2 Local Stakeholder Consultation

The Project operates in accordance with several permits to ensure protection of the environment. The landfill is owned by a public entity and therefore local stakeholders can submit input at any time to the Landfill Manager or Public Works Department. No ongoing comments or concerns have been submitted. The VCS PD provides further detail on stakeholder consultation.

### 3.3.3 Environmental Impact

No environmental impact assessments were required for the Project Activity.

### 3.3.4 Public Comments

No public comments or concerns have been submitted.

### 3.3.5 AFOLU-Specific Safeguards

This section is not applicable to the Project activity.

## 3.4 Application of Methodology

### 3.4.1 Title and Reference

The VCS-approved methodology valid at the time of validation and applied to the project activity is the following CDM approved consolidated methodology:

- ACM0001 “Flaring or use of landfill gas” Version 19.0

The methodological tools valid at the time of validation, and applied to the project activity are the following CDM approved tools:

- CDM TOOL03: “Tool to calculate project or leakage CO<sub>2</sub> emissions from fossil fuel combustion,” Version 03.0
- CDM TOOL05: “Baseline, project and/or leakage emissions from electricity consumption and monitoring of electricity generation,” Version 3.0
- CDM TOOL06: “Project emissions from flaring,” Version 03.0
- CDM TOOL08 – “Tool to determine the mass flow of a greenhouse gas in a gaseous stream,” Version 03.0
- CDM TOOL09: “Determining the baseline efficiency of thermal or electric energy generation systems,” Version 03.0
- CDM TOOL11 – “Assessment of the validity of the original/current baseline and to update the baseline at the renewal of a crediting period,” Version 03.0.1

### 3.4.2 Applicability

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

| ACM0001 Requirement                                                                                                                                                                                                                                                                                                                                                                   | Project Conformance | Comments/Findings                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| The methodology is applicable under one of the conditions identified in Section 2.2, Paragraph 3.                                                                                                                                                                                                                                                                                     | Yes                 | <p>The project activity involves the following activities:</p> <ul style="list-style-type: none"> <li>• An investment to an existing LFG capture system to increase the recovery rate. Project eligible LFG that is captured would have been flared or vented. LFG in the existing capture system is collected separately from the project system.</li> <li>• Destruction of LFG in a flare, generator for electricity production, or boilers for heat generation.</li> <li>• The Project does not reduce the amount of organic waste that would be recycled in the absence of the project activity</li> </ul> |
| The methodology is only applicable if the application of the procedure to identify the baseline scenario confirms that the most plausible baseline scenario one of those identified in Section 2.2, Paragraph 4.                                                                                                                                                                      | Yes                 | The most plausible baseline scenario is the partial or total release of the LFG or the capture of LFG and destruction through flaring.                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <p>This methodology is not applicable:</p> <ul style="list-style-type: none"> <li>• In combination with other approved methodologies.</li> <li>• If the management of the SWDS in the project activity is deliberately changed during the crediting in order to increase methane generation compared to the situation prior to the implementation of the project activity.</li> </ul> | Yes                 | The methodology was not used in combination with other approved methodologies. Additionally, the waste management practices at the landfill have not changed relative to prior to project implementation.                                                                                                                                                                                                                                                                                                                                                                                                      |

| ACM0001 Requirement                                            | Project Conformance | Comments/Findings                                                                                      |
|----------------------------------------------------------------|---------------------|--------------------------------------------------------------------------------------------------------|
| The applicability conditions included in the tools also apply. | Yes                 | The VCS PD applies each applicable tool as per the applicability conditions identified in the Tool(s). |

The Project correctly applied the ACM0001 methodology, and all associated methodological tools as referenced in Section 3.4.1 above.

### 3.4.3 Project Boundary

The project boundary is defined by the geographical extent of the project activity including the landfill's physical boundaries where landfill gas is collected and destroyed in the open flare and engine generator, and the Millikin facility where collected landfill gas is destroyed in the boilers. The project boundary also includes all gas collection equipment and all associated ancillary equipment.

The Audit Team verified the boundary through observations and interviews during the site inspection.

The Audit Team reviewed the source, sink, and reservoir (SSR) determination included in the VCS PD and found the justification accurate and in accordance with the applied methodology.

Overall, the Project Proponent provided an accurate description of the project boundary and a comprehensive justification for the project's SSR.

### 3.4.4 Baseline Scenario

For the renewal of a crediting period, the VCS Standard requires that the CDM Tool "Assessment of the validity of the original/current baseline and update of the baseline at the renewal of the crediting period" be applied. The Project's baseline scenario consists of the continued collection of landfill gas and combustion in the pre-existing flare without expansion or carbon revenue. The Tool requires a stepwise assessment of the original baseline scenario as discussed in detail below:

Step 1.1 requires the assessment of the current baseline with relevant national and/or sectoral policies. Landfilling of MSW has not been affected by any national policies with the exception of updates to 40 CFR Subpart WWW (Standards of Performance for Municipal Solid Waste Landfills), and the promulgation of Subpart XXX which lowers the non-methane organic compound (NMOC) emissions threshold from 50Mg./yr. to 34Mg./yr. that would trigger the requirement for installing and operating a gas collection and control system. The landfill is currently subject to the lower threshold of 34Mg./yr. However, the landfill remains in compliance with NSPS regulations and the most recent 2020 NMOC emissions rate calculations and report identify that the landfill's NMOC rate is 22.3 Mg./yr. which is below the emissions threshold of 34Mg./yr. that would require a gas collection and control system. However, these NSPS updates would not materially impact the placement of MSW into landfills.

Step 1.2 requires the assessment of the impact of circumstances existing at the time of requesting renewal of the crediting period on the baseline emissions. The VCS PD considered and assessed circumstances which could impact the baseline. Those considered were the costs associated with maintaining the gas collection wells and associated piping, and the use of natural gas at the Millikin facility and fossil-based electricity generation in the absence of the Project activity. The VCS PD identifies and justifies that the original capital cost barriers associated with implementation of the Project activity have remained the same and in most cases these barriers have become more substantial due to inflation, which further supports the legitimacy of the baseline scenario. The circumstances discussed in the VCS PD identified that the original baseline emissions scenario is not changed by new circumstances at the time of crediting period renewal. First Environment concluded that the current baseline remains plausible, and no new circumstances change the validity of the selected baseline.

Step 1.3 requires the assessment of whether the continuation of use of current baseline equipment(s) or an investment is the most likely scenario for the crediting period for which renewal is requested. The baseline scenario identified is the continuation of current equipment without any additional investment. The relevant baseline equipment is the original pre-project flare, the boilers at the Millikin facility, and in the absence of the Project activity; fossil-based electricity generation from the regional electrical grid. Since project implementation there has been no change in the Millikin boilers. Aside from routine maintenance, no investment is required for the boilers to remain operational, and the expected lifetime of the boilers extends beyond the Project's crediting period. The baseline flare was replaced during the first crediting period primarily due to outdated technology associated with the flare skid and to add increased capacity for future landfill expansion. However, the installation of a new flare does not change the outcome of the originally selected baseline scenario since in the absence of the Project activity the selected baseline is the atmospheric release of landfill gas, and/or partial capture to address odour issues. Due to the costs associated with installing, operating, and maintaining a flare, the landfill would likely implement measures other than flaring to address odour issues if required. Routine maintenance of any pre-project wellfield components would occur regardless of the Project activity and therefore is not applicable. First Environment concluded that the continuation of the current baseline equipment scenario is reasonable and is the most plausible scenario.

Step 1.4 requires the assessment of the validity of the data and parameters. The VCS PD identifies data parameters that were only determined at the start of the original crediting period and not monitored during the original crediting period, which have been updated for the crediting period renewal. First Environment confirmed that relevant emission factors and default values have been updated accordingly.

Step 2.1 (Update the current baseline scenario) is not applicable as the original baseline scenario was determined to be valid.

Step 2.2 requires that data and parameters be updated. As discussed in Step 1.4 in the VCS PD, applicable baseline data and parameters have been updated for the crediting period renewal.

First Environment concluded that the originally identified baseline scenarios remain valid for the second crediting period, and that relevant emission factors and default values have been updated accordingly.

### 3.4.5 Additionality

Consistent with VCS Standard Section 3.8.9, a full reassessment of additionality is not required when renewing the project crediting period. The Audit Team confirmed through review of the Title V Permit, landfill's operating permit, NSPS status, and NMOC emissions report, as well as interviewed project personnel during the site visit to confirm that the Project is not mandated by any law, statute, or other regulatory framework. Additionally, an attestation stating that the project is not required to operate as a result of any regulations was provided. The Audit Team concluded that the Project met the regulatory surplus requirement.

### 3.4.6 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. 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. All data and parameter values identified in the VCS PD were reasonable and found to be within the context of the Project.

Baseline emissions ( $BE_y$ ) are calculated ex-post as the sum of the total baseline emissions of methane from the SWDS ( $BE_{CH_4,y}$ ) and baseline emissions associated with heat generation ( $BE_{HG,y}$ ). Baseline emissions from methane are quantified as the total quantity of methane destroyed by the Project ( $F_{CH_4,PJ,y}$ ) multiplied by a soil oxidation factor ( $OX_{top\_layer}$ ), and the global warming potential for methane. The baseline emissions associated with heat generation is quantified by calculating fossil fuel emissions that would have been emitted in the absence of the Project. Baseline emissions are not calculated for the electricity generation activity ( $BE_{EC,y}$ ) because no GHG emission reductions are claimed for the displacement of fossil generated electricity.

The amount of methane that would have been captured and destroyed in the baseline ( $F_{CH_4, BL, y}$ ) is set to zero since the pre-project gas collection system is separate from the Project gas collection system, and Project gas collection is monitored separately. Additionally, at the end of the first crediting period, the pre-project gas collection header line had been physically cut off from the flare skid gas header line, further segregating the two gas collection systems.

The Project consumes both fossil fuel and grid electricity. Therefore, project emissions are quantified in accordance with Equation 22 identified in the ACM0001 methodology.

As specified in ACM0001, no leakage emissions are considered. Therefore, total GHG emission reductions are calculated as the total quantity of methane destroyed by the Project ( $F_{CH_4, PJ, y}$ ) plus the baseline emissions associated with displacement of fossil fuel in heat generation equipment ( $BE_{HG, y}$ ), minus project emissions associated with fossil fuel usage ( $PE_{FC, y}$ ) and grid electricity usage ( $PE_{EC, y}$ ).

Ex-ante estimates were calculated in accordance with Equation 5 of the ACM0001 methodology. The Audit Team reviewed the ex-ante estimates in order to confirm that they were correctly calculated and correctly apply all specified factors and default values.

After reviewing the quantification procedure and supporting evidence, the Audit team concluded that the methodology and applicable tools have been applied correctly to calculate baseline emissions, project emissions, leakage, and net GHG emission reductions and removals. Documentation related to all data sources were reviewed, and all identified parameter values were determined to be reasonable in the context of the Project activity. No uncertainties remained with the calculation of emissions.

### 3.4.7 Methodology Deviations

The following methodology deviations were identified during the validation process. The audit team evaluated the justification and applicable supporting evidence and validated the application of the deviations listed below:

- **Electricity Emission Factor:** The CDM Tool: “Baseline, project and/or leakage emissions from electricity consumption and monitoring of electricity generation, Version 3” identifies that the electricity emission factor be calculated by using the CDM Tool: “Tool to calculate the emission factor for an electricity system,” or apply a default electricity emission factor. The VCS PD identifies that project emissions resulting from purchased grid electricity will be quantified by using an electricity emission factor sourced from the U.S. EPA eGRID database for the sub region in which the Project is located, as opposed to applying the methods identified in the Tool. First Environment approved this methodology deviation because the U.S. EPA eGRID electricity factor more accurately represents the electricity grid in which the Project activity resides.
- **Ex-Ante Estimate of Emissions Reductions:** The ex-ante emission reduction estimates were not estimated using the CDM “Tool to determine methane emissions avoided from disposal of waste at a solid waste disposal site.” Instead, ex-ante emission reductions were estimated by using the US EPA LandGEM Landfill Gas Emissions model, which is the industry accepted standard for developing landfill gas curves in the United States. First Environment approved this deviation because it does not impact the conservativeness of the future reporting period emission reductions.
- **Default Flare Efficiency:** The CDM Tool: “Project emissions from flaring, Version 3” identifies an open flare default destruction efficiency of 50 percent. The VCS PD identifies that a default open flare efficiency of 98 percent will be applied, which is representative of the flares design to comply with United States (US) Environmental Protection Agency (EPA) 40CFR60.18. First Environment approved this methodology deviation because the 98 percent flare efficiency is representative of the typical flare efficiency for an open flare operated in the United States (US) in accordance with 40CFR 60.18 requirements. Furthermore, the applied flare efficiency yields a more accurate representation of emission reductions.
- **Electricity consumed by heat generation equipment:** The ACM001 Methodology, and underlying CDM Tool: “Baseline, project and/or leakage emissions from electricity consumption and

monitoring of electricity generation” requires that grid electricity consumption be directly monitored. Because electricity usage by the Project boilers is not separately metered, the power rating of the heat generation equipment in MW is multiplied by the time of operation of the boilers. As a conservative measure, it is assumed that the heat generation equipment is in operation for 24 hours per day. First Environment approved this deviation because it does not negatively impact the emission reduction assertion.

- **Net Calorific Value (NCV) of methane:** The ACM0001 Methodology/Parameter Table 4 identifies a default value for the NCV of methane. The VCS PD identifies a value sourced from the National Institute of Standards and Technology, which will be reviewed annually to ensure the applied value remains appropriate and accurate. First Environment approved this deviation because it does not negatively impact the emission reduction assertion.
- **Emission factor for natural gas:** The ACM0001 Methodology/Parameter Table 5 identifies that the emission factor for stationary fossil fuel combustion is sourced from the 2006 IPCC Guidelines on National GHG Inventories. The VCS PD identifies that the natural gas emission factor will instead be sourced from the EPA Center for Corporate Climate Leadership GHG Emission Factors Hub, and that the value will be reviewed annually to ensure applied factors remain appropriate and accurate. First Environment approved this deviation because it does not negatively impact the emission reduction assertion.
- **Standard Temperature Conditions:** The ACM001 Methodology, and underlying Tools, identify a standard temperature reference condition of 32°F. The VCS PD identifies that a standard temperature reference condition of 60°F will be applied which is more common for U.S. based project types. First Environment approved this deviation because the methane density factor applied by the project is that of methane at 60°F. Additionally, this deviation will have no impact on the accuracy or the emission reduction assertion.
- **Landfill Gas monitoring method:** The method to monitor the quantity of project methane destroyed is based on a comparison of the total amount of Project landfill gas collected ( $V_{\text{Project total,y}}$ ) and the proportion of landfill gas sent to each destruction device. The total amount of Project landfill gas collected is metered on the main header line prior to the previous junction (which is now removed) with the non-eligible (pre-project) portion of the landfill and also prior to any gas conditioning equipment. As a conservative measure, the sum of landfill gas destroyed by all three destruction devices is compared to the total amount of Project landfill gas collected ( $V_{\text{Project total,y}}$ ), and the lesser of the two values is applied in the calculation of methane destroyed. First Environment approved this deviation because it meets the criteria for permitted methodology deviations. Specifically, this deviation is related to the criteria and procedures pertaining to monitoring or measurement set out in the methodology. Additionally, this deviation results in greater conservativeness in the emission reduction assertion.
- **Efficiency of heat generation equipment:** The amount of landfill gas combusted in the three Millikin boilers is not monitored separately per boiler, the quantity of thermal energy displaced by LFG-sourced heat is amalgamated and the efficiency of all three boilers are assumed to be the same (82%). First Environment approved this deviation because it does not negatively impact the emission reduction assertion. Additionally, manufacturer documentation of the 82% boiler efficiency was provided to support this deviation.
- **Boiler Operability:** The Operation of the Project Boilers is not measured hourly as required according to ACM0001. This is due to the fact that the boilers also consume natural gas and therefore can still be operational even when landfill gas is not being combusted. All landfill gas that is sent to the boilers is considered to be destroyed because the boilers have multiple fail-safes built into the control systems and automatic shutoff valves that close anytime the boilers are not in operation. First Environment approved this deviation because the fail-safes ensure landfill gas destruction.
- **Methane Density:** The CDM Tool to determine the mass flow of a greenhouse gas in a gaseous stream identifies that density of the greenhouse gas be calculated according to Equation 10 of the Tool. Since the measurement of landfill gas by all flow meters is done at a set/standard

temperature and pressure, the density used in the project quantification is the density at the same reference temperature and pressure. Therefore, methane density is identified in the VCS PD as a reference methane density at standard conditions of 60°F and one atmosphere. First Environment approved this deviation because the applied methane density is consistent with the standard temperature and pressure conditions of the recorded landfill gas flow, and it does not negatively impact the emission reduction assertion.

The above-mentioned deviations were all deemed to be valid and meet the criteria and specifications for permitted methodology deviations. Additionally, each deviation was appropriately justified in the VCS PD and do not impact the applicability of the methodology applied, additionality of the Project, appropriateness of the baseline scenario, or conservativeness of the emission reduction assertions.

### 3.4.8 Monitoring Plan

The Project applies the monitoring methodology described in the ACM0001 methodology. The primary variables monitored in order to determine and account for emission reductions are listed below.

| Parameter                                                      | Method of Estimation              | Frequency of Measurement | Frequency of Recording               |
|----------------------------------------------------------------|-----------------------------------|--------------------------|--------------------------------------|
| Total amount of landfill gas collected from the Project system | Thermal mass flow meter           | Continuous               | At least every 15 minutes            |
| Total amount of landfill gas sent to the engine                | Differential pressure flow meter  | Continuous               | At least every 15 minutes            |
| Landfill gas sent to the flare                                 | Differential pressure flow meters | Continuous               | At least every 15 minutes            |
| Landfill gas sent to the Millikin boilers                      | Differential pressure flow meter  | Continuous               | At least every 15 minutes            |
| Fraction of methane                                            | Continuous gas analyzer           | Continuous               | At least every 15 minutes            |
| Operation of the engine                                        | Revenue electricity meter         | Continuous               | Every minute                         |
| Operation of the flare                                         | Thermocouple                      | Continuous               | At least every 15 minutes            |
| Grid electricity consumption                                   | Monthly billing invoices          | Continuous               | Monthly                              |
| Fossil fuel consumption                                        | Supplier invoices                 | As purchased             | As purchased/<br>aggregated annually |

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 the ACM0001 methodology. The VCS PD includes a complete description of the frequency, responsibility, and procedures for recording, storing, 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.

The Audit team concluded that the monitoring plan included in the VCS PD is adequate and in accordance with the guidelines and requirements of the ACM0001 methodology.

### 3.5 Non-Permanence Risk Analysis

The project activity does not require a non-permanence risk analysis.

## 4 VERIFICATION FINDINGS

### 4.1 Accuracy of GHG Emission Reduction and Removal Calculations

Emission reductions are calculated ex-post using the approach indicated in the ACM0001 methodology and the VCS PD. First Environment reviewed the emission reduction calculations for the verification period to ensure accuracy in the formulas applied and the raw data and default factors used as inputs. First Environment's review assessed whether emission reductions were free of material misstatement. The formulas were tested and found to be consistent with the calculations described in ACM0001 and the VCS PD.

Total landfill gas flow ( $V_{\text{Project total}}$ ), landfill gas flow to the flare ( $V_{\text{flare}}$ ), landfill gas to the engine ( $V_{\text{Electricity}}$ ), landfill gas flow to the boilers ( $V_{\text{Heat}}$ ), and the methane fraction of the landfill gas ( $V_{\text{CH}_4}$ ) measured by the continuous gas analyzer are used to calculate the total quantity of methane destroyed by each destruction device ( $F_{\text{CH}_4, \text{flared}, y}$ ,  $F_{\text{CH}_4, \text{EL}, y}$ ,  $F_{\text{CH}_4, \text{HG}, y}$ ) and summed to obtain the total methane collected and destroyed by the project system ( $F_{\text{CH}_4, \text{PJ}, y}$ ). The total quantity of landfill gas methane destroyed is determined by taking the continuous flow readings at each destruction device and aggregating them daily and monthly over the reporting period. All flow meters automatically correct flow data to standard conditions of 60°F and one atmosphere of pressure. Methane density consistent with the metered flow standard conditions (0.000678 mt/ft<sup>3</sup> at 60°F and 1Atm.) is multiplied by methane flow to convert the methane destroyed from a volumetric flow to a mass flow. Project emissions from flaring ( $PE_{\text{flare}, y}$ ) is calculated by multiplying the mass flow of methane sent to the flare by the complement of the destruction efficiency of the flare ( $1 - \eta_{\text{flare}}$ ). The destruction efficiency of the open flare is 0.98. Total baseline emissions from methane destruction are determined as the product of the total methane collected and destroyed by the project system ( $F_{\text{CH}_4, \text{PJ}, y}$ ) and a 10 percent soil oxidation factor multiplied by the global warming potential of methane. Because the pre-project gas collection system is segregated from the project activity, no baseline deduction is necessary.

The baseline emissions associated with heat generation is quantified by calculating fossil fuel emissions that would have been emitted in the absence of the Project. Baseline emissions are determined as the product of the net calorific value of methane, the heat generation efficiency ratio ( $R_{\text{efficiency}}$ ), amount of methane in the LFG which is destroyed for heat generation ( $F_{\text{CH}_4, \text{HG}, \text{dest}, j, y}$ ), and the emission factor for natural gas. The amount of methane in the LFG which is destroyed for heat generation ( $F_{\text{CH}_4, \text{HG}, \text{dest}, j, y}$ ) is determined as described above for parameter ( $F_{\text{CH}_4, \text{HG}, y}$ ).

Project emissions from electricity consumption ( $PE_{\text{EC}, y}$ ) are calculated by aggregating the annual electricity consumption from utility invoices, the calculated boiler electricity consumption, and multiplying total project electricity consumption by the appropriate emission factor, and transmission loss factor obtained from the U.S. EPA eGRID database.

Project emissions from fossil fuel (propane) consumption ( $PE_{\text{FC}, y}$ ) are determined by multiplying activity data by an appropriate emission factor.

The verification process focused on the evaluation of quantification spreadsheets to ensure that they were consistent with the formulas and equations described in ACM0001 and the VCS PD. Copies of the raw data used in the calculations, including flow and methane concentration data, were compared with the values used in the final calculations and tested for transcription or mathematical errors. The calculations for the entire period were reviewed as well to determine whether they were free of material misstatement. All calculation methods and emission factors used to determine emission reductions were consistent with those outlined in the validated PD.

The Audit Team performed an independent recalculation of the emission reductions from the verification period using the available raw data. Material misstatements were identified for correction as described in Section 2.5.

No material misstatements were observed in the final GHG assertion.

Overall, the GHG emission reductions were quantified correctly in accordance with the VCS PD and the ACM0001 methodology.

## 4.2 Quality of Evidence to Determine GHG Emission Reductions and Removals

Adequate documentation for the emission reduction calculations as well as its management systems around the data collection process was provided to support the verification process. Specifically, First Environment was provided a Monitoring Report prepared in accordance with the VCS program template, transparent calculation spreadsheets, calibration records, and data records associated with LFG flow, methane concentration, and meter QA/QC evidence. Data was reviewed beginning from its original source of generation to confirm the accuracy of the information flow.

The flow meters and continuous methane analyzer were calibrated in accordance with the requirements of the VCS PD, except as identified below. The table below identifies the dates each meter was calibrated:

| Meter                                                                       | Location (Parameter acronym)                        | Dates of Use                                    | Calibration Date       | VCS PD Calibration Frequency |
|-----------------------------------------------------------------------------|-----------------------------------------------------|-------------------------------------------------|------------------------|------------------------------|
| FCI Thermal Mass Flowmeter (s/n 324341)                                     | Total Flow ( $V_{\text{Project total}}$ ).          | Entire reporting period                         | 5/13/2020              | 24 months                    |
| Rosemount 2051 Flow Transmitter (s/n:21998)                                 | Flare ( $V_{\text{flare}}$ );<br>Primary gas line   | Entire reporting period                         | 1/6/2020               | 16 months                    |
| Rosemount 2051 Flow Transmitter (s/n:21997)                                 | Flare ( $V_{\text{flare}}$ );<br>Secondary gas line | Entire reporting period                         | 1/6/2020               | 16 months                    |
| Rosemount 2051 Flow Transmitter (s/n:21996)                                 | Flare ( $V_{\text{flare}}$ );<br>Pilot flow         | Entire reporting period                         | 1/6/2020               | 16 months                    |
| Rosemount 3051 SFC (s/n: 482561)                                            | Engine ( $V_{\text{Electricity}}$ )                 | Entire reporting period                         | 1/6/2020               | 3 years                      |
| Rosemount 2051 SFC (s/n: 43317)                                             | Boiler ( $V_{\text{Heat}}$ )                        | Entire reporting period                         | 1/6/2020               | 3 years                      |
| Siemens Ultramat Continuous Gas Analyzer (s/n: N1-A1-664). Primary Analyzer | Gas Header Line ( $V_{\text{CH}_4}$ )               | 6/15/2020 – 8/19/2020<br>9/14/2020 – 12/31/2020 | 8/13/2019<br>8/24/2020 | Annual                       |
| Siemens Ultramat Continuous Gas Analyzer (s/n: N1-B3-412). Spare Analyzer   | Gas Header Line ( $V_{\text{CH}_4}$ )               | 8/19/2020 – 9/14/2020                           | 1/13/2020              | Annual                       |

First Environment reviewed the calibration records for all meters identified in the table above confirm that each meter was operating within the five percent accuracy threshold established by the Standard.

Methane concentration is monitored continuously using a Siemens Ultramat 23 gas analyzer. Methane concentration data are recorded by the Project's SCADA system data recorder at least every 15 minutes. The data are also uploaded and stored on a separate server at the Lockhart facility. Additionally, the gas analyzer was field calibrated on a regular basis by facility personnel. First Environment reviewed the results of all third-party calibrations and field calibrations, all of which identified that the gas analyzer was operating accurately and within the five percent accuracy threshold established by the Standard. A spare gas analyzer was used during the reporting period while the primary analyzer was sent out for routine calibration.

The open flare uses thermocouples to continuously monitor flare temperature as well as a UV eye to monitor the presence of a flame. The temperature is recorded by the SCADA system at least every 15 minutes. The flare is set to operate above a minimum temperature of 300°F. The flare system alarms at 300°F and automatically shuts down the blowers and flare if the temperature drops below 300°F or if the UV eye does not detect a flame. First Environment confirmed that no flow was recorded when the flare temperature was below this threshold.

The operation of the Lockhart energy plant is demonstrated by kilowatt production monitored continuously and recorded every minute.

As described in Section 3.4.7 above, operation of the Milliken plant boilers is satisfied through the use of failsafe shut-off valves built into the control system on each boiler gas train that include two automatic valves that shut anytime the landfill gas line is switched off or the boiler(s) go down. This stops the flow of gas to the boilers.

The Project imports electricity from the grid. Electricity consumption is monitored using monthly utility invoices and maximum horsepower ratings for the boiler fans. The Project also consumes propane for the flare's secondary pilot light system. Propane consumption is determined from purchase invoices.

The data collection and recordkeeping procedures were found to be consistent with those outlined in the monitoring plan described by the VCS PD and meet the requirements of the ACM0001.

The following project description deviation is proposed in the Monitoring Report for the current reporting period:

The VCS PD identifies that the Siemens Ultramat analyzer will undergo annual calibration. The gas analyzer was calibrated on August 13, 2019 and August 24, 2020. Thus, missing the annual calibration frequency by 11 days. First Environment approved this deviation because the as-found conditions documented during the August 24, 2020 calibration event indicated that the analyzer was operating accurately and well within accuracy requirements. Additionally, all monthly field calibrations during the reporting period identified "as-found" conditions of the analyzer to be within five percent accuracy. Therefore, it is reasonable to conclude that the data monitored by the Siemens Ultramat was not adversely affected by the exceeded calibration frequency.

The project deviation described above did not impact the applicability of the methodology, additionality, or the appropriateness of the baseline scenario, and the Project remained in conformance with all other ACM0001 and VCS requirements. In addition, Blue Source provided appropriate descriptions and justifications for all relevant deviations. All project deviations were deemed to be valid.

The evidence provided was found to be appropriate, and consistent with the requirements of ACM0001 and the validated VCS PD and meets generally accepted evidentiary standards for best practice in GHG accounting.

## 5 VALIDATION AND VERIFICATION CONCLUSION

First Environment has performed a joint validation and verification of the Project's approach, as outlined in the VCS PD, as part of the VCS joint validation and verification process. The validation process was conducted according to the requirements stated in the VCS Standard, 22 April 2021, v4.1; the VCS Program Guide, 19 September 2019; and the ISO 14064-3 standard. The VCS PD was assessed against the criteria in the VCS Standard, and the approved CDM consolidated methodology ACM0001 "Flaring or use of landfill gas, Version 19.0. The objective of validation activities was as stated in Section 1.1 above.

The total emission reductions from the Project are *projected* to be 1,351,412 metric tons of CO<sub>2</sub>e over the duration of the second 10-year crediting period. The emission reduction forecast has been checked, and it is deemed reasonable that the stated amount will be realized given that the underlying assumptions do not change.

It is First Environment's opinion that the Blue Source Spartanburg County Landfill Gas Combustion Project, as described in the VCS PD of June 21, 2021, Version 1.9, meets all relevant VCS requirements and correctly applies the CDM methodology ACM0001.

Additionally, First Environment provided verification services for the Project's GHG emission reductions assertion based on the following fundamentals:

- *Level of assurance:* Reasonable assurance.
- *Objectives of verification:* To assure project conformance with the VCS Standard, the CDM methodology ACM0001 and the VCS PD.
- *Verification criteria:* VCS Standard, the CDM methodology ACM0001 and the VCS PD.
- *Definition of materiality:* Misstatements of greater than five percent of the GHG assertion and qualitative non-conformities with the validated VCS PD are considered material.
- *Scope, including:*
  - *Boundaries of the assertion:* Operations at the Wellford Landfill, Lockhart Energy Facility, and the Milliken Dewey Chemical Plant.
  - *The physical infrastructure, facilities, and activities within the assertion:* LFG collection and destruction operations, including the flare located at the Wellford Landfill, engine at the Lockhart Energy facility, and boilers located at the Milliken Dewey Chemical Plant.
  - *GHG sources, sinks, and reservoirs included within the assertion:* Methane and carbon dioxide emission reductions expressed as carbon dioxide-equivalents. Carbon dioxide and methane emissions from the operation of project equipment.

Based on the assessments performed and the historical evidence collected, First Environment concludes, with a reasonable level of assurance, that the emissions reductions of the Project resulting from the capture and combustion of methane gas are:

- consistent with the VCS PD of June 21, 2021;
- in conformance with the VCS Standard, the CDM methodology ACM0001 (Version 19.0);
- without material discrepancy; and
- meeting the minimum level of accuracy of at least 95 percent.

Additionally, the deviations reviewed and approved during the current audit process are consistent with the VCS Standard and ACM0001 methodology, including all validation criteria therein.

Verification period: From 15-June-2020 to 31-December-2020

Verified GHG emission reductions and removals in the above-verification period:

| Year         | Baseline<br>Emissions or<br>Removals<br>(tCO <sub>2</sub> e) | Project<br>Emissions or<br>Removals<br>(tCO <sub>2</sub> e) | Leakage<br>Emissions<br>(tCO <sub>2</sub> e) | Net GHG<br>Emission<br>Reductions or<br>Removals<br>(tCO <sub>2</sub> e) |
|--------------|--------------------------------------------------------------|-------------------------------------------------------------|----------------------------------------------|--------------------------------------------------------------------------|
| 2020         | 46,390                                                       | 233                                                         | 0                                            | 46,157                                                                   |
| <b>Total</b> | <b>46,390</b>                                                | <b>233</b>                                                  | <b>0</b>                                     | <b>46,157</b>                                                            |

## APPENDIX A: Detailed Resolution of Findings

| Validation Findings |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                              |                         |
|---------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|
| ID                  | Corrective Action Request                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Participant Response                                                                                                                                                                                                                                                                         | Validation Conclusion   |
| 1                   | The fourth deviation (Baseline Heat Generation Emissions) in Section 3.6 of the VCS PD does not adequately justify the equivalency of efficiencies of heat generation equipment.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | The original description of this deviation has been removed as it was inaccurate. This deviation has been revised and is now identified as deviation #9 in Section 3.6 of the VCS PD.                                                                                                        | Response is acceptable. |
| 2                   | <p>The following non-conformities were identified between the VCS PD Template and the Project Description:</p> <ul style="list-style-type: none"> <li>•Section 1.1 does not include an estimate of annual average and total GHG emission reductions and removals.</li> <li>•Section 1.11 does not include in the description information about the age and average lifetime of the equipment based on manufacturer's specifications and industry standards.</li> <li>•Section 1.17 - As per the VCS PD Template instructions, information related to the estimation of GHG emission reductions cannot be deemed commercially sensitive and must be included in the public versions of the PD.</li> <li>•Section 3.1 does not identify all of the applicable CDM Tools that are applied.</li> </ul> | The VCS PD has been revised to address these issues.                                                                                                                                                                                                                                         | Response is acceptable. |
| 3                   | The VCS PD identifies "equation modifications" related to baseline emissions associated with heat generation, and the determination of LFGflare, LFGHeat, and LFGelectricity. As per VCS Standard Section 3.17, equation modifications are not allowable deviations.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Section 3.6 of the VCS PD has been revised. Equation modifications have been removed from the VCS PD. The deviation related to equation modifications has been removed. Deviation #8 has been revised accordingly and now focuses on the process for monitoring landfill gas to each device. | Response is acceptable. |
| 4                   | The parameter abbreviations used to calculate FCH4,sent_flare,y, FCH4,heat, and FCH4,electricity are not consistent with the CDM Tool to determine the mass flow of a greenhouse gas in a gaseous stream, v3. Specifically, parameters for the volumetric flow and volumetric fraction of greenhouse gas of the gaseous stream.                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | The parameter abbreviations identified in the VCS PD have been revised and are now consistent with the underlying methodology and CDM Tool 08 for volumetric flow (V) and volumetric fraction of methane (v).                                                                                | Response is acceptable. |

## APPENDIX A: Detailed Resolution of Findings

| Validation Findings |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                            |                         |
|---------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|
| ID                  | Corrective Action Request                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Participant Response                                                                                                                                                                       | Validation Conclusion   |
| 5                   | Section 4.1 of the VCS PD identifies that methane density can be considered a reference value. However, the CDM Tool to determine the mass flow of a greenhouse gas in a gaseous stream (v3) requires that under Option C, density be calculated according to Equation 10 of the Tool.                                                                                                                                                                                                              | Identifying methane density as a reference / lookup value has been identified and justified in Section 3.6 of the VCS PD as a deviation.                                                   | Response is acceptable. |
| 6                   | The VCS PD does not identify the Ex-ante estimation equation (in Section 4.1) and associated parameters (in Section 5.1) as required per Equation 5 of the ACM0001 Methodology.                                                                                                                                                                                                                                                                                                                     | The ex-ante estimation equation has been added to Section 4.1 of the VCS PD, and the associated data parameters are now included in the Section 5 tables.                                  | Response is acceptable. |
| 7                   | The VCS PD inaccurately identifies that methane concentration is monitored prior to comingling with the pre-project landfill gas.                                                                                                                                                                                                                                                                                                                                                                   | The VCS PD has been revised accordingly.                                                                                                                                                   | Response is acceptable. |
| 8                   | Section 4.1 of the VCS PD does not identify ACM0001 Methodology Equation 19 relative to the calculation of the parameter FCH <sub>4</sub> HG <sub>dest,j,y</sub> (Amount of methane in the LFG which is destroyed for heat generation). Additionally, the associated ACM0001, Equation 19 parameter: fdCH <sub>4</sub> HG <sub>j,default</sub> (Default value for the fraction of methane destroyed when used for heat generation equipment type j) is not identified in Section 5.1 of the VCS PD. | Methodology equation 19 has been added to Section 4.1 of the VCS PD, and the associated parameter has been added to Section 5.1 of the VCS PD.                                             | Response is acceptable. |
| 9                   | VCS PD Section 4.2, Paragraph: "Determination of PEEL <sub>y</sub> " identifies an incorrect acronym (PEEL <sub>y</sub> ) for the amount of electricity consumed, instead of the ACM0001 methodology specified acronym of: EC <sub>pj,y</sub> .                                                                                                                                                                                                                                                     | Section 4.2 of the VCS PD, has been revised to identify the acronym for the amount of electricity consumed by the project activity consistent with the methodology: "EC <sub>pj,y</sub> ." | Response is acceptable. |
| 10                  | The quantity of electricity consumed by the Milliken boilers is not directly measured as required per the CDM Tool "Baseline, project and/or leakage emissions from electricity consumption and monitoring of electricity generation," v3.0. The approach for determining electricity consumed by the boilers has not been identified and justified in the VCS PD as a deviation.                                                                                                                   | The measurement procedure for determining the amount of electricity consumed by the Milliken boilers has been identified and justified in Section 3.6 of the VCS PD as a deviation.        | Response is acceptable. |

## APPENDIX A: Detailed Resolution of Findings

| Validation Findings |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                            |                         |
|---------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|
| ID                  | Corrective Action Request                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Participant Response                                                                                                                                                                                                                                                                                                       | Validation Conclusion   |
| 11                  | Section 4.2 of the VCS PD Paragraph "Determination of PEFC" does not define the parameters NCVpropane and EFCO <sub>2</sub> ,propane.                                                                                                                                                                                                                                                                                                                                                               | Section 4.2 of the VCS PD has been revised to identify the parameters NCVpropane and EFCO <sub>2</sub> ,propane in the discussion of project emissions from fossil fuel consumption.                                                                                                                                       | Response is acceptable. |
| 12                  | The comment row of the Global Warming Potential (GWP) of methane parameter (GWPC <sub>H4</sub> ) in Section 5.1 of the VCS PD incorrectly identifies that this value will be updated throughout the crediting period based on latest published IPCC guidance.                                                                                                                                                                                                                                       | The comments row of the methane GWP parameter box has been revised to remove this language.                                                                                                                                                                                                                                | Response is acceptable. |
| 13                  | Section 5.1 of the VCS PD identifies that the parameter NCVCH <sub>4</sub> will be assigned a value of 0.0010677GJ/scf. This has not been identified and justified in Section 3.6 of the VCS PD as a deviation from the default value identified in Parameter Table 4 of ACM0001. Additionally, the units of measure for this parameter are inconsistent between Section 4.1 and 5.1 of the VCS PD.                                                                                                 | Section 3.6 of the VCS PD has been revised to identify the alternate NCVCH <sub>4</sub> value as a deviation. Parameter box identifies that value will be reviewed annually to ensure accuracy. Units have been revised to be consistent across sections.                                                                  | Response is acceptable. |
| 14                  | The data source, value applied, and unit of measure identified in Section 5.1 of the VCS PD for data parameter EFCO <sub>2</sub> ,BL,HG,j (CO <sub>2</sub> emission factor for natural gas used in the baseline heat generation equipment) is not consistent with the requirements of ACM0001 Data Parameter Table 5.                                                                                                                                                                               | The data source for data parameter EFCO <sub>2</sub> ,BL,HG,j (CO <sub>2</sub> emission factor for natural gas used in the baseline heat generation equipment) has been identified and justified in Section 3.6 of the VCS PD as a deviation. Additionally, the parameter box in Section 5.1 has been revised accordingly. | Response is acceptable. |
| 15                  | Section 5.2 of the VCS PD does not include the "Management of SWDS" parameter as required per ACM0001 Data / Parameter table 8.                                                                                                                                                                                                                                                                                                                                                                     | Section 5.2 of the VCS PD has been revised and now includes the "Management of SWDS" parameter                                                                                                                                                                                                                             | Response is acceptable. |
| 16                  | The value for parameter: ηHG,PJ,y (Efficiency of the heat generation equipment used in the project activity) identified in Section 5.1 of the VCS PD is incorrectly based on guidance from the CDM Tool: "Determining the baseline efficiency of thermal or electric energy generation systems, v03.0" instead of the guidance from the ACM0001 Methodology Data / Parameter table 11. Additionally, the "description" and "justification" rows of the parameter box contain incorrect information. | The value for the efficiency of heat generation equipment used in the project activity has been updated and is based on a manufacturer efficiency of 82%. Additionally, the "description" and "justification" rows of the parameter box have been revised accordingly.                                                     | Response is acceptable. |

## APPENDIX A: Detailed Resolution of Findings

| Validation Findings |                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                     |                         |
|---------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|
| ID                  | Corrective Action Request                                                                                                                                                                                                                                                                                                                                                         | Participant Response                                                                                                                                | Validation Conclusion   |
| 17                  | VCS PD Section 5.2: The operational parameter for engine operability is incorrectly identified as "EGenLockhar", instead of "Op,engine,h" as required by ACM0001. Additionally, the monitoring frequency is not consistent with ACM0001 requirements of at least hourly monitoring, and QA/QC procedures are not identified.                                                      | The electricity operability parameter has been revised. Monitoring frequency and QAQC descriptions have also been revised accordingly.              | Response is acceptable. |
| 18                  | VCS PD Section 5.2 Data Parameter: "Other flare operation parameters" does not contain a unit of measure in the "data unit" row, contains irrelevant information for monitoring flare operability in the "other comments" row, and does not contain correct information relative to the "purpose of data" row.                                                                    | The flare operability parameter has been revised and now identifies correct information and descriptions.                                           | Response is acceptable. |
| 19                  | Several parameters in Section 5.2 of the VCS PD identify the source of data as "Measured." This is not a correct description for a source of data.                                                                                                                                                                                                                                | The parameter boxes in Section 5.2 have been revised to identify a correct source of data description where relevant.                               | Response is acceptable. |
| 20                  | Section 3.6 of the VCS PD does not identify and justify the lack of hourly boiler operability data as a deviation.                                                                                                                                                                                                                                                                | Boiler operability monitoring has been added to Section 3.6 as a deviation.                                                                         | Response is acceptable. |
| 21                  | Section 1.14 of the VCS PD contains outdated information relative to the landfill's compliance with New Source Performance Standards (NSPS) Tier 2 Non-Methane Organic Compound (NMOC) Emissions requirements. Additionally, this section does not identify/clarify if the newer NMOC emissions threshold of 34Mg./yr. is applicable (i.e., 40 CFR 60 Subpart Cf or Subpart XXX). | Section 1.14 has been revised to identify current information relative to the landfill's NMOC requirements and emissions.                           | Response is acceptable. |
| 22                  | Baseline assessment Step 1.2 of VCS PD Section 3.4 does not identify or assess the impact of circumstances relative to the power and heat generation baselines.                                                                                                                                                                                                                   | Step 1.2 in Section 3.4 of the VCS PD has been revised to identify the impact of circumstances relative to the power and heat generation baselines. | Response is acceptable. |

## APPENDIX A: Detailed Resolution of Findings

| Validation Findings |                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                      |                         |
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| ID                  | Corrective Action Request                                                                                                                                                                                                                                                                                                                                                     | Participant Response                                                                                                                                                                 | Validation Conclusion   |
| 23                  | Baseline assessment Step 1.3 of VCS PD Section 3.4 does not identify and address the decommissioning of the original flare and installation of the new flare skid in March 2019. Additionally, Step 1.3 does not discuss and assess the continuation of use of the baseline equipment at the Milliken facility.                                                               | Step 1.3 in Section 3.4 has been revised to identify and discuss the installation of a new flare, and the lifetime of baseline equipment.                                            | Response is acceptable. |
| 24                  | The use of a standard temperature condition of 60F is not identified in Section 3.6 of the VCS PD as a deviation from the Tool to determine the mass flow of a greenhouse gas in a gaseous stream, and ACM0001 which both identify a standard reference temperature condition of 32F.                                                                                         | The use of a standard temperature condition of 60F (which corresponds to the standard temperature of recorded flow) has been identified in Section 3.6 of the VCS PD as a deviation. | Response is acceptable. |
| 25                  | The following data parameter acronyms identified in the VCS PD are not consistent with the ACM0001 Methodology and CDM Tool 08:<br>• LFGheat/LFGelectricity/LFGproject,total/LFGflare<br>• WCH4                                                                                                                                                                               | The VCS PD has been revised and parameter acronyms are now consistent with the ACM0001 Methodology and CDM Tool 08.                                                                  | Response is acceptable. |
| 26                  | The QA/QC Procedures identified for parameter WCH4 (Volumetric fraction of methane) are not consistent with the requirements identified in the Data / Parameter table 10 of the Tool to determine the mass flow of a greenhouse gas in a gaseous stream, Version 03.0. Additionally, the QA/QC row of the parameter box contains unnecessary information about flow metering. | The QA/QC Row of the parameter box has been revised to be consistent with the requirements of the Tool and to remove unnecessary information/details.                                | Response is acceptable. |
| 27                  | Section 5.1 of the VCS PD contains two "NCVpropane" parameter boxes.                                                                                                                                                                                                                                                                                                          | The second NCVpropane reference has been removed from Section 5.1 of the VCS PD.                                                                                                     | Response is acceptable. |
| 28                  | Data parameter "EFCO2,propane" in Section 5.1 of the VCS PD identifies an incorrect data source, data unit, and emission factor.                                                                                                                                                                                                                                              | The emission factor value and data source have been revised and updated between VCS PD v1.2 and v1.3 of the VCS PD                                                                   | Response is acceptable. |

## APPENDIX A: Detailed Resolution of Findings

| Validation Findings |                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                  |                         |
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| ID                  | Corrective Action Request                                                                                                                                                                                                                                                                                                   | Participant Response                                                                                                                                                                                                                                                                                                             | Validation Conclusion   |
| 29                  | Data parameters "EFCO2,propane" and "NCVpropane" do not identify in the Comments row if the values will be reviewed annually for appropriateness in accordance with the Tool to calculate project or leakage CO2 emissions from fossil fuel combustion, Version 2.0.                                                        | The comments row of each parameter has been revised to identify that the values will be reviewed annually for appropriateness.                                                                                                                                                                                                   | Response is acceptable. |
| 30                  | Several data parameters in Sections 5.1 and 5.2 of the VCS PD identify an incorrect data unit (for example, parameters: "F", emission factor parameters, "Pepropane," flare operation, etc.)                                                                                                                                | Data units identified in Sections 5.1 and 5.2 have been revised accordingly.                                                                                                                                                                                                                                                     | Response is acceptable. |
| 31                  | The method for determining the quantity of electricity consumed by the Milliken boilers has not been identified and justified in Section 3.6 of the VCS PD as a deviation. Additionally, the ECMilliken, y parameter box in Section 5.2 does not identify what the load ratings are for each applicable piece of equipment. | A deviation has been added to Section 3.6 of the VCS PD to identify and justify how electricity consumption at the Milliken facility will be accounted for. Additionally, the "Description of measurement methods and procedures to be applied" row of the parameter box has been revised to identify the equipment load rating. | Response is acceptable. |

| Validation Findings |                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                              |                         |
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| ID                  | Clarification Request                                                                                                                            | Participant Response                                                                                                                                                                                                                                                                                                         | Validation Conclusion   |
| 1                   | Please clarify why the monitoring equipment row of the WCH4 parameter box in Section 5.2 of the VCS PD contains two gas analyzer serial numbers. | The two serial numbers that were previously included represent the units installed at Milliken (N1B3412) and the Project blower skid (N1A1664). The unit installed at the Milliken facility (N1B3412) has been removed from the VCS PD since data from this analyzer are not primarily used to quantify emission reductions. | Response is acceptable. |

| Validation Findings |                                                                                |                                               |                         |
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| ID                  | Clarification Request                                                          | Participant Response                          | Validation Conclusion   |
| 2                   | Please clarify if propane is still used at the new flare skid as a pilot fuel. | Propane is still used as a backup pilot fuel. | Response is acceptable. |

| Verification Findings |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                  |                         |
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| ID                    | Corrective Action Request                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Participant Response                                                                             | Verification Conclusion |
| 1                     | The project description deviation identified in Section 3.2.2 of the Monitoring Report contains inaccurate information. Specifically, an incorrect reference to a flow meter, the length of time the calibration was exceeded, and the date of the 2019 calibration event. Additionally, the deviation does not identify and justify if the accuracy of the data was impacted by the overdue calibration.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | The deviation description identified in Section 3.2.2 of the monitoring report has been revised. | Response is acceptable. |
| 2                     | <p>The following issues were identified in the Monitoring Report:</p> <ul style="list-style-type: none"> <li>Section 1.6 does not identify the total number of years in the crediting period as required per the VCS Monitoring Report Template.</li> <li>Section 4.2 Parameter boxes contain six artifactual references to the VCS PD in the calculation method row: "See sample calculations in Section 4 for exact methodologies".</li> <li>The Monitoring Report contains three incorrect references that identify: "see section 3.6 for deviation description." However, there is no Section 3.6 in the Monitoring Report.</li> <li>Section 4.3 schematic diagram is incorrect relative to the interconnect of the gas header line for the pre-project system. (See also Section 5.3 of the VCS PD.)</li> <li>Section 5.1: The "Determination of FCH<sub>4</sub>,BL,y" subsection contains artifactual information about the project and pre-project landfill gas header lines.</li> </ul> | The monitoring report has been revised to address all identified issues.                         | Response is acceptable. |

| Verification Findings |                                                                                                                                                                                                                  |                                                                                                                                            |                         |
|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|
| ID                    | Corrective Action Request                                                                                                                                                                                        | Participant Response                                                                                                                       | Verification Conclusion |
|                       | <ul style="list-style-type: none"> <li>Section 5.4 contains artifactual information from version 11 of the ACM0001 methodology relative to the comparison of methane generated vs. methane destroyed.</li> </ul> |                                                                                                                                            |                         |
| 3                     | The soil oxidation factor is not being applied in the calculation of baseline emissions of methane (BECH4,y).                                                                                                    | The calculation of baseline emissions from methane have been revised to apply the soil oxidation factor.                                   | Response is acceptable. |
| 4                     | The June 2020 landfill gas flow to the Millikin facility is incorrectly aggregated due to a formula error in column "H" of the "June" tab in the "June 2020 - Dec 2020 combined.xlsx" workbook.                  | The formula error in the aggregation of June 2020 gas flow to the Millikin facility has been corrected.                                    | Response is acceptable. |
| 5                     | The engine operability check contains an error resulting in the exclusion of significant quantities of eligible engine flow.                                                                                     | The engine operability check has been revised and is now carried out correctly in the file: "June 2020 - December 2020 combined0527.xlsx." | Response is acceptable. |

| Verification Findings |                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                         |
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| ID                    | Clarification Request                                                                                                                                                                    | Participant Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Verification Conclusion |
| 1                     | Please clarify if the project activity used any propane during the reporting period.                                                                                                     | Propane has not been purchased in the reporting period. The Project quantifies emissions from propane combustion by accounting for all propane at the time of purchase.                                                                                                                                                                                                                                                                                                                                                                           | Response is acceptable. |
| 2                     | Please clarify if the low methane concentration readings recorded from August 19, 2020 at 11:30 to August 20, 2020 at 13:44 are valid readings.                                          | The low methane concentration readings correspond to the period when the primary analyzer was removed from the field for routine calibration and the spare unit was installed. The spare analyzer was not auto calibrated upon installation and facility personnel identified this issue and calibrated it the next day (i.e., August 20, 2020). As a result, the low methane concentration readings are not accurate and therefore data substitution has been applied to this period in accordance with the substitution guidance in the VCS PD. | Response is acceptable. |
| 3                     | Please clarify the dates when the primary gas analyzer (s/n: N1-A1-664) was removed from the field for routine calibration and re-installed after it was received back from calibration. | The primary gas analyzer was removed on August 19, 2020. It was reinstalled on September 14, 2020.                                                                                                                                                                                                                                                                                                                                                                                                                                                | Response is acceptable. |