METHANE RECOVERY PROJECT PRAKTIJKCENTRUM STERKSEL, NORTH BRABANT, THE NETHERLANDS

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Prepared By	AENOR INTERNACIONAL S.A.U.
Contact	Génova, 6. 28004 Madrid – Spain Telephone +34 914326000 medioambiente@aenor.com www.aenor.com
Approved By	Jose Luis Fuentes
Work Carried Out By	Lead auditor: Luis Javier Arribas Alonso Auditor: Marina Arroyo Bovea Technical reviewer: Elena Pérez Llorente

Summary:

AENOR has carried out the verification of the "Methane Recovery Project Praktijkcentrum Sterksel, North Brabant, the Netherlands" ("The project" hereinafter). The project is a project implemented in Sterksel, North Brabant, southeastern part of the Netherlands. The geographical coordinates are N51°22'21" E5°37'30". The project is an agricultural biogas plant that produces renewable energy (electricity and heat) from different organic input materials. The project generates emissions reductions through avoided uncontrolled methane emission out of manure and organic wastes as well as the generation of renewable thermal energy decentrally used to substitute fossil fuels.

The project activity was put into operation in spring 2006. The Project has been verified for its first operation period from May 1st, 2006 to December 31st, 2007 in order to certify the correspondingly reduced GHG emissions by this project activity within this period. The project uses a fixed crediting period of 10 years which ends on 30th of April 2016.

The present verification Report certifies the emission reductions that have occurred from the end of the first monitoring period until the end of the project's crediting period (01/01/2008 - 30/04/2016), with a quantitative monitoring of emission reductions for only the last 6 years of the project's crediting period (01/05/2010 - 30/04/2016). For the period between 01/01/2008 and 30/04/2010, AENOR has verified that the project has reduced and not emitted GHG emissions in that period of time as it is required in the "Request for exemption from quantitative monitoring for the monitoring period from 01/01/2008 to 30/04/2010" submit by the PP on 20/07/2020 and approved by VCS on 21/07/2020. Consequently, no emission reductions are claimed in those years.

Therefore, the emissions reduction for the current monitoring period is 36031 tCO_2e.

The purpose of the verification was to determine the conformance of the project with respect to the VCS Standard v4.0 and the validated PD and the assessment of the ex-post monitored anthropogenic GHG emissions reductions that have occurred as a result of the project's activities.

The scope of the verification was to assess the conformance of validated project, once implemented, with the VCS requirements and requirements in the validated PD. The process was performed through a combination of desk review, interviews, and communications with relevant personnel.

During the verification 1 observation (OBS) and 4 Non-Conformities (NC) were raised. All these issues where appropriately closed by means of corrections, more clear explanations, and other supporting documents.

Once all issues detected were appropriate resolved, AENOR carried out this final verification report and deems with reasonable level of assurance that the project complies with all of the verification criteria. The assessment team has no restrictions or uncertainties with respect to the compliance of the project with the verification criteria, hence, the audit team concludes that the cumulative net GHG emissions reductions of 36031 tCO_2e over the monitoring period has been quantified in accordance with VCS rules.

1 INTRODUCTION

1.1 Objective

The objective of the verification audit was to conduct an independent assessment of the project to determine:

- The extent to which methods and procedures, including monitoring procedures, have been implemented in accordance with the validated project description (PD), including the monitoring plan.
- The extent to which GHG emission reductions reported in the monitoring report are materially accurate.

1.2 Scope and Criteria

The scope of the verification audit was to verify the emissions reductions of the project against the Verified Carbon Standard, the identified methodology, the validated PD and the exemption from quantitative monitoring for the monitoring period from 01/01/2008 to 30/04/2010 (approved by VCS on 21-07-2020) throughout the monitoring period from 01/01/2008 to 30/04/2016.

The objectives of this audit included a verification of the Project's calculated reductions with the Verified Carbon Standard requirements for only the last 6 years of the project's crediting period (01/05/2010 - 30/04/2016). In addition, the audit assessed the project with respect to the validated baseline scenarios presented in the PD.

Further, according to the "Request for exemption from quantitative monitoring for the monitoring period from 01/01/2008 to 30/04/2010", the objectives of this audit included a verification of the Project has reduced and not emitted GHG emissions in that period of time and, no emission reductions are claimed in that period.

In accordance with Section 4.1.8 of the VCS Standard, the criterion for validation and verification was the VCS Version 4, including the following documents:

- VCS Standard v4.0
- VCS Program Guide v4.0

Unless otherwise indicated, the assessment was performed against the most recent version of the relevant VCS guidance document.

1.3 Level of Assurance

The assessment was conducted to provide a reasonable level of assurance of conformance against the defined audit criteria and materiality thresholds within the audit scope. Based on the audit findings, a positive evaluation statement reasonably assures that the project GHG assertions are materially correct and is a fair representation of the GHG data and information.

All the versions of the verification report were subjected to an independent internal technical review before being submitted to the client to confirm that all verification activities had been completed according to the pertinent AENOR instructions required. The technical review was performed by a technical reviewer(s) qualified in accordance with AENOR´s qualification scheme for VCS validation and verification.

The threshold for materiality with respect to the aggregate of errors, omissions and misrepresentations relative to the total reported GHG emission reductions was one percent (1%), as established for large projects by the VCS Standard.

1.4 Summary Description of the Project

The project is a project implemented in Sterksel, North Brabant, southeastern part of the Netherlands. The geographical coordinates are N51°22'21" E5°37'30". The project is an agricultural biogas plant that produces renewable energy (electricity and heat) from different organic input materials. The project generates emissions reductions through avoided uncontrolled methane emission out of manure and organic wastes as well as the generation of renewable thermal energy decentrally used to substitute fossil fuels.

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Therefore, the emissions reduction for the current monitoring period is 36031 tCO2e.

2 VERIFICATION PROCESS

2.1 Method and Criteria

The verification was performed through a combination of document review and interviews with relevant personnel, as discussed in Sections 2.2 through 2.4 of this report. At all times, the project was assessed for conformance to the criteria described in Section 1.2 of this report. As discussed in Section 2.5, findings were issued to ensure that the project was in full conformance to all requirements.

A project specific Verification Plan was developed to guide the verification auditing process to ensure efficiency and effectiveness. The purpose of the Verification Plan was to present a risk assessment for determining the nature and extent of verification procedures necessary to ensure the risk of auditing error was reduced to a reasonable level. The Verification Plan methodology was derived from all items in our verification process stated above. Any modifications applied to the Verification plan were made based upon the conditions observed for monitoring in order to detect the processes with highest risk of material discrepancy.

The verification activities in which risks were assessed were the evaluations of the monitoring system (data flow, data control procedures, etc.) but mainly the quality of raw data as well as sources and the spreadsheet calculations. AENOR reproduced and verified 100% of data in the *"App C - Calculation_Emission Reductions_VCS_v002_Sterksel_MR 2008-2016"* for the monitoring period. The project boundary and project area for the monitoring period were checked using the evidence provided by the PP.

AENOR carried out a deep and meticulous review of the spreadsheets in order to verify the correct application of the methodology (formulae, equations.) and checked that data required calculating the GHG emissions reductions were appropriately provided. Based on the assessment carried out, AENOR confirms with a reasonable level of assurance that the claimed emission reductions are free from material errors, omissions, or misstatements.

AENOR confirms that sufficient evidence was presented for the reported net anthropogenic GHG emission reductions and that there is a clear audit trail that contains the evidence and records that validate the stated figure in this verification report since:

- Sufficient evidence available: The project participant has provided the 100% of data used in the calculations to achieve the final amount of GHG emission reductions reported, or the source of data in case of default values, or conservative approaches in case of estimated values.

- Nature of evidence: The raw data were collected from reliable sources. They are detailed in the project documents and have been provided to the verification team and were checked during the interviews.

- Cross-checked evidence: AENOR cross-checked the collected information through interviews with stakeholders and reproducing calculations.

Hence, AENOR confirms that the stated figures in the monitoring report are correct and confirms that is able to certify net anthropogenic GHG emissions based on verifiable and reliable evidence.

2.2 Document Review

A detailed review of all project documentation was conducted to ensure consistency with, and identify any deviation from the VCS program requirements, the methodologies applied (AMS III.D, "Methane recovery in agricultural and agro-industrial activities" version 11 and AMS I.C, "Thermal energy for the user with or without electricity" version 09), and the validated PD. Initial review focused on the Monitoring Report (MR) and included an examination of the project details, implementation status, data and parameters, and quantification of GHG emission reductions. Documents reviewed included data from monitoring, calculation spread sheets, and responses to the Non Conformities (NCs) and the observation (OBS).

The verification included a review of the validated PD and MR, relative to the field conditions and interviews with project management staff and stakeholders.

For a listing of all documents received from the client for this verification, please see Appendix 1.

2.3 Interviews

Interviews were performed as part of the overall verification process which was additional to that provided in the project description, monitoring report and any supporting documents. The AENOR verification team met with individuals with various roles in the project. This included a series of interviews with in-country staff that support the mission of the project. In addition, interviews discussions were conducted with project members. The following table summarizes the interviews carried out during the process.

Name	Title/Organization/Community
Pauline Kalathas	Project Manager at GES Energie
John Horrevorts	Plant Manager

Due to the COVID-19 pandemic situation, all interviews were carried out through videoconference or email, as explained in Section 2.4. The interviews were carried out in different dates during the verification process.

2.4 Site Inspections

Due to the exceptional situation caused by the COVID-19 crisis and the travel restrictions established by governments for safety reasons, it was not possible to carry out a site visit as part of the verification process of the project.

In accordance with VERRA's COVID-19 Travel Guidance for Projects (dated 18 March 2020) and since that the VCS Programs does not explicitly mandate site visits, an exemption of the site was requested on the ground of the crisis situation and considering that a reasonable level of assurance was achievable by other means. AENOR as VVB proposed to carry out a remote verification audit that ensured the achievement of the assurance level required by VCS program.

The remote audit was based on the following auditing techniques:

- Document review and cross checks between the information provided in the in the MR, the PD and supporting information and evidence provided by the PP Emissions calculations and supporting information and evidence provided.
- Review, based on the selected methodologies, tools and the other applied methodological regulatory documents, of the appropriateness of formulae and accuracy of calculations.
- Telephone, teleconference and/or e-mail interviews for the implementation of project activities and the elaboration of project's documents.
- Cross checks between information provided by interviewees to ensure that not relevant information has been omitted.

2.5 Resolution of Findings

All documentation provided by the PP was assessed against the applicable version of the relevant VCS guidance document. Several observations (OBS) and Non-Conformities (NC) were raised and submitted to the PP, which addressed them either by providing to the audit team the requested information or by making the appropriate corrections. Updated versions of the documentation were submitted by the PP and the audit team reassessed them against the guidance documentation. This process was repeated iteratively until all OBS and NC were fully closed. Specifically, 1 OBS and 4 NC were raised.

All findings issued by the AENOR audit team during the verification process have been closed. In accordance with Section 4.1.13 of the VCS Standard, all findings issued during the verification process, and the inputs for their closure, are described in Appendix 2 of this report.

2.5.1 Forward Action Requests

No FARs were raised to the PP during the verification process.

2.6 Eligibility for Validation Activities

AENOR holds accreditation for validation for the relevant sectorial scope under which this project activity is classified.

3 VALIDATION FINDINGS

3.1 Participation under Other GHG Programs

The verification team is not aware of project involvement in other forms of environmental credits from its activities. The project has not been registered, and is not seeking registration, under any other GHG programs.

3.2 Methodology Deviations

Two methodology deviations were applied during the monitoring and quantification of VCUs for this monitoring period although they were applied during the previous monitoring period too. A detailed description of the methodology deviations can be found below and in Section 3.2.1 Methodology Deviations of the MR:

1. Biogas production

The amount of biogas is not measured but calculated by the amount of electricity produced. The reason is that no flow meter is installed to measure the biogas volume that is utilized in the CHP. This calculation, based on a reference method described by the CCX Agricultural Methane Gas Project Guidelines, has already been assessed in the last monitoring period and estimated as a conservative way to calculate the amount of biogas produced.

The electricity measurement can be considered as very accurate because it is also the basis for the accounting with the utility. No negative influence on the amount of emission reductions can be expected as the calculated value is expected to be very close to the actual value as it was demonstrated in the previous verification process.

2. Conservativity factor

The application of an overall deduction factor of 0.5 on the emission reductions due to methane recovery. This conservativity factor covers the uncertainties due to the fact, that the project owner has to deal with a lot of organic waste streams of different type and only default values are used instead of local values for waste specific parameter. Furthermore, the project was developed at a time when the methodological approaches and guidelines were not yet mature. Following the conservativeness principle prescribed by the VCS methodology as well as ISO 14064, the application of an additional security factor of 0.5 (conservativity factor) is appropriated to highly compensate the risk of an over-estimation of the emission reductions.

This factor has already been assessed and verified for the last monitoring period in 2006/2007.

The factor 0.5 has been originally applied during the last monitoring on the total amount of emission reductions.

Therefore, due to all the information detailed before, the VVB considers that the deviations meet with the criteria and specifications for permitted methodology deviations stated by the VCS Standard v 4 because they are related to data and parameters monitored and do not negatively impact the conservativeness of the quantification of GHG emission reductions.

3.3 Project Description Deviations

Nine Project Description Deviations have occurred during this monitoring period are detailed below:

1- Increase of manure quantities

Higher amounts of manure generally and of manure with a dry matter content have been treated than initially planned and estimated in the validated PD. This development is attributed to the higher manure surpluses that the Netherlands have been experiencing in the last decade and that could not have been anticipated.

The audit team has verified that the deviation does not impact to:

a) The applicability of the methodologies applied because the project activity comprises:
   - methane recovery from manure and wastes from agricultural or agro-industrial activities,
   - the annual emission reductions achieve by the project activity are less than or equal to 60 kt CO_2.
   - Biomass-based cogenerating systems that produce heat and electricity.
   - Generation capacity is less than 15 MW_{el} or 45 MW_{th}.

b) Additionality, and the investment barriers are still valid, and the production of biogas is not an economically attractive business in the Netherlands.

c) The appropriateness of the baseline scenario, because there are no legal requirements to change the current manure handling system in The Netherlands.

The deviation has been appropriately described and justified by the PP in the MR and evidences provided to the audit team, and VVB considers that the project remains in compliance with the VCS rules.

2- Amount of emission reductions

The amount of emission reductions is higher than the estimated amounts in the PD. This is partly due to the larger amounts of manure that are processed in the biogas plant, as described above. But it is also due to the fact, that only the baseline methane emissions released from stored manure are calculated in the PD and not the one from waste management. Hence, the yearly estimated methane emissions reductions written down in the PD do not correspond to the entire methane emissions that are reduced through the project activity. Furthermore, the Global Warming Potential of CH_4 has been adapted from 21 to 25 according to the Fourth Assessment Report and VCS Requirements, which also leads to higher emission reductions.

The audit team has verified that the deviation does not impact to:

a) The applicability of the methodologies applied because the annual emission reductions achieve by the project activity are less than or equal to 60 kt CO_2.

b) Additionality, and the investment barriers are still valid, and the production of biogas is not an economically attractive business in the Netherlands.

c) The appropriateness of the baseline scenario, because there are no legal requirements to change the current manure handling system in The Netherlands.

The deviation has been appropriately described and justified by the PP in the MR and evidences provided to the audit team, and VVB considers that the project remains in compliance with the VCS rules.

3- Carbon Consultant

from the last Monitoring in 2006/2007, the company of the Carbon Manager has changed from ARA Carbon Finance GmbH to GES Energie GmbH, but this company and its employees belong to the same company group as the ARA Carbon Finance GmbH. This has no impact on the quality of the Monitoring Report and the resulting emission reductions, since the actual Carbon Consultant has big experience working in the carbon sector.

The deviation has been appropriately described and justified by the PP in the MR and evidences provided to the audit team, and VVB considers that the project remains in compliance with the VCS rules.

4. Project Proponent

The person responsible for collecting all data relevant for the monitoring of GHG emission reductions was Mart Smolder till 2011, managing director of the project. Between 2011 and 2014, the managing directors and heads of technical staff has changed several times. Since 2014, the company RE-N Technology B.V. is the project operator with John Horrevorts as plant manager. John Horrevorts has taken over the responsibility for monitoring and recording all data with Bas de Kort supporting him as head of technical staff. This presents a deviation from the PD information from 2011 on. Since the data collected for this Monitoring has also to be collected by Wageningen Livestock Research as basis for accountancy and feed-in tariffs, and is verified by external authorities, negative impacts on the quality of the documentation provided for the calculation of emission reductions is excluded.

The deviation has been appropriately described and justified by the PP in the MR and evidences provided to the audit team, and VVB considers that the project remains in compliance with the VCS rules.

5. Heat meter

The heat meter was installed to measure the use of external heat in 2013 (installation of first heat meter; second one in 2014). However, the project proponent has decided not to claim any emission reductions for the substitution of fossil fuel for the current monitoring period, as the work efforts to calculate the emission reductions and collect the necessary documents and evidence are economically not viable.

Therefore, the installation of a heat counter is not required and in consequence, the audit team considers this deviation has no impact on the amount of emission reductions and has been appropriately described and justified by the PP in the MR and evidences provided to the audit team, and the project remains in compliance with the VCS rules.

6. Flow meter

No flow meter has been running during the present monitoring period. In the first years of operation of the biogas plant, during the first monitoring period, a flow meter was installed, as required in the monitoring plan in the PD. Practice during this period shown that the flow meter was unable to deliver reliable measurements, due to contaminations like moisture (condensation) or Sulfur (H_2S). Therefore, the measurements could not be used as accurate values for calculation the emission reductions.

Hence, the biogas flow has been calculated following a reference method described by the CCX Agricultural Methane Gas Project Guideline, based on the electric energy produced, the efficiency of the CHPs and the calorific value of biogas. The calculation of the biogas amount bases on the electricity production measured by an electric meter with an accuracy <1%. Since the accuracy of the electric meter is highly precise and the method described by CCX is conservative, as it was already demonstrated in the previous monitoring report, using the CCX method have a conservative effect on the quantity of emission reductions.

The audit team has verified that the deviation does not impact to the applicability of the methodologies applied and the project still complies with all the applicability criteria, the investment barriers used to justify the additionality of the project are valid too, and the baseline scenario identified in the validated PD is appropriated currently because there are no changes in the legal requirements of the current manure handling system in the country.

The deviation has been appropriately described and justified by the PP in the MR and evidences provided to the audit team, and therefore, VVB considers that the project remains in compliance with the VCS rules.

7. Methane content

Since the accuracy of the methane content measurements is not secured during the monitored years between 2010 and 2016, the methane content has been calculated based on the literature values, as it has been done for the biogas production and methane content from non-waste co-ferments. Since the biogas production is calculated based on the electricity production and the methane content in the biogas, the biogas production will decrease proportionally with a higher methane content.

The audit team verified that the source of literature values is recognized in the sector and are conservative values. Additionally, the application of the conservativity factor of 0.5 indicated in the previous section of this report assess the deviation does not negatively impact the conservativeness of the quantification of GHG emission reductions.

The deviation has been appropriately described and justify, and do not affect the applicability of the methodology, the additionality of the project nor the appropriateness of the baseline scenario. Thus, the audit team considers the deviation to be valid and that the project remains in compliance with the VCS rules.

8. Emergency boiler

The emergency boiler has only been used in 2006 to heat the digester to launch the biogas process. After the successful warming up of the installation, the plant has used the own heat produced to keep

the digesters warm and the boiler has not been used during the monitoring period, and then, no project emissions have occurred.

The audit team verified that the boiler has not been used during all the monitoring period and consequently, no fossil fuel was used. Therefore, the deviation does not negatively impact the conservativeness of the quantification of GHG emission reductions.

The deviation has been appropriately described and justify, and do not affect the applicability of the methodology, the additionality of the project nor the appropriateness of the baseline scenario. Thus, the audit team considers the deviation to be valid and that the project remains in compliance with the VCS rules.

9. Manure from own farm

The amount of liquid manure coming from the own farm is calculated based on the animal number instead of being measured, as required in the PD. As required by law, the amount of manure coming from the own farm is based on animal numbers in case the manure does not have to be transported. For the project, the number of animals is annually calculated, listed and approved by the government. However, the emission reductions are calculated based on the total amount of CH4 minus the amount of CH4 from non-waste co-substrates. Therefore, the amount of manure has no significant impact on the amount of emission reductions. Hence, this deviation does not impact the accuracy and quantity of emission reductions.

3.4 Grouped Project

N/A. The project is not a grouped project.

4 VERIFICATION FINDINGS

4.1 Project Implementation Status

The MR provides in its Section 3.1 a detailed description of the activities implemented by the project since its start. During this verification process, AENOR has not detected project changes in regards of the project title, its purposes and objectives. As such, the project activity accurately reflects the proposed project which reduces the GHG emissions by reducing uncontrolled methane emissions out of manure and organic wastes, but also contributes to an improved ecological sustainability. Additionally, renewable energy is produced to be fed in the local power grid, but also contributes to an improved ecological sustainability and increased flexibility for fertilizer application to the fields.

During the verification process, the audit team checked the actual implementation of project activity through the analysis of evidences provided by the PP and through interviews to project staff. No discrepancies have been found between the gathered evidence and the implemented activities reported

in the MR, as well between the MR and the planned activities in the PD, except to the methodology deviations and project description deviations detailed in the MR and in previous sections of this report.

After the review of the MR, spreadsheet calculations and the other document to support calculations, AENOR deems that project status is in compliance with applicable methodologies and implementation is in support of the VCS principles of Conservativeness and Accuracy.

Related to the compliance with the Monitoring Plan, section 4.3 of the MR provides information about the monitoring plan and actions carried out for the current monitoring period. AENOR reviewed the procedures put in place to perform the different parameters and data monitored and deems that they are in accordance with the procedures described in the validated monitoring plan. AENOR checked the monitoring plan contained in the validated PD and compared it with the MR to verify whether there was any difference that would cause an increase in estimates of the GHG emission reductions in the current monitoring period. AENOR has confirmed that all discrepancies between the actual monitoring system and the monitoring plan set out in the project description and the applied methodologies have been described and justified properly in sections 3.2. and 3.3. of the MR and do not impact to the applicability of the methodologies and the conservativeness of the quantification of GHG emission reductions. Also, the project proponent effectively monitors the required parameters to determine the project's emissions by sources as required by the monitoring plan and the applicable methodologies.

The parameters reported, including source, frequency and review criteria as indicated in the monitoring plan were verified to be correct and in line with the monitoring plan of the validated PD. Necessary management system procedures including responsibility and authority of monitoring activities have been verified to be consistent with the PD. Knowledge of personnel associated with the project activity was also found to be satisfactory.

Regarding leakage emission, they account 0. In this regard, AENOR has checked evidence provided which confirms the information included in the MR.

There is no evidence of double counting or that the project has participated nor been rejected under any other GHG programs. GHG emission reductions generated by the project are not included in an emission trading program or any other mechanism that includes GHG allowance trading. The project has not received or sought any other form of environmental credit.

After a complete review of the different documents provided and the information gather through the remote audit process, AENOR is able to confirm that the project implementation is in accordance with the validated PD and the deviations described in the MR.

4.2 Safeguards

4.2.1 No Net Harm

The project has been formally and finally approved by the responsible regional authorities of the Netherlands in accordance to the Dutch building law “Wet op de Ruimtelijke Ordening”.

This act provides the set of rules which regulates the impact assessment of plants or projects on the environment. The approval covers the installation and operation of the biogas power plant including all components such as storage, feeders, fermenters, CHP modules, etc.

The project activity contributes to a significant higher ecological sustainability compared to a reference scenario without manure’s treatment by using biogas plants.

Hence, the project has no relevant negative environmental and socio-economic impacts and contributes positively by providing environment friendly power generation leading to sustainable development of the region.

4.2.2 Local Stakeholder Consultation

Public stakeholders have the possibility to contact directly and at any time the responsible at Wageningen Livestock Research in case they feel directly or indirectly disturbed by the project. No complain or litigation has taken place during the entire crediting period of the project activity.

No special meetings have been organized since the communication with the stakeholders takes place in the day-to-day life due to the neighborhood or a working relationship and the impact of the installation in operation on the stakeholders is only positive.

4.3 AFOLU-Specific Safeguards

N/A. The project is not an AFOLU project.

4.4 Accuracy of GHG Emission Reduction and Removal Calculations

Procedures for quantifying the baseline emissions were conducted in accordance with the methodologies applied (AMS III.D, “Methane recovery in agricultural and agro-industrial activities” version 11 and AMS I.C, “Thermal energy for the user with or without electricity” version 09). The verification team performed an intensive review of all input data, parameters, formulas, calculations, conversions, statistics and resulting uncertainties and output data to ensure consistency with the VCS documentation, methodologies and associated documents, and the PD and MR. Further, the verification team reproduced calculations for selected samples to ensure accuracy of the results. Conversion factors, formulas, and calculations were provided by project proponents in spreadsheet format to ensure all formulas were accessible for review. The verification team recalculated subsets of the analysis to confirm correctness. Project proponent also provided a step-by-step overview of select calculations to ensure the verification

team understood the approach and could confirm its consistency with the methodologies, PD and MR. Where applicable, references for analysis methods or default values were checked against relevant scientific literature for best practice.

Baseline emissions

Section 5.1 of the MR and the calculation spreadsheet submitted to AENOR provide information related to the baseline emissions calculations. The total baseline emissions are due to the three following cases:

The methane emission reduction through the project activity is calculated according to the small-scale Methodology AMS III D, as per the validated PD Section D with the following equation:

$GHG_{red,\ IIID} = AF \bullet (BGP \bullet MC - \Sigma\ BGCO_i \bullet MCCO_i) \bullet D \bullet GWP_{CH4}$

With:

$AF = 1 - dm_{nw,\ i} / (dm_{manure} + \Sigma\ dm_{nw,\ I} + \Sigma\ dm_{w,\ j}) \bullet 0.1$

Where:

$GHG_{red,IIID}$	is the annual emission reduction through methane recovery, in t CO_{2e}
BGP	is the total annual biogas produced by the project activity BGP, in Nm^3
AF	is an adjustment factor, which ensures a conservative estimation of the realized emission
$dm_{nw,I}$	is the dry matter of the proceeded quantity of non-waste co-ferment i
dm_{manure}	is the dry matter of the proceeded quantity of manure
$dm_{w,j}$	is the dry matter of the proceeded quantity of waste co-ferment j
$BGCO_i$	is the annual biogas portion of the total biogas amount produced, caused by a digested non-waste co-ferment i if applied, to be determined by the appropriate input amount (MCOFi) and the specific gas productivity of the non-waste co-ferment i, in m^3
MC	is the average annual methane content in the biogas, in Nm^3 methane / Nm^3 biogas
$MCCO_i$	is the average methane content arising in the biogas through digesting a non-waste co-ferment i, in Nm^3 methane / Nm^3 biogas
D	is the density of methane, set to 0.7168 kg CH_4 / Nm^3 CH_4 according to ACM0001
GWP_{CH4}	is the Global Warming Potential of methane, set to 25 t CO_{2e} / t CH_4 according to UNFCCC

Since the biogas flow BGP could not be directly recorded, BGP is calculated following a reference method described by the CCX Agricultural Methane Gas Project Guidelines and used in different similar climate protection projects. The produced electricity and methane content of the biogas are used to calculate the biogas flow as follows:

$$BGP = \frac{EEP}{(ETA_{CHP-el}) * HV_{Biogas}}$$

with:

BGP: Biogas produced [m³]

EEP: Electricity energy produced [MWh]

ETACHP-el Electric efficiency of the CHP engines [%]

HVBiogas Caloric value biogas [kWh/m³]:

$$HV_{Biogas} = 0,01 \frac{MWh}{m^3} \cdot x_{CH4}$$

with:
x_{CH4}: = CH_4 volume content of biogas flow [%]

AENOR has checked the calculations provided and confirmed that the amount of baseline emissions is in conformance and have followed the methodology in the validated PD.

Project emissions

Section 5.2 of the MR describes the calculations for the project emissions.

The oil-fired emergency boiler has not been used on the plant's site, so that no emissions by this source of the project activity occurred during the actual monitored period.

The project emissions from transport of biomass due to the combustion of fossil fuels is not considered, since the emissions from transportation are below 1 % of total baseline emission by the project and do not exceed the criterion for significance as described in the PD.

CH_4 emissions from physical leakage of biogas in the manure management systems, which includes production, collection and transport of biogas to the point of combustion or gainful use of the anaerobic digester have been considered and calculated in accordance with the CDM Methodology AMS III.AO "Methane recovery through controlled anaerobic digestion", Version 01, suggests estimating these project emissions using a default factor of 0.05 m³ biogas leaked/m³ biogas produced.

AENOR has checked the calculations provided and confirmed that this amount of project emissions is in conformance and have followed the methodology in the validated PD.

Leakage

As reported in Section 5.3 of the MR, according to the PD section E.2., no leakage has to be considered.

Net GHG Emissions Reductions

As indicated in Section 5.4 of the MR, the following table summarized the GHG emissions of the project calculated for the current monitoring period.

Year	Baseline emissions or removals (tCO2e)	Project emissions or removals (tCO2e)	Leakage emissions (tCO2e)	Net GHG emission reductions or removals (tCO2e)
Year 2008	0	0	0	0
Year 2009	0	0	0	0
Year 2010	4382	806	0	3576
Year 2011	8108	1114	0	6994
Year 2012	6515	874	0	5642
Year 2013	7521	1107	0	6414
Year 2014	8067	981	0	7086
Year 2015	5344	1110	0	4234
Year 2016	2439	354	0	2085
Total	42377	6346	0	36031

The net anthropogenic GHG reduction due to the project activity for the monitoring period amount 36031 t CO_2e.

AENOR reproduced the calculations to achieve the same results and deems they are depicted clearly and correctly in the provided sheets. AENOR verification team was able to trace calculations directly from the data sources of measurements. Formulae used are in compliance with MR, PD and methodology, like the default values used to determine the parameters, are appropriate. Thus, the net amount of VCUs to be issued is accurate and realistic.

AENOR verified for the parameters available at validation, the values reported or the references to the documents where they are used or explained by reviewing, reproducing and crosschecking the evidence provided by the PP. AENOR checked the values of these parameters to be appropriate and correctly used in equations. Data and parameters available at validation are the ones stated in section 4.1 of the MR.

The data and parameters monitored to calculate the VCUs to be issued are the ones stated in section 4.2 of the MR. AENOR checked that the list of parameters to be monitored was complete and consistent with information in the monitoring plan of the PD.

Regarding the accuracy of spreadsheet, formulae, conversions and aggregations and consistent use of data and parameters, the PP elaborated a complete procedure to assure the accuracy and appropriateness of data. During the verification process, AENOR not only verified the spreadsheet calculation, data and parameters but also the AENOR team could verify that the PP conducted a rigorous QC/QA procedure of its measurements and an assessment of uncertainty. Thus, AENOR deems the PP performed good practices in this assessment and concludes that GHG reductions were quantified correctly in accordance with the project description and applied methodology.

AENOR verified the consistency and accuracy of each parameter detailed in Section 4 of the MR by crosschecking the information in the MR with the information in PD as well as checking values and reproducing the calculations in the spreadsheet calculation package (see Appendix 1) and did not find inconsistencies. Therefore, AENOR deems that values reported for the parameters are accurate and consistent.

The following tables summarize the data and parameters used by the PP to calculate the GHG emission reductions, which has been assessed by AENOR.

Data/Parameter available at validation	Value	Assessment procedure and result
Density of Methane (D_{CH4})	0.0007168	Value is consistent with validated PD. Correctly inputted in the calculation spreadsheets.
Global warming potential of methane (GWP_{CH4})	25	The GWP value set in the PD has been adapted to the second commitment period with value from the fourth assessment report according to UNFCCC and VCS Requirements. Correctly inputted in the calculation spreadsheets.

Data/Parameter monitored	Value		Assessment procedure and result
Biogas produced (BGP)	Year	m^3	As it is explained in the deviation 2 included in section 3.3. of this report, the values of this parameter are higher than the
	2010	1572121	
	2011	2150476	

Data/Parameter monitored	Value	Assessment procedure and result
	2012 1662999 2013 2154193 2014 1905686 2015 2184967 2016 695444	estimated in the PD due to the increase of available manure. Moreover, as it is explained in the deviation 1 of section 3.2., the amount of biogas is calculated by the amount of electricity produced instead of being directly measured. Calculation reproduced. Correctly inputted in the calculation spreadsheets.
Methane content of the biogas (MC)	Year / Weighted average MC [%] 2010 57.20 2011 57.79 2012 58.65 2013 57.34 2014 57.44 2015 56.65 2016 56.77	As it is explained in the deviation 7 included in section 3.3. of this report, the values of this parameter are calculated based on the literature values because the accuracy of its measurements is not secured. The source of default values used to calculate have been checked and confirmed that it is recognized by the sector. Calculation reproduced. Value correctly estimated.
Fraction of time	Several values for CHP unit and year, included in the spreadsheet.	The values of this parameter are obtained from the maintenance reports of the provide. Values correctly inputted in the calculation spreadsheets.
Thermal energy production for external utilization (ETP)	This parameter is not used.	Heat counter is installed since 2013 to measure the total amount of heat used. However, this parameter is not monitored because the project proponent does not claim emission reductions due to it.
Electrical energy produced (EEP)	Year / kWh 2010 3550349 2011 4906766 2012 3850823 2013 4877331	The electric meters are sealed and maintained by the grid operator. Calibration is done by authorized service providers.

Data/Parameter monitored	Value	Assessment procedure and result
	2014 4321850 2015 4886926 2016 1558884	Values correctly inputted in the calculation spreadsheets.
Electric energy imported (EEI)	Year kWh 2010 934616 2011 822877 2012 798276 2013 770785 2014 895000 2015 1049380 2016 1099588	The electric meters are sealed and maintained by the grid operator. Calibration is done by authorized service providers. Values correctly inputted in the calculation spreadsheets.
Mass of each co-ferment i fed into the digester (MCOFi)	Annual value of each co-ferment is included in the spreadsheet.	Each co-ferment is weighed at delivery. The mass of the co-ferment is noted on the delivery receipt and recorded in the electronic database Values correctly inputted in the calculation spreadsheets
Volume of manure fed into digester (MANURE)	Annual value of each type of manure (pig or cattle) is included in the spreadsheet.	Manure is weighed like co-ferments when delivered on the weighing scale. Manure from the own farm is estimated based on the current animal number. The daily amounts of manure are recorded in the electronic database. Values correctly inputted in the calculation spreadsheets
Oil consumed in emergency boiler (OIL)	0	Emergency boiler has not been used during the monitoring years.

AENOR did not find inconsistencies between the PD, technical annex, monitoring report and spreadsheet calculation.

After a deep and thorough review and reproduction of calculations and the corresponding tracks to the other spreadsheets, AENOR deems the parameters monitored and available at validation are correct, reliable, and consistent. Information in the monitoring report is in compliance with the PD, the calculations provided and the applicable methodology. Then, the results showed in the monitoring report are reliable, consistent, and accurate.

4.5 Quality of Evidence to Determine GHG Emission Reductions and Removals

The data and parameters used to determine GHG emission reductions are listed in Section 4 of the MR.

During AENOR's verification, the evidence provided by the PP was enough in both quantity and quality to support the determination of GHG emission reductions reported by the project.

Quality assurance and control is an essential part of company procedures to assure the accuracy of inventory data, modeling results, and carbon accounting. Quality assurance procedures are done to minimize and correct any potential data transcription, calculation, or formatting errors that may result in inaccurate carbon accounting results.

In accordance with VCS, the PP is committed to storing all project data in a secure and retrievable manner for at least two years after the end of the project crediting period. In order to facilitate project management and long-term accounting, all primary data outputs supporting verification including the information is stored and maintained.

Roles and responsibilities are clearly identified in the MR. QA/QC procedures were developed by the PP for maintaining consistency and quality. Interviews with the PP and inspection of data and results demonstrated that the PP possess all the competencies required for reporting of GHG emissions reductions on accurate way.

Data presented to the audit team were clear and coherent and processing steps could be traced to the corresponding sections of the methodology and monitoring plan with transparency.

Above procedures to ensure this are described in Section 4 of the MR, in terms of general QA/QC of the monitoring plan and specific QA/QC procedures applied to data and parameters monitored.

Throughout the verification, the PP demonstrated a commitment toward conservativeness and took all measures appropriate to ensure the reliability of evidence provided. Interviews conducted (oral evidence) are outlined in Section 2.4, and the final documents received from the PP supporting the determination of GHG reductions can be viewed in Appendix 1.

AENOR deems that the PP performed good practices in this assessment and concludes that GHG reductions were quantified correctly in accordance with the PD and applied methodology, and that the that evidence is sufficient in quantity and appropriate in quality to determine the GHG reductions.

4.6 Non-Permanence Risk Analysis

N/A. The project is not an AFOLU project.

5 VERIFICATION CONCLUSION

AENOR has verified that the "Methane Recovery Project Praktijkcentrum Sterksel, North Brabant, the Netherlands" follows the VCS Standard v4.0 and has been implemented in accordance with the validated PD and the project description deviations and methodology deviations.

However, as consequence of reasons explained in the "Request to exempt the VCS projects ID 334, ID 335, ID 336, ID 337 and ID 338 from the VCS requirements for rotation of Validation/Verification Bodies" submitted to VCS on 20/07/2020 and approved on 21/07/2020, although the monitoring period verified has been from the final of the first monitoring period until the end of the crediting period (01/01/2008 - 30/04/2016), the emission reductions have been quantified only for the last 6 years of the crediting period (01/05/2010 - 30/04/2016), whereas between 01/01/2008 and 30/04/2010 has been subject to a verification by AENOR concerning the evidence, that the project has reduced and not emitted GHG emissions, and consequently, no emission reductions are claimed in that period.

As it has been explained above, the verification assessment covers the monitoring period from 01-January-2008 to 30-April-2016 and verifies that calculated emission reductions were achieved during the monitoring period from 01/05/2010 to 30/04/2016 with a reasonable level of assurance and confirms that the project has reduced and not emitted GHG emissions for the period between 01/01/2008 and 30/04/2010. Therefore, AENOR is able to issue a positive verification opinion for the 36031 tCO_2e of VCUs, as reported in the Monitoring Report version 2 dated on 23 February 2021, for the current monitoring period (01/01/2008 - 30/04/2016) corresponds to the emission reductions achieved during the monitoring period from 01/05/2010 to 30/04/2016, as the following table:

Year	Baseline emissions or removals (tCO_2e)	Project emissions or removals (tCO_2e)	Leakage emissions (tCO_2e)	Net GHG emission reductions or removals (tCO_2e)
2008	0	0	0	0
2009	0	0	0	0
2010	4382	806	0	3576
2011	8108	1114	0	6994
2012	6516	874	0	5642
2013	7521	1107	0	6414
2014	8067	981	0	7086
2015	5344	1110	0	4234

Year	Baseline emissions or removals (tCO_2e)	Project emissions or removals (tCO_2e)	Leakage emissions (tCO_2e)	Net GHG emission reductions or removals (tCO_2e)
2016	2439	354	0	2085
Total	42377	6346	0	36031

AENOR is able to confirm that all deviations validated in this verification event complies with all validation criteria for projects set out in VCS Version 4 without any qualifications or limitations.

Date: 5 April 2021

Lead Auditor

Luis Javier Arribas Alonso

APPENDIX 1: LIST OF EVIDENCES PROVIDED

General documents
Monitoring report: - Final version: VCS Monitoring Report_Sterksel_v002_2008-2016 - 20201010_VCS Monitoring Report_Sterksel_v001_2008-2016 dated on 05/11/2020 Previous monitoring report: - MONIT_REP_338_01MAY2006_31DEC2007 Version 02 dated on 19 March 2008; Previous verification report: - VERIF REP 338 24FEB2009 25MAY2009 Project description: - PD v4 on 28/06/2017
MONITORING PLAN DOCUMENTATION (Appendix D)
1. Proof of operation stop of the CHPs with the end of maintenance contracts named “Beeindiging contract Jenbacher” and Beeindiging contract MAN” 2. Daily records of the main data process i.e. methane content in “Daily rapport 2015” 3. Calibration reports for gas analyzer named “Calibration rapport gas analyzer - 2013” 4. Filled questionnaire with project data, i.e. average methane content “20201028_VCS_Data Inquiry_Sterksel” 5. Inaccuracy of CHP runtime counters under “Runtime counter - Accuracy - Jenbacher” 6. Records of the monthly production rates for the year 2010 till 2012 provided by Agentschlap NL and CertiQ named “Production data Jenbacher [year]”, “Production data MAN [year]” and “Production data 2011 Sterksel_CertiQ” 7. Records of the monthly production rates for the year 2013 till 2016 certified by Fudura BV named “Meetrapport [year] VIC Sterksel” 8. Email information about operation, maintenance and calibration of electric meters complying with MID according to Fudura adviser named “Fudura_Electric meters” 9. Reports containing information about electricity and heat production, their technical description, the monitoring methods as well as the accuracy class of the CHPs’ power meters named “Meetprotocol biogas installatie VIC Sterksel” 10. Runtime hours recorded annually on the invoices for maintenance of the CHP manufacturer named “MAN [year] - Runtime hour”, “Jenbacher [year] - Runtime hour” as well as recorded daily in the operation manual named “MAN and Jenbacher [year] - Runtime hour” 11. Overview of the operating hours for both CHPs recorded in excel under “Operating hours CHP’s 2010 - 2016” 12. Amounts of co-products logged in annual excel files under “Aanvoer co-producten [year]” 13. Overview of co-products fed into the biogas plant over the current monitoring period named “Overview co-products for 2010-2016” 14. Manure amounts recorded online via the official program that records all the nutrients shifts and flows between farms under minj.rvo.nl “Supply manure 2010-201_rvo” 15. “Attestation_boiler not used_Heesmans”

16. Electric efficiency of project's CHPs named "Technical data CHP Jenbacher" and "Technical data CHP MAN".
REQUEST FOR EXEMPTION FROM QUANTITATIVE MONITORING FOR THE CREDITING PERIOD FROM 01/01/2008 TO 30/04/2010 (Appendix E)
- Letter submitted by the PP to VCS with the request dated on 20/07/2020 - Approval of the request by VCS dated on 21/07/2020. - Appendix E_GES_Energie_Monitoring gap year_ID 334-335-336-337-338
Carbon Accounting
Spreadsheets: - App C - Calculation_Emission Reductions_VCS_v002_Sterksel_MR 2008-2016 - App C - Calculation_Emission Reductions_VCS_v001_Sterksel_MR 2008-2016
Technical evidences
- Email "FW: data sheet MAN" "
Supporting documents
- App B - Project Review Report_VCS_ID 337 Princepeel - The source of values for methane content from ÖS Schweiz (Ökostrom Schweiz) - Approval by the government of the number of animals annually calculated and listed ("Combi Hoofdformulier [year]"). - The formal approval of the project according to the Dutch building law - Excel file "Electricity production and consumption_2010-2016" with the records of electricity production in March 2020 from Fudura monthly electricity production values of each CHP with the corresponding sources for the years 2010-2012 - Excel files from Fudura with the electricity generation measurements of the net and gross electricity production for the years 2014-2016 (files "Own use [year]") - Excel file "inkomsten 2013" - "Production Q1Q2 Jenbacher 2013" - "Delivery receipt - Co-products - [No]" - Evidence of the formal approval of the project according to the Dutch building law - Permit dismantlement_eng - Tabel-4-Diergebonden-normen-2019_2021 - Sterksel - Calculation manure1
Remote Audit Evidences (Appendix S)
- Remote interview notes - Pictures of the biogas plant before, during and after dismantlement. - Pictures of the main equipment of CHPs.

APPENDIX 2: OBSERVATIONS AND NO CONFORMITIES REQUESTED

Observations (OBS)

OBS ID	01	Date: 07/01/2021
Description of OBS		
The PP shall provide evidence of the following issues: • The project has been formally and finally approved by the responsible regional authorities of the Netherlands in accordance to the Dutch building law "Wet op de Ruimtelijke Ordening". • Disconnection of the boiler. • The plant has been dismantled. • The biogas plant stopped its production in March 2020. • Installation and uninstallation of the 70 kWel CHP. • Technical features of both CHP units (nameplates pictures or manufacturer documentation) and evidence of the installation and operation starting date. • The start date when the biogas plant is used for hygienization of the digestate. • The change of name of the owner of the biogas plant. • Evidence to justify that the sum of the monthly values of each CHP is the annual value used in the calculation of the emission reductions for years 2010, 2011 and 2012. • The technical features of the electrical meters indicated in the MR (serial number, inaccuracy, brand, etc) to monitor the net and gross electricity production. • The calculation of the electricity consumption and values of the gross electricity production. • Delivery receipts of the parameter MCOFi and the excel files carried out by the operation personal.		
Project participant response		**Date:** 24/02/2021
• The formal approval of the project according to the Dutch building law has been attached as "140716 bijlage OLO VIC". • The disconnection of the boiler in 2006 has not been documented. The decisive evidence that no fuel was used in the current monitoring period, however, was already provided with App D - 15 -, with which project emissions can be excluded. • Photos of the biogas before, during and after dismantlement have been attached as "Biogas plant_Dismantlement [no]". • In March 2020, the last kWh electricity was generated. The 2 Excel files with the records of electricity production from Fudura were attached as "20200301202003315OD-M-VARKENBOERDERY" and "20200301202003315OD-M-RE-N" and show that the electricity production was already stopped in March 2020 (first document, column E-F) or was stopped during the month of March 2020 (second document, column D).		

- The 70 kWhel CHP was used in 2008 and 2009 as a test unit, since Wageningen Livestock Research is a research institute. After 2009, the grid connection of this CHP was kept (as can be seen in App D - 9 - page 5, named WKK2 Rothec) in order to have the possibility to carry out further tests. However, after 2009 no tests were carried out and the CHP was no longer used.
- The manufacturer documentation of both CHP units was already provided as App D - 16. For the MAN CHP, a staff member of MAN explains in the mail attached ("FW: data sheet MAN"), that mechanical power production of 380 kWel has to be multiplied with the generator efficiency of 95% to have the electrical power production of 360 kWel. The serial numbers of the CHPs are 4546341 (Jenbacher J208) and 492 2156 839 2146 (MAN LE322), as can be read in App D - 1- . In App D - 9 - on page 5, the CHP engine Jenbacher J208 is registered as WKK 1 and the MAN LE322 is registered as WKK 4. Two photos of the CHP engines are attached as "CHP Jenbacher" and "Container CHP MAN".
- The hygienization unit started latest in 2014 and a new heat meter were installed to measure the heat use for hygienization. This is indicated in the Meetrapport 2014 (App D - 7c) on the first page: the new heat meter is indicated under EAN-code warmte 871961900000000774 in 2014 whereas till 2013, only EAN-code warmte 871961900000000231 is indicated. However, since no emission reductions are claimed for the substitution of fossil fuel, the information given is not relevant for the current monitoring.
- The mother company of Praktijkcentrum Sterksel was named Animal Science Group (ASG) which became Wageningen Livestock Research in September 2009, as can be read under the link https://www.wur.nl/en/Research-Results/Research-Institutes/livestock-research/About-us/History.htm.
- The monthly electricity production values of each CHP with the corresponding sources for the years 2010-2012 are listed in the attached excel file "Electricity production and consumption_2010-2016". The electricity production of the Jenbacher as well as own consumption was corrected in the App C version 02 for the years 2011 and 2012, as there were minor differences in the annual values.
- The technical features of the electrical meters measuring net and gross electricity production were indicated in the MR under section 4.2 for parameter EEP and parameter EEI (source: App D - 9-, page 9). The serial numbers of the gross meter were added in the corresponding tables under section 4.2. of the MR.
- The calculation of electricity consumption and values for the gross electricity production are given in the excel file attached ""Electricity production and consumption_2010-2016". For the years 2010-2012, the evidence can be found in App D - 6a/b/c/d/e. For the year 2013, the evidence for gross electricity production comes from the Meetrapport 2013 from Fudura. The electricity own consumption was taken from an internal company excel file that was created for billing purposes (see "inkomsten 2013") as well as from official documentation about net electricity production and own use from Agentschlap NL for the 2 first quarters of 2013 (see "Production Q1Q2 Jenbacher 2013"). For the years 2014-2016, the net and gross electricity production is taken from excel files from Fudura with the electricity generation measurements (see folders "Own use [year]") or from the Meetrapport 2014-2016 from Fudura (App D - 7c/d/e). The

electricity consumption was corrected in the App C version 02 for the years 2013 and 2014, as there were minor differences in the annual values. • Some delivery receipts stored in folders were attached as photos to this document as "Delivery receipts - Co-products - [No]". The excel files carried out by the operation personal, where the amounts of co-products are recorded, were already provided to the VVB as App D - 12 -.
Documentation provided by project participant
• "140716 bijlage OLO VIC" • "Biogas plant_Dismantlement [no]" • "20200301202003315OD-M-VARKENBOERDERY" • "20200301202003315OD-M-RE-N" • "FW: data sheet MAN" • "CHP Jenbacher" and "Container CHP MAN" • "Electricity production and consumption_2010-2016" • "inkomsten 2013" • "Production Q1Q2 Jenbacher 2013" • Folders "Own use [year]" • "Delivery receipt - Co-products - [No]".

DOE assessment	**Date:** 02/03/2020
The justification and evidence provided are considered adequate. **Therefore, the observation has been clarified and is closed.**	

No Conformities (NCs)

NC ID:	01	**Date: 07/01/2021**
Description of NC		
The auditing team has found the following issues with format: • The number format used in different sections of the MR (3 and 5) is not correct. • Date of issue should be DD-Month-YY. • The exemption crediting period in some instances is identified as finishing on 30/04/2010 and others 01/05/2010. • Section 5.4 lacks values for leakage emissions from Year 2010 onwards. • The start date when the biogas plant is used for hygienization of the digestate is not correct. • Emission reduction values of table of section 5.4. are not correct for some years nor the total project emissions.		
Country participant response		**Date:** 24/02/2021

• The number format has been corrected in the updated version 02 of the MR of Project Sterksel. • The format for the date of issue were corrected. • The end of the exemption crediting period is dated 30/04/2010 and were corrected in the MR v02. • The values for leakage emissions from the year 2010 onwards in section 5.4 were added. • The start date on which the heat from the biogas plant is used for hygienization of the digestate was specified by the project owner and is dated 2014. • The values for baseline emissions, project emissions and net GHG emission reductions were rounded in the excel calculation file (App C) from 2 decimals to the nearest integer, so that the rounded values for net GHG emission reductions in the MR may appear incorrect by calculating the difference of the rounded values, but they are correct (please refer to Appendix C, spreadsheet "Overview").
Documentation provided by the Country Participant
MR updated

VVB Assessment	**Date:** 02/03/2021
All requested issues with format have been resolved in the updated monitoring report. **Therefore, the no conformity is closed.**	

NC ID:	**02**	**Date: 07/01/2021**
Description of NC		
Table 5 does not include the same Amount values for pigs – liquid and mink - liquid as Appendix C tab ER 2014, therefore transport emissions would differ.		
Country participant response		**Date:** 24/02/2021
Table 5 is correct. The error was done in App C under spreadsheet "ER 2014" for the manure values. This error was corrected in App C as well as in the MR. For reasons of consistency, table 5 was adapted to the excel App C under spreadsheet "ER 2014".		
Documentation provided by the Country Participant		
Updated MR App C - Calculation_Emission Reductions_VCS_v002_Sterksel_MR 2008-2016		
VVB Assessment		**Date:** 02/03/2021

Information included in the table 5 of the updated monitoring report is now consistent with the information and values included in the Appendix C tab ER 2014. **Therefore, the no conformity is closed.**

NC ID:	03	Date: 07/01/2021
Description of NC		
The information of some parameters is not correct: • The source of the value of methane content of "Sugar water/ Fruit waste liquid" is not provided in the spreadsheet (the web link of "ÖS Schweiz" is not included). • The operation hours of the MAN CHP unit indicated in the MR is different to the value indicated in the spreadsheet of the appendix C. • Section of "monitoring equipment", the information of parameter MCOFi is inconsistent: on "monitoring equipment" it indicates N/A and on "QA/QC" it indicates that Weighing scales used by the supplier, and the PD indicates that this parameter shall be measured by scales. • The manure from the own farm is estimated based on the current animal number instead of measured by scales as is required by the PD.		
Country participant response		**Date:** 24/02/2021
• The source of values for methane content from ÖS Schweiz (Ökostrom Schweiz) were not provided to the VVB in the Appendix of the MR since the corresponding document is strictly confidential. The carbon consultant asked now ÖS the permission to send the original document as evidence to the VVB and received the authorization to send a screenshot of the co-substrate and his values needed (see attached the answer of the email from ÖS on the second page of the word document "Screenshot_Substrate list from Ökostrom Schweiz"). The carbon consultant made a screenshot of the values for Sugar water to provide the evidence to the VVB (see attached as "Screenshot_Substrate list from Ökostrom Schweiz"). • The operation hours of the MAN CHP unit indicated in the MR is 8.408 h for the year 2014 and correspond with also 8.408 h to the operation hours indicated in App C. • The information under section "Monitoring equipment" were corrected in the MR under section 4.2. • The manure from the own farm is estimated based on the animal number (as required by law) and not measured, because there is no law that requires the installation of a flow meter. As practice has shown in other biogas projects, flow meters are never installed on a biogas plant just to measure the amounts of manure coming from their own farm. Since biogas projects are usually hardly economically viable, investments in technologies that are of no use or legally not required are avoided. The accuracy of the manure amounts from the company's own farm can be		

stated as very precise, as the number of animals is annually calculated, listed and approved by the government (see attached "Combi Hoofdformulier [year]", e. g. on page 8 for the year 2014).
Documentation provided by the Country Participant
• "Screenshot_Substrate list from Ökostrom Schweiz" • "Combi Hoofdformulier [year]" • Updated MR

VVB Assessment	**Date:** 02/03/2021
The information included in the updated monitoring report of all parameters is now correct and complete. **Therefore, the no conformity is closed.**	

NC ID:	04	**Date: 07/01/2021**
Description of NC		
The MR include some information that is not correct or complete: • The MR indicates that 2 CHPs with a total electric capacity of 690 kW have been put into continuous operation till now although the plant owner decided to stop the energy production in March 2020. • The date when the emergency boiler was disconnected after the successful launching of the biogas plant is not consistent with the information provided in the MR of the previous verification. • Section 4.3. of the MR indicates that a second heat meter was installed in 2014 that it is not indicated in the deviation.		

Country participant response	**Date: 24/02/2021**
• The sentence concerning the operation of the CHPs were corrected in the MR under section 1.1. • The emergency boiler was only used in the first quarter of 2006, prior to the start of the CHP in April 2006. From April 2006, electricity and thus heat was generated to keep the digesters warm, but the emergency boiler was no longer needed. Therefore, as indicated in the MR, the emergency boiler has been used in 2006 but, as indicated in the previous monitoring, it was not used in the first monitoring period. • The information concerning the second heat meter was added in the deviation under section 3.2.2.	
Documentation provided by the Country Participant	
Updated MR	

VVB Assessment	Date: 02/03/2021
The information included in the updated monitoring report is now correct and complete. **Therefore, the no conformity is closed.**	