



BLUE SOURCE SPARTANBURG LANDFILL GAS COMBUSTION PROJECT



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Summary:

This report describes the verification of the Blue Source Spartanburg Landfill Gas Combustion Project (“the project”), a Waste handling and disposal project located in Spartanburg, South Carolina. In this project, methane gas was collected from active and inactive portions of the Wellford landfill located in Spartanburg County, South Carolina. Landfill gas was destroyed in one of three destruction devices: 1) Landfill gas was used to generate electricity from a Caterpillar internal combustion engine that was coupled to an electricity generator (“generator set”); 2) landfill gas was used in a beneficial project to produce thermal energy (i.e., boilers); and 3) landfill gas not consumed by the other two destruction devices was burned in an open flare. The Project also displaced fossil fuels consumed for baseline thermal energy generation. These activities resulted in a net reduction of CO₂-equivalent emissions.

The purpose of the verification engagement was to conduct, in accordance with the VCS Program rules, an ex-post independent assessment of the GHG emission reductions and removals that have occurred as a result of the project during the monitoring period from 01 January 2021 to 31 December 2021 (“the verification period”). SCS verified the asserted emission reductions against criteria found in assertion against the criteria stated in the Verified Carbon Standard (VCS) Standard v. 4.2, and the Approved consolidated baseline methodology ACM0001: “Consolidated baseline and monitoring methodology for landfill gas project activities”: Version 19.

The verification engagement was carried out through a combination of document review, interviews with relevant personnel and on-site inspections. As part of the verification engagement 8 findings were raised: 5 Non-Conformity Reports, 3 New Information Requests and 0 Observations. These findings are described in Appendix A of this report.

SCS confirmed the project complied with the verification criteria, and SCS holds no restrictions or uncertainties with respect to the compliance of the project with the verification criteria. SCS verified the Project generated 78,469 emission reduction credits.

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1 INTRODUCTION

1.1 Objective

The assessment objective will be to assess the conformance of the submitted monitoring report with the assessment criteria.

The scope of Verification is to evaluate:

- Reported project GHG emissions and emission reductions/removal enhancements, leakage assessment, and impermanence risk assessment and mitigation (if applicable).
- Conformance with applicable verification criteria, including the principles and requirements of relevant standards or GHG programs within the scope of the verification.
- GHG project planning information and documentation, including the project, baseline, quality assurance and control, risk management, monitoring and reporting procedures and criteria; and
- The GHG project's actual controls

1.2 Scope and Criteria

The scope of the engagement included quantification, monitoring, and reporting of greenhouse gas project emissions reductions associated with the voluntary destruction of landfill gas from an expanded landfill gas collection system at the Wellford Landfill in Spartanburg County, South Carolina.

The project boundary is defined as the landfill, which is the site where landfill gas is collected via separate header and piping system from a pre-existing landfill gas conveyance and collection system, the Lockhart Power generation facility, and the Milliken Dewey Chemical Plant facility located approximately six miles from the landfill site where landfill gas is consumed in boilers. Although there is electricity generated by the combustion of landfill gas within the project, which would have been generated by power generation sources connected to the grid, emission reductions from this portion of the project are not claimed. Therefore, the project boundary does not include these grid-connected power generation sources. This exclusion is conservative as it reduces baseline emissions.

The gases included in the project included methane (CH₄) and carbon dioxide (CO₂).

The period under this verification is 01 January 2021 to 31 December 2021.

The criteria for verification included the following documents:

- Verified Carbon Standard (VCS) Standard, Version 4.2 (20 January 2022)
- The approved Clean Development Mechanism (CDM) methodology ACM0001 – Consolidated baseline and monitoring methodology for landfill gas project activities, Version 19 (ACM0001)

The following tools were utilized as noted in the ACM0001 methodology:

- CDM Tool 3: Tool to determine project or leakage CO₂ emissions from fossil fuel combustion”.
 - CDM Tool 6: “Project emissions from flaring”.
 - CDM Tool 8: Tool to determine the mass flow of a greenhouse gas in a gaseous stream.
 - CDM Tool 9: Determining the baseline efficiency of thermal or electric energy generation systems
- VCS Project Description (VCS PD), 21-June-2021

SCS conducted the verification according to the Principles of ISO 14064-3:2006 Greenhouse Gases – Specification with guidance Specification with guidance for the validation and verification of greenhouse gas assertions.

1.3 Level of Assurance

This engagement was performed at the reasonable level of assurance. The Project activity generated less than 300,000 tonnes of CO₂e per year and therefore falls under the “Project” scale. Emission reduction reports were considered fairly stated if they varied by no more than 5% from a complete statement of the project’s emission reductions.

1.4 Summary Description of the Project

The Project consisted of the voluntary destruction of landfill gas from an expanded landfill gas collection system at the Wellford Landfill in Spartanburg County, South Carolina. Landfill gas was destroyed in one of three destruction devices: 1) Landfill gas was combusted to generate electricity from a Caterpillar internal combustion engine that was coupled to an electricity generator (“generator set”); 2) landfill gas was combusted in a beneficial project to produce thermal energy (i.e., boilers); and 3) landfill gas not consumed by the other two destruction devices was burned in an open flare.

The landfill gas piping systems and headers for the project, LFG collection and control system (LFGCCS), were constructed separately from a pre-project system existing at the Wellford landfill. Greenhouse gas (GHG) emission reductions were claimed from the destruction of methane, which would have otherwise been emitted directly to the atmosphere, and also from the displacement of fossil fuels that were used for thermal energy generation at the Milliken Dewey Chemical plant prior to the project activities. GHG emission reductions are not claimed for the displacement of fossil fuel-based electricity generation. The VCS Project Description provides additional details regarding the project activities.

2 VERIFICATION PROCESS

Use this section to describe the verification process. Where validation activities have also been performed as part of the verification (e.g., validation of a project description deviation or inclusion of new project activity instances into a grouped project), also include details relevant to the validation process.

2.1 Method and Criteria

The verification engagement was conducted through a combination of document review, interviews with relevant personnel and on-site inspections, as discussed in Sections 1.7 through 1.9 of this report. At all times, an assessment was made for conformance to the criteria described in Section 1.3 of this report. As discussed in Section 1.10 of this report, findings were issued to ensure conformance to all requirements.

The following is a summary of the verification process implemented by SCS:

- Conflict of Interest Review and Appointment of Team
- Kick-off meeting with Blue Source.
- Begin Risk Assessment by conducting a Documents Review including the Project Description (PD), the monitoring report, and supporting data.
- Development of the verification and sampling plan.
- Remote site visit.
- Execution of the sampling plan.
- Desktop review and evaluation of raw data and emission reduction calculations for the period under review.
- Follow-up of Non-conformities and Clarification Requests as needed; and

- Final report and statement development.

The audit team created a sampling plan following a proprietary sampling plan template developed by SCS. The audit team identified areas of “residual risk”—those areas where there existed risk of a material discrepancy (either in terms of non-conformance to the verification criteria or in terms of errors, omissions, and misrepresentations that, in aggregate, exceeded the materiality threshold established for the project as a percentage of the total reported GHG emission reductions and/or removals) that was not prevented or detected by the controls of the project. Sampling and data testing activities were planned to address areas of residual risk. The audit team then created a verification plan that took the sampling plan into account. This approach is justified as it has been designed in accordance with Section 4.4.3 of ISO 14064-3:2006 and the guidance provided in Annex A.2.4.6 of the same document.

2.2 Document Review

SCS reviewed the Project’s Description Document, 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. SCS assessed the GHG emission reduction assertion and underlying monitoring data to determine if either contained material or immaterial misstatements.

The following Primary documents were reviewed:

Document	File Name
Project Description Document	Spatranburgpddv1.9
Project Validation Report	VCS 947 Final Validation and Verification Report_6-23-2021
Project Monitoring Report	SpartanburgMR_v1.7_20220215
Project GHG Assertion	Spartanburg_Calc_v1.5_02072022
Supporting documentation	FCI flowmeter calibration 12-30-21
	FCI Rental meter installed 11-1-21
	Flare Rosemount 2020 calibrations

Document	File Name
	Rosemount 3051S Series Scalable Pressure, Flow, and Level Solution
	Rosemount Mass Flowmeter Serial #43317 page 1
	Rosemount Mass Flowmeter Serial #43317 page 2
	Rosemount Mass Flowmeter Serial #482561 page 1
	Rosemount Mass Flowmeter Serial #482561 page 2
	16b 16d Rosemount
	Site Gac Factory calibration 9-27-21
	2021 raw data
	electricity Data
	Flare logs
	Flow data
	Jan - Dec 2021 Combined w Cals Updated v1
	Jan - Dec 2021 Combined w Cals Updated v2
	Weekly reports
	Datetime Formatting Instructions

2.3 Interviews

The purpose of the interviews was to assess and confirm information and data provided in the Project Description and monitoring report, identify relevant competencies to assigned roles and responsibilities, and to assess the GHG management systems implemented onsite.

Throughout the course of verification activities and during the site visit, SCS interviewed the following project personnel:

Person	Title	Organization
Andre Buiza	Manager, Carbon Solutions	Blue Source LLC
Bianca Glascott	Carbon Solutions Analyst	Blue Source LLC
Scott Thompson	LFG Specialist	Lockhart Power

2.4 Site Inspections

SCS conducted a remote site visit on 27 January 2022. Information and Communication Technology (ICT) was utilized to conduct the site visit virtually. Prior to conducting the site visit virtually, SCS updated the 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, the landfill gas destruction devices, gas collection and conveyance system, and all associated metering and monitoring equipment and data management systems.

2.5 Resolution of Findings

Any potential or actual discrepancies identified during the audit process were resolved through the issuance of findings. The types of findings typically issued by SCS during this type of verification engagement are characterized as follows:

- **Non-Conformity Report (NCR):** An NCR signified a discrepancy with respect to a specific requirement. This type of finding could only be closed upon receipt by SCS of evidence indicating that the identified discrepancy had been corrected. Resolution of all open NCRs was a prerequisite for issuance of a verification statement.
- **New Information Request (NIR):** An NIR signified a need for supplementary information in order to determine whether a material discrepancy existed with respect to a specific requirement. Receipt of an NIR did not necessarily indicate that the project was not in compliance with a specific requirement. However, resolution of all open NIRs was a prerequisite for issuance of a verification statement.
- **Observation (OBS):** An OBS indicates an area where immaterial discrepancies exist between the observations, data testing results or professional judgment of the audit team and the information reported or utilized (or the methods used to acquire such information) within the GHG assertion. A root cause analysis and corrective action plan are not required, but highly recommended. Observations are considered by the audit team to be closed upon issuance, and a response to this type of finding is not necessary.

As part of the audit process, 5 NCRs, 3 NIRs and 0 OBS were issued. All findings issued by the audit team during the audit process have been closed. In accordance with the VCS Standard, all findings issued during the audit process, and the impetus for the closure of each such finding, are described in Appendix A of this report.

2.5.1 Forward Action Requests

This section is not applicable, as no forward action requests have been issued.

2.6 Eligibility for Validation Activities

This section is not applicable, as SCS holds accreditation for validation for the relevant sectoral scope (scope 13; Waste).

3 VALIDATION FINDINGS

Use this section to provide details of all validation activities that took place during the verification, such as gap validation, validation of methodology deviations and project description deviations, and the inclusion of new project activity instances into grouped projects.

3.1 Participation under Other GHG Programs

This section is not applicable, as the Project is not, at this time, seeking registration under the VCS Program and an approved GHG program.

3.2 Methodology Deviations

There were no new methodology deviations identified as part of the reporting period.

However, during the initial validation and during previous monitoring periods, the following deviations were validated and applied during this monitoring period.

Methodology Deviations at Validation

The initial validation of the project identified eleven (11) methodology deviations between the monitoring or measurement requirements of the validation criteria and the Project's monitoring plan. The methodology deviations were reviewed by the validation body and found to be acceptable, as summarized in the table below.

1. 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.
2. 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.
3. 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.

4. 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.
5. 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.
6. 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.
7. 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.
8. 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 (VProject 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 (VProject 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.

9. 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.
10. Boiler Operability: The Operation of the Project Boilers is not measured hourly as required according to ACM0001. This is because 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.
11. 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.

Methodology Deviations from Previous Reporting Periods

In addition, there were two methodology deviations from previous reporting periods that remained applicable to the current monitoring period as well.

- 1) The PDD states that the equations 6-8 ($MD_{flared,y}$, $MD_{electricity,y}$, and $MD_{thermal,y}$) are calculated by using an equation format such as $MD_{destructiondevice,y} = LFG \text{ Project total,y} * w_{CH4,y} * DCH4 * Proportion_{destructiondevice,y}$. This equation format could result in overstating emission reductions thus a change to the equation is necessary. This overstatement is possible if the LFG eligible project is more than LFG destroyed. Therefore, for conservativeness a comparison of CH₄ eligible vs CH₄ destroyed is taken into consideration so that emission reductions would not be overstated. This is taken into consideration in the calculations on tabs "Project_Flaring, Project Milliken, Project_Lockhart" in column D. An IF statement is used to determine: If the eligible gas is greater than the amount destroyed: -if true, then the destroyed amount (which is lesser of the two) is used to multiply against the % proportion. -if eligible gas is less than the amount destroyed (false) then the eligible amount of gas (which is less than destroyed) is used to multiply the % proportion.
- 2) Engine flow is measured on a dry basis while corresponding methane is measured on a wet basis. Measuring methane content (along with temperature and pressure) on a wet basis and flow rate on a dry basis results in a conservative calculation of the fraction of methane in the landfill gas. This is because after the gas is de-watered, the methane fraction will be larger, while the overall volume of gas will be smaller. If methane fraction is measured on a wet basis and flow is measured on a dry basis, the resulting figures for methane volume will always be lower than if both measurements were taken on the same basis (both wet or both dry).

SCS reviewed the above methodology deviations for applicability and accuracy to the Project description and the current Methodology. SCS agreed with the justification of the deviations and SCS concluded:

- the deviations meet with the criteria and specifications for permitted methodology deviations.
- the deviations do not negatively impact the conservativeness of the quantification of GHG emission reductions or removals (except where they result in increased accuracy).

Therefore the methodology deviations applied to the project at validation and from previous reporting periods remain valid.

3.3 Project Description Deviations

There were four deviations to how the project was defined in the PDD for this reporting period.

1) Calibration Frequency of Flowmeter at Location 2 (Flare):

The PDD noted the set of flowmeters used to record gas flow at location '2' would be calibrated every 12 to 18 months following manufacturer recommendations. The flowmeters in question are SN 21996, 21997 and 21998. All three flow meters are still used at the facility. However, there is an additional flow meter that was installed with the new flare in May 2019 and is identified as SN#22000. The primary flow meters are currently 21998 and 22000, both 2051 Rosemount meters. Rosemount recommends that their meters be calibrated according to the calculations provided in the meter reference manual. Correspondence from the manufacturer, noted if the required accuracy of the meter were to be taken as 0.5% (the calibration tolerance from previous calibration records), the meters would be due for calibration after 3.5 yrs. The meters listed above were not calibrated on the rotation of every 12 to 18 months and are set to be calibrated once every 3.5 years. SCS reviewed the manufacturer's reference manual and an email from the manufacturer who concurred that the calibration frequency schedule of 3.5 years is appropriate for the application. Therefore, SCS accepted this deviation of the delayed calibration as the meters are still calibrated more frequently than noted by the manufacturer as they are within the 3.5 year period. SCS concludes the deviation is appropriately described, justified and in compliance with the VCS rules and does not affect the applicability of the methodology, additionality, or the appropriateness of the baseline scenario.

2) Flowmeter Serial ID at Location 4 (Milliken Facility):

The flowmeter listed in the PDD at location 4 'Milliken Facility' is Flowmeter SN 43317. This flowmeter, however, is located at the delivery point between Lockhart and the Milliken Facility and not at gas skid 2. Flowmeter SN 42055 is located at gas skid 2 and is the flowmeter used in the quantification thus, the schematic has been updated to reflect this. SN 42055 records at least approximately every 15 minutes and feeds into the SCADA system. SCS confirmed during the site visit this was the meter used for carbon credit calculations. SCS accepted this deviation as it improves accuracy of the PDD to list the correct flowmeter used in the quantification. SCS concludes the deviation is appropriately described, justified and in compliance with the VCS rules and does not affect the applicability of the methodology, additionality, or the appropriateness of the baseline scenario.

3) Gas Analyzer Calibration 2021

The Siemens Ultramat Gas Analyzer (SN N1 A1 664) was calibrated on September 27, 2021. The gas analyzer was previously calibrated on August 24, 2020, and thus, exceeded its 12-month calibration interval by 1 month and 3 days. SCS accepted this deviation as the overall impact to the accuracy of the greenhouse gas assertion due to this deviation is deemed negligible as Lockhart performs monthly calibrations on the analyzer which involve at least one reading verification with a standard gas. SCS concludes the deviation is appropriately described, justified and in compliance with the VCS rules and does not affect the applicability of the methodology, additionality, or the appropriateness of the baseline scenario.

4) Flowmeter SN 42055 Calibration Requirements

Flowmeter SN 42055 was last calibrated on January 23, 2018. As noted above the meter actually in place is a Rosemount 2051 meter. Rosemount guarantees meter stability for a 5-year period but correspondence from the manufacturer, noted if the required accuracy of the meter were to be taken as 0.5% (the calibration tolerance from previous calibration records), the meter would be due for calibration after 3.5 yrs. Meaning, that the meter was due for calibration in July of 2021. To account for this missed calibration, data from August through to December of 2021 was adjusted by a 1% discount factor across the entirety of the monitoring period for the Milliken meter. SCS accepted this deviation as this discount factor was applied pre-calculation and thus, no changes to the calculations as defined by the Methodology were made in addition, the application of the factor was a conservative measure across the whole reporting period. SCS concludes the deviation is appropriately described, justified and in compliance with the VCS rules and does not affect the applicability of the methodology, additionality, or the appropriateness of the baseline scenario.

Lastly, SCS confirmed the Project Proponent correctly listed the project description deviations from previous monitoring periods though they were not applicable to this monitoring period.

3.4 Grouped Project

This section is not applicable as it is not part of a Grouped Project.

4 VERIFICATION FINDINGS

4.1 Project Implementation Status

The Blue Source Spartanburg Landfill Gas Combustion Project (the “Project”) was implemented as indicated in the validated project description. The Project was fully

operational throughout the monitoring period and was implemented according to the validated PDD except as noted below. The distribution of the landfill gas flow going to the different destruction devices were as follows: Flare ~12%; Milliken~39%; and Lockhart~49%.

The Project start date is April 29, 2010. The project is in the second crediting period of 15 June 2020 to 14 June 2030. The start date and credit period were verified by reference to the project validation report.

SCS confirmed the landfill continued to be owned and operated by the Spartanburg County DPW in Spartanburg County, South Carolina. The County owns and operates the landfill gas collection system, gas treatment system, flare, and pipeline to the Milliken Dewey Chemical plant. Lockhart Power owns and operates the energy facility and also contracted with the County to maintain and operate the landfill gas monitoring equipment and pipeline activities. The Milliken Dewey Chemical Plant owns and operates the boilers and all associated equipment for thermal energy generation. Due to these shared responsibilities, all three entities, i.e., the County, Lockhart, and Milliken, are considered the project proponents. The carbon credit originator, purchaser, and preparer of the monitoring report was Blue Source LLC.

Project Monitoring:

Project monitoring was implemented and performed by Lockhart Power technicians for the landfill gas monitoring system, flare skid, pre-treatment skid, pipeline activities and the production of energy through the Caterpillar generator set as indicated by the Project Description. Milliken Dewey Chemical Plant technicians conducted monitoring of the thermal production process through operation of the boilers. All monitoring results were reported to Blue Source LLC and reviewed by SCS.

The flow rate of LFG was metered at four locations; main gas stream from the field, at the flare inlet, prior to delivery to the Lockhart Power facility and prior to delivery to Milliken Facility. Temperature and pressure were not separately monitored because the project used flow meters that automatically measured temperature and pressure, expressing LFG volumes in normalized SCF. Refer to the PDD and monitoring report for a diagram of the metering.

The following is an overview of the metering and measurement:

Location 1: Flow measurement : Main LFG Gas flow for the project is measured continuously on a wet basis. Landfill gas flow from the project system was monitored using an FCI Thermal Mass flow meter that measures flow on a wet basis and normalizes flow to standard temperature and pressure conditions of 60 degrees and 1 ATM. The manufacturer recommends calibration once every 12 to 24 months.

Location 2: Flow measurement at the Flare Inlet: Landfill gas flow is separated into three lines (primary, secondary, and pilot flow) at the flare skid. These three lines are each

monitored individually with three Rosemount 2051 differential pressure flow meters. Flow was measured on a wet basis. A Pyromation thermocouple was used to monitor temperature. Flow and temperature data from the flare is recorded at least once every fifteen minutes. Additionally, an ultraviolet flame detector is in place to monitor the presence of a flame and activate the safety interlock system. The manufacturer recommends calibration once every 12 to 18 months.

Location 3: Flow measurement to Lockhart Power, the electricity phase of the Project:

Gas flow to Lockhart's 3250 Caterpillar Engine and generator set was metered continuously using a Rosemount 3051 SFC compact conditioning orifice plate mass flow meter with integrated pressure and temperature integration. Flow is measured on a wet basis and recorded at least once every fifteen minutes. The meter was noted to be calibrated every three years in the PDD.

Location 4: Flow measurement prior to delivery to Milliken Dewey Chemical Company:

Gas flow to the Milliken Facility was metered continuously using a Rosemount 2051 SFC compact conditioning orifice plate mass flow meter with integrated pressure and temperature integration. Flow was measured on a dry basis and is recorded at least once every fifteen minutes. The meter is noted will be calibrated every three years. The project originally noted this meter as serial number SN:43317 in the PDD but during the site visit, it was noted the meter is incorrect, and the actual meter is the same make and model but with serial number 42055 located at skid #2. A project deviation for this change is discussed in section 1.14 above.

Methane concentration for the Project was measured using an in-line Siemens Ultramat 23 continuous gas analyzer. The gas analyzer was positioned prior to gas flow splitting to the different combustion devices. The manufacturer requirement for calibration was noted annually however the facility calibrated just outside the annual window (see Project description deviations noted above in section 1.14). SCS reviewed the calibration records, which indicated the meter was operating accurately.

The primary variables monitored to determine and account for emission reductions are listed below:

Parameter	Instrument	OEM Calibration	Measurement Frequency	Comments
Location 1: Total Flow (VProject total).	FCI Thermal Mass Flow meter (Serial No. 324341)	12 to 24 months	Continuous	At least every 15 minutes Data recorded at 60 deg F and 1 atm.

Location 2: Flare (Vflare).	Rosemount 2051 Flow Transmitter (s/n:21996, 21997 and 21998)	12-18 months	Continuous	At least every 15 minutes Data recorded at 60 deg F and 1 atm.
Location 3: Engine (VElectricity)	Rosemount 3051 SFC compact conditioning mass flow meter (Sn: 482561	1. Orifice Plate- Rosemont every 3 years.	Continuous	At least every 15 minutes Data measured at 60 deg and 1 atm.
Location 4: (Thermal- Milliken). (VHeat)	Veris Verabar DPSN (V17909- 01.1) with Rosemont transmitter 2051- (SN:42055)	1. Orifice checked every 3 years, 2. Calibration of Rosemont every 3 years.	Continuous	At least every 15 minutes Data measured at 60 deg and 1 atm.
Methane fraction in landfill gas (VCH4)	Siemens Ultramat 23 Continuous Gas Analyzer	Every 12 months	Continuous	At least every 15 minutes
Operation of the engine	Revenue electricity meter	N/A	Continuous	Every Minute

Operation of the Flare	Thermo-couple	N/A	Continuous	At least every 15 minutes
Grid electricity consumption	Invoices	N/A	Continuous	Monthly
Fossil Fuel Consumption	Invoices	N/A	As Purchased	Aggregated annually

Per interview with the Project personnel, review of the Project monitoring plan and review of the validation report, SCS was confirmed:

- The project has not participated or been rejected under any other GHG programs since validation or previous verification.
- The project has not received or sought any other form of environmental credit, nor become eligible to do so since validation or previous verification.
- The GHG emission reductions or removals generated by the project have not become included in an emissions trading program or any other mechanism that includes GHG allowance trading.

Lastly, SCS noted the list of previously validated methodology deviations (each verification report must contain an exhaustive list of all methodology deviations applied to the project) is provided above in section 3.2. There are no other methodology deviations from previous monitoring periods noted.

Based on the above review, SCS concluded that the project was implemented as described in the project description and the project monitoring remained effective during the verification period.

4.2 Safeguards

4.2.1 No Net Harm

The Project creates no negative environmental or socio-economic impacts as noted in the validation report.

4.2.2 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.

4.3 AFOLU-Specific Safeguards

This section is not applicable as the Project is not an AFOLU Project.

4.4 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 PDD. SCS 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. SCS'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_{flare}), landfill gas to the engine ($V_{\text{Electricity}}$), landfill gas flow to the boilers (V_{Heat}), and the methane fraction of the landfill gas (V_{CH_4}) were continuously measured to calculate the total quantity of methane destroyed by each destruction device ($F_{\text{CH}_4, \text{flared}, y}$, $F_{\text{CH}_4, \text{EL}, y}$, $F_{\text{CH}_4, \text{HG}, y}$). For conservativeness, if the amount of eligible project LFG was greater than the amount destroyed, the destroyed amount was used to multiply by the proportion of LFG that is combustion by the separate devices 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/ft³ 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 (FCH_4, 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 ($Refficiency$), amount of methane in the LFG which is destroyed for heat generation ($FCH_4, HG, dest, j, y$), and the emission factor for natural gas. The amount of methane in the LFG which is destroyed for heat generation ($FCH_4, HG, dest, j, y$) is determined as described above for parameter (FCH_4, HG, y).

Project emissions from electricity consumption ($PEEC, y$) 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 ($PEFC, y$) 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 in the list of findings. No material misstatements were observed in the final GHG assertion.

4.5 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, SCS 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 (i.e. raw data) to confirm the accuracy of the information flow.

Data was assured by the proper monitoring and maintenance of the various flow meters and methane concentration analyzer. All calibrations for the flow meters and methane analyzer for the project were checked to verify that they were calibrated to manufacturers' specifications. The following is an overview of the accuracy of the project monitoring devices:

Parameter	Instrument	OEM Calibration	Calibration conducted	Value applied for Report Period
Location 1: Total Flow (VProject total).	FCI Thermal Mass Flow meter (Serial No. 324341)	12 to 24 months	05/13/2020 Meter maintained to OEM specifications.	180,626,330 SCF
Location 2: 1. Flare (Vflare) 2. $F_{CH_4, sent_flare, y}$	Rosemount 2051 Flow Transmitter (s/n:21996, 21997 and 21998)	12-18 months	01/6/2020 Meter maintained to OEM specifications.	1. 49,457,879 SCF 2. 949.53 t CH ₄

Location 3: 1. Engine (VElectricity) 2. $F_{CH_4,EL,y}$	Rosemount 3051 SFC compact conditioning mass flow meter (Sn: 482561)	1. Orifice Plate- Rosemont every 3 years.	01/6/2020 Meter maintained to OEM specifications	1. 6,093,370 SCF 2. 116.99 t CH ₄
Location 4: (Thermal-Milliken). 1. (VHeat) 2. $F_{CH_4,HG,y}$	Veris Verabar DPSN (V17909-01.1) with Rosemont transmitter 2051- (SN:42055)	1. Orifice checked every 3 years, 2. Calibration of Rosemont every 3 years.	1/23/2018 Meter maintained to OEM specifications as note in the project deviation section.	1. 100,394,359 SCF 2. 1,927.45 t CH ₄
Methane fraction in landfill gas (VCH ₄)	Siemens Ultramat 23 Continuous Gas Analyzer	Annual	s/n: N1-A1-664). Primary Analyzer on 09/27/2021 s/n: N1-B3-412). Spare Analyzer on 02/10/2021	~52.77%

SCS 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.

SCS verified the operation hours of the engine/generator was monitored to ensure that methane was only flowing to the engines when operating by review of engine kwh records. The operation of the flare was monitored through the flare's thermocouple temperature readings above a minimum temperature of 300 degree 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. Hours of operation of the boilers were not directly monitored, because the boilers are equipped with fail-safe values that automatically shut when the landfill gas line is switched off or the boiler(s) goes down.

The flow rate for all metering measurement point locations one through four above and methane concentration of the project are record at least every 15 minutes as documented in a Supervisory Control and Data Acquisition system (SCADA) system. The SCADA operates Wonderware, Historian In-Touch, Active Factory, and Microsoft Terminal Server 2003 software on a Dell Power Edge server located at the Lockhart facility. The data was confirmed backed up on the Lockhart technician's laptop. The SCADA system uploads data to the on site server monthly and data will also be aggregated on a monthly and yearly basis.

SCS has concluded from the evidence presented that the flow meters remained reliable during the reporting period and the project monitoring was implemented as indicated in the validated PD except for the deviations noted above.

4.6 Non-Permanence Risk Analysis

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

5 VERIFICATION CONCLUSION

Blue Source LLC has supplied a Project Monitoring report, Validated Project Design Document and the necessary evidence requested during the verification process to enable SCS to arrive at an opinion on the Blue Source Spartanburg County Landfill Gas Combustion Project. The emission reductions generated from the capture and destruction of landfill gas methane via a flare, a beneficial use project consisting of thermal energy generation and electricity generation have been compiled in a transparent manner, the data was found to be accurate within the uncertainty limits of the measurement equipment and emission reduction calculations were found to include all the required sources.

SCS has determined that the Blue Source Spartanburg County Landfill Gas Combustion Project, developed by Spartanburg County, Lockhart Power and Milliken Dewey Chemical Company, is in conformance with the Consolidated Baseline Methodology ACM001, version 19 and the VCS Standard v 4.2 (20 January 2022). Furthermore, the Project Plans and data are considered accurate, complete, transparent, and free of material misstatements. The GHG emission reductions are considered verified to a reasonable level of assurance.

Verification period: From 1 January 2021 to 31-December-2021

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

For non-AFOLU projects, use the following table:

Year	Baseline emissions or removals (tCO ₂ e)	Project emissions or removals (tCO ₂ e)	Leakage emissions (tCO ₂ e)	Net GHG emission reductions or removals (tCO ₂ e)
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Year 2021	78,851	382	0	78,469
Year...				
Total	78,851	382	0	78,469

APPENDIX A: LIST OF FINDINGS

Reporting Period: 1/1/2021 to 12/31/2021

NCR 1 Dated 22 Dec 2021

Standard Reference: ACM0001, V19_sec. 6.1

CDM Tool 8: Tool to determine the mass flow of a GHG in a gaseous stream. Section 6.1

VCS Standards 4.2- Section 3.18.1-2

Document Reference: Spatranburgpddv1.9

Section 5.2

Data Parameter: Vflare

Finding: For the data parameter Vflare:

Various Rosemount 2051 flow meters are noted in the PDD to be calibrated every 16 months. The last calibration for these meters were observed conducted d 1/6/2020. Please provide the calibration records for the meters identified as:

21998 Flare Flow Transmitter (Primary)

22000 Flare Pressure Transmitter (Primary)

21997 Flare Pressure Transmitter (Secondary)

21996 Pilot Pressure Transmitter (secondary)

Project Personnel Response: The Rosemount meters for the flare are on the same 3-year schedule as the generator and boiler. They have the same % accuracy. The previous flare had a Thermal Instruments flow meter that I did have calibrated every 18 months. Since Rosemount doesn't recommend that short of an interval, we are having them calibrated when the tech does the others.

Auditor Response: The PDD indicates the meters are to be calibrated every 16 months.

Section 3.18 of the VCS Standard states: "Projects may deviate from the validated project description in certain cases in order to accommodate changing circumstances post-validation." The procedures for documenting a project description deviation depend on whether the deviation impacts the applicability of the methodology, additionality, or the appropriateness of the baseline scenario."

As required by the Standard sec 3.18.2, describe and justify in the monitoring report whether the deviation impacts the applicability of the methodology, additionality or the appropriateness of the baseline scenario and include a description of when the changes occurred and the reasons for the changes. The deviation shall also be described in all subsequent monitoring reports.

Project Personnel Response 2: Project description deviation included in updated MR - 'SpartanburgMR_v1.3_20220202'.

Auditor Response 2: A project description deviation was included in section 3.2.1 of the Monitoring report. This deviation did not impact the methodology, additionality, or appropriateness of the baseline scenario. Issue closed.

Bearing on Material Misstatement or Conformance (M/C/NA): C

NIR 2 Dated 22 Dec 2021

Standard Reference: ACM0001, V19_sec. 6.1

CDM Tool 8: Tool to determine the mass flow of a GHG in a gaseous stream. Section 6.1

Document Reference: Spatranburgpddv1.9

Section 5.2

Data Parameter: Vproject total (page 52)

Finding: For the data parameter Vproject total (FC Thermal Mass Flowmeter Sn# 324341) - Please provide the calibration conducted within 18 months. The last calibration was noted on 05/13/2020.

Project Personnel Response: I've uploaded the FCI flowmeter calibration to the Spartanburg verification folder along with evidence of calibration at standard conditions (60 degrees and 14.7 psi) – see 'FCI Rental meter installed 11-1-21.pdf'

Auditor Response: The calibration records provided indicate the meter was removed and a rental meter was installed on 11/1/2021 (SN:RR385371) which is within 18 month interval. The calibration record for SN#324341 was conducted on 12/30/2021. Issue closed.

Bearing on Material Misstatement or Conformance (M/C/NA): C

NIR 3 Dated 6 Jan 2022

Standard Reference: ACM0001, V19_sec. 6.1

CDM Tool 8: Tool to determine the mass flow of a GHG in a gaseous stream. Section 6.1

Document Reference: Jan - Dec 2021 Combined w Cals Updated

TAB: All, Column: "CH4 to Milliken"

Finding: The equation within the column to Milliken, incorrectly references "Min Methane % for Flare" instead of the cell Time increment. Please correct in next version of the data.

Project Personnel Response: Addressed in 'Spartanburg_Calc_v1.2_01102022'.

Auditor Response: The equation correctly references the correct cell for the time increment in the file "Jan - Dec 2021 Combined w Cals Updated ". Issue closed

Bearing on Material Misstatement or Conformance (M/C/NA): C

NIR 4 Dated 7 Jan 2022

Standard Reference: ACM0001, V19_sec. 6.1

CDM Tool 8: Tool to determine the mass flow of a GHG in a gaseous stream. Section 6.1

Document Reference: Jan - Dec 2021 Combined w Cals Updated

Tab: July

Finding: It appears there is under reporting of flow due to the calculations are discounted in columns "eligible wellfield CH4 captured", "CH4 to flare" and "CH4 to Milliken" at or around row 2889 for July and August. Please explain why?

Project Personnel Response: Addressed in 'Spartanburg_Calc_v1.2_01102022'. Incorrectly discounted.

Auditor Response: Please clarify how addressed as the issue was related to the feeder spreadsheet "Jan - Dec 2021 Combined w Cals Updated", not the calculator ?

Also, for the new "Jan-Dec combined w cals updated sheet uploaded on Monday 1/31/2022"- For august Data still looks cut off for engine and Milliken at row 2889 with no calculations from Column H on ?

Lastly, when updating files, please provide a revision number as well.

Project Personnel Response 2: Issue was addressed in 'Jan - Dec 2021 Combined w Calcs Updated v1.1'. Calculations in columns F - H were applied to rows 2889 - 2976 for both July and August. Corresponding changes in flow CH4 to Milliken, Eligible CH4, CH4 to Lockhart and CH4 to Flare were updated in 'Spartanburg_Calc_v1.5_02072022'.

Auditor Response 2: Confirmed data revised to include all readings and referenced spreadsheets updated. Issue closed.

Bearing on Material Misstatement or Conformance (M/C/NA): C

NCR 5 Dated 27 Jan 2022

Standard Reference: ACM0001, V19_sec. 6.1

CDM Tool 8: Tool to determine the mass flow of a GHG in a gaseous stream. Section 6.1

VCS Standards 4.2- Section 3.18.1-2

Document Reference: Spatranburgpddv1.9

Parameter Vboiler

Finding: The flow Meter listed in PDD for Milliken is not the meter used for carbon credit calculations. The meter noted during the site visit and in calculations is Serial Number 0042055. Therefore, the project description document no longer reflects the conditions on site.

1. Please provide the meter calibration records for this meter and
2. As required by the Standard sec 3.18.2, describe and justify in the monitoring report whether the deviation impacts the applicability of the methodology, additionality or the appropriateness of the baseline scenario and include a description of when the changes occurred and the reasons for the changes. The deviation shall also be described in all subsequent monitoring reports. Update the PDD with this deviation.

Project Personnel Response: Project description deviation included in updated MR - 'SpartanburgMR_v1.3_20220202'.

Auditor Response: 1. Pending ...Provide the previous calibration of the meter as noted in the Monitoring report of 1/23/2018 and justify the calibration frequency of 5 years per 5.3.2 of the reference manual provided as it states the stability depends on the application of the meter.

2. A project description deviation was included in section 3.2.1 of the Monitoring report. This deviation did not impact the methodology, additionality, or appropriateness of the baseline scenario. Issue closed.

Project Personnel Response 2: Calibration document provided in 'Lockhart Power 2018.pdf'. Will obtain email confirmation from Rosemount confirming 5 yr calibration for 2051 meters.

Auditor Response 2: Received calibration record. Meter calibrated by Emmerson.

Bearing on Material Misstatement or Conformance (M/C/NA): C

NCR 6 Dated 4 Feb 2022

Standard Reference: "ACM0001, V19_sec. 6.1

CDM Tool 8: Tool to determine the mass flow of a GHG in a gaseous stream. Section 6.1"

Document Reference: "Jan - Dec 2021 Combined w Cals Updated

Tab: May-September.

Finding: The PDD notes continuous monitoring recording every 15 minutes. The cell "time increment" in column L of the "Jan - Dec 2021 Combined w Cals Updated" file incorrectly notes the time increment over 15 mins for tabs: May- September. This is not a material issue.

Project Personnel Response: Data is recorded every 15 minutes and 1 millisecond for these months. Monitoring report updated to include 'approximately' every 15 minutes.

Auditor Response: Data for these months is observed recorded every 16 minutes from May-September. This is a project description discrepancy between the PDD and the actual calculations.

Project Personnel Response 2: Time increment' parameter altered from 16.0 to 15.2 in 'Jan - Dec 2021 Combined w Cals Updated v1.2' for the following TABs: May 2021, June 2021, July 2021, August 2021, September 2021.

Auditor Response 2: Confirmed data file updated with the time increment set to 15 minutes. Issue closed.

Bearing on Material Misstatement or Conformance (M/C/NA): C

NCR 7 Dated 4 Feb 2022**Standard Reference:** VCS Standard, 4.2**Document Reference:** SpartanburgMR_v1.2_20220127**Finding:** The following issues were noted in the Monitoring report:

1. Section 1.8 template states: "Provide the title, reference and version number of the methodology or methodologies applied to the project Include also the title and version number of any tools applied by the project."

The information for the tools applied were not included.

2. Section 1.10 : It has not been indicated whether the project has sought or received another form of GHG-related environmental credit, including renewable energy certificates, during this monitoring period as noted in the template.

3. Section 3.2.2.: The deviation for the delay in gas analyzer calibration for this reporting period - the last sentence states the "The overall impact to the accuracy of the greenhouse gas assertion due to this deviation is deemed negligible" Please clarify why in the paragraph.

4. Section 3.2.2.: The MR templates states: "Describe and report on any project description deviations applied in previous monitoring reports. ". The previous reporting period deviations are not mentioned.

Project Personnel Response: 1. Tools added to section 1.8 of 'SpartanburgMR_v1.4_20220207'.

2. Information added to section 1.8 of 'SpartanburgMR_v1.4_20220207' addressing whether the project has sought or received another form of GHG-related environmental credit.

3. Clarification added to 'Gas Analyzer Calibration' deviation in section 3.2.2 of 'SpartanburgMR_v1.4_20220207'. Confirmation of monthly calibrations by Lockhart.

4. 'Gas Analyzer Calibration 2020' deviation from previous monitoring period added to section 3.2.2 of 'SpartanburgMR_v1.4_20220207'.

Auditor Response: 1. Tools noted included in Monitoring report. Issue closed.

2. Updated noted in section 1.10. Issue closed

3. Response acceptable, Issue closed.

4. Previous deviation noted added. Issue closed.

Bearing on Material Misstatement or Conformance (M/C/NA): C

NCR 8 Dated 4 Feb 2022

Standard Reference: VCS Standard, 4.2

Document Reference: SpartanburgMR_v1.2_20220127

Finding: The following discrepancies were noted for the various parameters in section 4.2 of the monitoring report:

1. Parameter BE CH₄, SWDS, Y is not listed in the monitoring report.
2. Parameter "VProject total A"- total SCF does not match the calculator total in the tab :Data Entry sheet Cell E45.
3. Parameter " PE Propane" value applied is not consistent with the value noted in the calculator tab "PE_FC" cell F33.
4. Parameter "FC Propane" value applied is not consistent with the value noted in the calculator tab "PE_FC" cell E33

Project Personnel Response: 1. Parameter BECH₄,SWDS,y added to section 4.2 in 'SpartanburgMR_v1.4_20220207'.

2. 'Vproject total A' corrected to Project total as per the PDD in 'SpartanburgMR_v1.4_20220207'.

3. 'PE Propane' updated in 'SpartanburgMR_v1.4_20220207' to reflect value in 'Spartanburg_Calc_v1.5_02072022' tab 'PE_FC' cell F33.

4. Parameter 'FC Propane' updated in 'SpartanburgMR_v1.4_20220207' to reflect value in 'Spartanburg_Calc_v1.5_02072022' tab 'PE_FC' cell E33.

Auditor Response: 1. The parameter BECH4 does not match the PDD version as this is only calculated once every 10 years. It is not clear where the value 290,835 t CO₂e is derived. Please review and clarify.

2. The value for Vproject Total still does not match the Total eligible flow from the project as noted by VProject total E in the Data entry tab (the total from flow meter 32341). Please correct in the monitoring report.

3. PE propane updated to 0.36 tCO₂e which is correct. Issue closed.

4. FC propane updated to 64.56 gallons which is correct. Issue closed.

Project Personnel Response 2: 1. Updated in version 1.7 to match PDD.

2. Vproject Total updated to reflect value in calc (Vproject total E) in 'SpartanburgMR_v1.7_02-15-2022

Auditor Response 2: 1. Confirmed value now reflects PDD since it is only required to be updated every 10 years. Issue closed.

2. Vproject now reflects the eligible flow noted in the monitoring records. Issue closed.

Bearing on Material Misstatement or Conformance (M/C/NA): C

NCR 10 Dated 28 March 2022

Standard Reference: “[Section 4.3 of the Registration and Issuance Process](#).”

Document Reference: “Monitoring report “

Finding: Please update the Monitoring report to address the following identified by Verra:

1. Update the sectoral scope to 13.
2. Update section 1.11 of the monitoring report to only include the emission reductions achieved for the first monitoring period.
3. Update the parameter Vheat in section 4.2 of the monitoring report to include the QA/QC procedures to be applied in the form of a discount factor when a calibration is missed outside of the MFG recommended calibration schedule.
4. update Section 3.2.1 and 3.2.2 of the monitoring report to describe any methodology deviations that still apply to this monitoring period and any project description deviations (bot present and past).

Project Personnel Response: Please see updated version of the monitoring report 1.13

Auditor Response 2: Confirmed the monitoring report was updated to include Verra’s comments.
Issue Closed.

Bearing on Material Misstatement or Conformance (M/C/NA): C