TRADEWATER INTERNATIONAL DOMINICAN REPUBLIC

RUBY CANYON ENVIRONMENTAL

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Summary:

The Tradewater International Dominican Republic Project (Project) collects and/or acquires recovered and stockpiled ozone depleting substances (ODS) in the Dominican Republic and transports them to the United States or potentially elsewhere in subsequent monitoring events for destruction at a facility that meets the Montreal Protocol's TEAP requirements.

Tradewater International, SRL (Tradewater) contracted with Ruby Canyon Environmental, Inc. (RCE) to perform the validation and verification of the first reporting period for the Tradewater International Dominican Republic project. The crediting period is 19 February 2021 – 18 February 2031. The verified reporting period is 19 February 2021 – 20 February 2021. RCE performed a site visit to the Project and completed a detailed document review of relevant Project information.

The purpose of the validation is to ensure that the baseline scenario is valid, that the Project complies with the requirements for additionality, that the project plan and GHG calculation methods are materially correct, that the Project meets the requirements of the Verified Carbon Standard (VCS), and that the planned project could reasonably be expected to achieve the claimed emission reductions. The Purpose of the verification is to ensure that the GHG assertion is materially correct, that the data provided to RCE can be documented and if errors or omissions are detected, they be corrected by Tradewater.

The scope of the validation includes the assessment of the Project Description (PD). The scope of the verification includes emission reductions from the destruction of ODS.

The Project was assessed against the requirements of the VCS Standard (Version 4.1), VM0016 Recovery and Destruction of Ozone Depleting Substances (ODS), v1.1, VMD0048 Module, Version 1.0, and the CDM Tool for the demonstration and assessment of additionality, Version 7.0 (as applicable) and the Project Description dated 25 May 2021. As part of the validation and verification activities, RCE reviewed the completeness, conservativeness, and accuracy of the underlying evidence for the Project's assumptions and data sources used.

During the validation and verification process, RCE issued a total of 10 findings which include:

- 3 Corrective Action Requests
- 1 Non-material Finding
- 2 Additional Document Requests
- 4 Clarification Requests
- 0 Forward Action Request

Based on documentation and explanations provided by the Project Proponent, RCE closed out all findings in a clear and transparent manner. RCE is reasonably assured that the Project meets all relevant VCS requirements, methodologies and applicable CDM Tools. All uncertainties associated with inherent data collection and analysis are properly managed through data controls and quality assurance checks.

RCE states, to a reasonable level of assurance that the Project as described in the Project Description dated 25 May 2021 and the monitoring report dated 25 May 2021 meets all relevant

VCS requirements and correctly applies VM0016 Recovery and Destruction of Ozone Depleting Substances (ODS), v1.1, VMD0048 Module, Version 1.0 and the CDM Tool for the demonstration and assessment of additionality, Version 7.0 (if applicable), with noted deviations.

RCE confirms, to a reasonable level of assurance, that the Project's GHG assertion of 23,656.86 metric tonnes of CO2 equivalent emissions for the period of 19 February 2021 – 20 February 2021 is fairly stated.

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1 INTRODUCTION

1.1 Objective

The purpose of the validation is to ensure that the baseline scenario is valid, that the Project complies with the applicable requirements for additionality, that the project plan and GHG calculation methods are materially correct, that the Project meets the requirements of the VCS program, and that the planned project could reasonably be expected to achieve the claimed emission reductions.

The purpose of the verification is to ensure that the GHG assertion is materially correct, that the data provided to RCE can be documented and if errors or omissions are detected, they be corrected by Tradewater.

1.2 Scope and Criteria

This is the validation of the Project's first crediting period from 19 February 2021 to 18 February 2031. The validation scope is defined as an independent and objective review of the destruction of ODS by the Project and a review of the Project Description (PD) v1.0, dated 25 May 2021. The PD was reviewed against the following criteria:

- VCS Standard version 4.1, 22 April 2021,
- VM0016 Recovery and Destruction of Ozone Depleting Substances (ODS), v1.1,
- VMD0048 Module, Version 1.0
- CDM Tool for the demonstration and assessment of additionality, Version 7.0
- ISO 14064-3:2006 "Greenhouse gases – Part 3: Specification with guidance for the validation and verification of greenhouse gas assertions"

This is the verification of the Project's first reporting period from 19 February 2021 to 20 February 2021 for the first crediting period. The verification scope includes the organizational boundaries of the recovery facility for ODS and the destruction facility for the ODS. The GHG emission sources included are associated with the destruction of the ODS and Project emissions from fossil fuel use or purchased electricity due to Project activities. CO_2 and ODS are the GHGs included in the scope of the project.

RCE conducted the verification based upon the following criteria:

- VCS Standard version 4.1, 22 April 2021,
- VM0016 Recovery and Destruction of Ozone Depleting Substances (ODS), v1.1,
- VMD0048 Module, Version 1.0
- CDM Tool for the demonstration and assessment of additionality, Version 7.0
- Validated VCS PD, 25 May 2021,
- VCS monitoring report, 25 May 2021, and

- ISO 14064-3:2006 "Greenhouse gases – Part 3: Specification with guidance for the validation and verification of greenhouse gas assertions"

1.3 Level of Assurance

RCE conducted the validation and verification activities to a reasonable level of assurance.

1.4 Summary Description of the Project

This Project involves the collection of recovered and stockpiled ODS in the Dominican Republic which is then transported to the United States or potentially elsewhere in subsequent monitoring events for destruction at a facility that meets the Montreal Protocol's TEAP requirements.

2 VALIDATION AND VERIFICATION PROCESS

2.1 Method and Criteria

RCE used a risk-based assessment approach for the validation and verification process to develop the validation and verification sampling plan as part of the validation and verification activities.

The validation process and sampling plan involved the following independent and objective activities:

- Select a validation team;
- Perform a Conflict of Interest Review;
- Conduct a kick-off meeting with Tradewater;
- Review the PD;
- Develop a validation plan and risk-based sampling plan;
- Review the validity of the baseline scenario;
- Conduct a site visit;
- Review the accuracy of the emission reduction projections for the crediting period;
- Review whether project activities are subject to regulatory compliance;
- Confirm project ownership is accurately described in the PD;
- Confirm the application of CDM methodologies;
- Review the monitoring plan;
- Issue corrective action requests (CARs), non-material findings (NMs), additional documentation requests (ADRs), and clarification requests (CRs), as necessary.
- Issue a joint validation/verification report and representation; and

- Conduct an exit meeting with Tradewater.

The validation/verification team was selected according to RCE's GHG Verification Policies & Procedures to ensure team members are qualified to perform validation/verification activities pertaining to the Project. The validation/verification team consisted of the following individuals:

Lead Validator: Zach Eyler

Senior Internal Reviewer: Michael Cote

Team Member: Phillip Cunningham

Prior to validation/verification project activities, RCE performed a Conflict of Interest Assessment to determine whether any potential conflicts exist with the project developer. No issues were discovered that would affect the impartiality or independence of the validation/verification team.

A validation/verification kick-off conference call was held with Tradewater on 19 February 2021. The purpose of the kick-off conference calls was to introduce the Tradewater personnel and the RCE validation/verification team, review the validation/verification objectives, process, and VCS requirements, and to confirm the schedule.

RCE reviewed the PD and developed a validation plan and sampling plan that was used throughout the validation of the Project. A risk-assessment was performed based upon the criteria listed above and evidence provided to RCE by Tradewater that pertained to the current reporting period.

Information in the PD was the primary focus of the validation and sampling plan. RCE reviewed the PD for completeness and accuracy and used the PD to determine other relevant documents to review and personnel to interview. RCE developed a sampling plan checklist based on the requirements of the VCS standard and CDM Tools.

After a preliminary assessment of the Project, RCE performed a site visit to the Heritage Thermal Services (HTS) destruction facility on 3 March 2021. The validation/verification team member interviewed key personnel, reviewed GHG sources, sinks and reservoirs (SSRs) and viewed relevant monitoring and metering equipment. Following its initial review of all Project documents and the site visit, RCE delivered an Issues Log to Tradewater with findings that included CARs, ADRs, and CRs. Tradewater provided responses to all identified issues.

The verification process and sampling plan involved the following independent and objective activities:

- Select a Verification Team;
- Perform a Conflict of Interest Review;
- Conduct a kick-off meeting with Tradewater;
- Review the validated Project Description;
- Review the current Monitoring Report;
- Develop a verification plan and risk-based sampling plan;
- Conduct a site visit;
- Review the project information control systems and quality control procedures;

- Review the Project's emission reduction calculations;
- Issue CARs, non-material findings (NMs), ADRs, and CRs;
- Conduct a senior internal review;
- Issue a joint validation/verification report and representation; and
- Conduct an exit meeting with Tradewater.

RCE developed a verification plan and sampling plan that were used throughout the verification of the Project. A sampling plan was created after reviewing the Project Monitoring Report (MR), validated PD, and the VCS Standard. A risk-assessment was performed based upon the criteria listed above and evidence provided to RCE by Tradewater that pertained to the current reporting period.

The verification plan was used throughout the reporting period as a basis for assessing the completeness, consistency, accuracy and transparency of the Project's GHG emission reductions.

Following the close-out of all open items, RCE completed a joint validation/verification report, and submitted the validation/verification for senior internal review.

2.2 Document Review

The validation/verification activities relied heavily on document review. RCE reviewed several versions of the PD and MR as well as copies of underlying evidence, data, records, and supporting documents.

RCE performed a risk-based analysis of the Project and document sampling to validate that the Project proponent was in conformance with all criteria requirements. RCE also performed a risk-based analysis of the Project and document sampling to verify that the Project proponent is in conformance with all criteria requirements and that the stated emission reductions are materially correct. These documents are listed in Appendix A.

2.3 Interviews

RCE held numerous discussions with the following personnel throughout the verification process:

- Mariel Alem, Process Leader, Tradewater
- Maria Gutierrez, Director of International Programs, Tradewater

Topics discussed included:

- Tradewater' process for compiling the PD to meet the VCS standard and CDM methodology including associated tools;
- Process for determining that the Project was not legally mandated;
- Methods for including relevant SSRs in the Project boundary;
- Ownership structure of the Project;

- Point of origin information for the Project;
- Review of documents provided in support of the PD

RCE interviewed the following personnel during the site visit:

- John Higgins, Product Management Coordinator, HTS
- Steve Lorah, Materials Process, HTS
- Caleb Cameron, Environmental Specialist, HTS

Topics discussed during the site visit included:

- Start date
- Methods for data collection (CEMS)
- Relevant HTS permits
- ODS mixing and sampling
- Scales
- Process for the import of ODS into the U.S.

2.4 Site Inspections

RCE conducted a site visit to the HTS destruction facility in East Liverpool, OH on 3 March 2021. The objective of the site inspection was to confirm the location of relevant Project monitoring equipment (as applicable), confirm that all relevant GHG SSRs were included in the PD and GHG calculations, and confirm that Project personnel were qualified to carry out their respective roles and responsibilities. The site visit activities included a physical inspection of the Project operations and a review of the HTS' information control systems, mixing procedures and location, and scales. RCE interviewed key personnel (see section 2.3) responsible for the day-to-day operation of equipment, data aggregation and compilation, and sampling and mixing for the Project.

2.5 Resolution of Findings

RCE used an Issues Log to request CARs, NMFs, ADRs, and CRs during the validation/verification process. Tradewater responded to all requests, which were subsequently closed out.

During the verification/validation process, RCE issued a total of 10 findings which include:

- 3 Corrective Action Requests
- 1 Non-material Finding
- 2 Additional Document Requests
- 4 Clarification Requests

The resolution of findings is summarized in the table found in Appendix B.

2.5.1 Forward Action Requests

RCE did not issue any forward action requests.

3 VALIDATION FINDINGS

3.1 Project Details

The Project is a grouped project under sector 11 fugitive emissions – from industrial gases (halocarbons and sulphur hexafluoride).

The Project Proponent is Tradewater International, SRL. RCE confirmed ownership by reviewing contracts between Tradewater and the recovery facility for the ODS (Secimar).

The Project start date is 19 February 2021 when the destruction event for the ODS began at HTS. This was confirmed through a reviews of the CEMS data and Certificate of Destruction.

The scale is a Project with estimated GHG emission reductions of 40,000 tonnes CO_2e over the entire crediting period.

In the Dominican Republic, ODS material has been stockpiled over the years through programs that recovered material from private companies and technicians, and that collected unused material from distributors that was originally imported for sale. In the country however, there is currently no law, rule or regulation requiring the destruction of ODS, and no equipment or technology capable of destroying ODS consistent with the requirements of the Montreal Protocol. As a result, the ODS material in the Dominican Republic is released into the atmosphere - either quickly, because it is not captured from equipment at end of life, or slowly, because it is captured and placed into stockpiles, or simply remains in stockpiles with no future use. Since the Dominican Republic lacks local destruction capacity, Tradewater will transport the consolidated ODS from Dominican Republic to the United States or elsewhere for destruction.

The Dominican Republic has no law, statute or other regulatory framework mandating the destruction of ODS. All ODS imported into the United States must apply and receive permission from the EPA. RCE confirmed that this was completed and also that HTS had no outstanding environmental or regulatory violations. RCE searched EPA's Environmental Compliance History Online database, and the Occupational Safety and Health Administrator's databases. RCE also contacted relevant state agencies who also confirmed that there were no violations.

The Project has not sought or received any form of GHG-related environmental credit other than offsets under VCS. Nor has the Project been registered nor is seeking registration under any other GHG program than VCS. The Project has not been rejected by any GHG program.

The project activity is not an AFOLU project and therefore leakage management is not applicable. There is no commercially sensitive information related to the Project. The Project contributes to the sustainable development of the region by supporting grass roots economic development (SDG1), destroying one of the most powerful GHGs the world allowing the development and use of safer and more environmentally friendly alternatives (SDG12) and preventing the release of ODS to help prevent ozone depletion, negative environmental impacts, and climate change (SDG13).

RCE concludes that the Project description included in the PD is accurate, complete, and provides an understanding of the nature of the Project. The Project has been implemented as described in the PD.

3.2 Participation under Other GHG Programs

The Project does not participate under other GHG programs.

3.3 Safeguards

3.3.1 No Net Harm

There are no potential negative environmental or socio-economic impacts because of the Project.

3.3.2 Local Stakeholder Consultation

Tradewater engaged with the Dominican Republic National Coordinator of the Ozone Layer Protection Program, to understand the country's needs and context regarding the rules and regulations in place for the disposal of ODS refrigerants.

Tradewater International also collaborated with Secimar SRL as a local waste manager authorized for the handling of ODS refrigerant gases. Secimar has been authorized by MARENA to conduct activities related to the handling of ODS refrigerant gases.

Both partnerships will be ongoing throughout the Project period. At least prior to each monitoring event, Tradewater International will consult directly with the Ozone Layer Protection Program, to ensure that exports of ODS from the Dominican Republic have the support of, and comply with, applicable laws, as well as explore collaboration opportunities with national initiatives. In addition, Tradewater International will further engage with other stakeholders, such as associations and chambers from various sectors. Informative material about the Project has been and will continue to be distributed to the local stakeholders.

3.3.3 Environmental Impact

The project did not require an environmental impact assessment.

3.3.4 Public Comments

The project did not receive any public comments during its public comment period.

3.3.5 AFOLU-Specific Safeguards

This is a non-AFOLU project and this section is not required.

3.4 Application of Methodology

3.4.1 Title and Reference

The project follows the VCS Standard 4.1 and uses the following methodologies and tools:

- VM0016 Recovery and Destruction of Ozone Depleting Substances (ODS), v1.1,
- VMD0048 Module, Version 1.0
- CDM Tool for the demonstration and assessment of additionality, Version 7.0

3.4.2 Applicability

This is the initial validation of the Project's first crediting period. The Project Proponent justified meeting each applicability condition of the chosen methodology through provided documentation. The review focused on the applicability conditions in VM0016. Namely:

1. The ODS that is part of the Project was not manufactured for destruction.
2. The ODS is sourced from the Dominican Republic (Article 5) and is destroyed in the United States (non-Article 5).
3. The ODS destroyed includes primarily CFC-12 and HCFC-22, with very small amounts of CFC-113, HCFC-142b, CFC-115 and CFC-114. All are listed in Appendix I of methodology.
4. All ODS was collected, stored and transported in sealed containers.

3.4.3 Project Boundary

RCE confirmed that the Project boundary was correctly defined. The ODS was aggregated at the Secimar facility in the Dominican Republic and is defined as the Project's recovery facility. The ODS was then transported to the Unites States for destruction at HTS. As the recovery of the ODS occurred prior to aggregation at Secimar, no project emissions associated with the collection were included. Project emissions form the transportation and destruction of the ODS were included. The selected SSRs correspond with those identified in the applied methodology.

RCE confirmed that all relevant SSRs were selected in included in the Project boundary and are described in the PD.

3.4.4 Baseline Scenario

The baseline scenario is determined correctly in accordance with the CDM *Tool for the demonstration and assessment of additionality.* According to Step 1a of the CDM Tool, R4 is the most likely alternative to the project activity - release of the ODS refrigerant or partial capture and reuse in existing products or continued storage in stockpile. According to Step RCE confirmed that there are no laws requiring the destruction or reuse of ODS in the Dominican Republic.

The identified baseline scenario is justified and is an accurate and reasonable assessment of pre-project conditions. The project description describes how the baseline scenario is relevant through documentary evidence provided as attachments and considers relevant sectoral policies and circumstances when proving that the project activity is additional.

3.4.5 Additionality

The Project uses two approaches to review additionality for the Project based on the type of ODS: section 7.1 and VMD0048 for CFCs and section 7.2 the CDM *Tool for the demonstration and assessment of additionality* for the HCFCs. RCE confirmed that this approach was acceptable with Verra.

For CFCs, RCE confirmed the Project demonstrated regulatory surplus as there are no laws in Dominican Republic that require the destruction of ODS via a review of communication from the National Coordinator of Ozone Layer Protection in the Dominican Republic RCE also confirmed that the Project meets the following applicability condition from VMD0048: the project activity consists of the collection and destruction of CFC refrigerant that meets the definition of consumer quantity (ODS in containers less than 250 lbs or 113 kg and not in possession of manufacturer). RCE confirmed that the R-12 collected was in containers with a capacity of 50 lbs.

For HCFCs, RCE confirmed that the Project is defined as a “first-of-its-kind project activities” per Step 0 of the CDM Tool. No HCFC destruction project has been previously carried out in the Dominican Republic, due to the absence of ODS destruction infrastructure and technology in the country compliant with the Montreal Protocol requirements, as well as the lack of financial mechanisms to make this possible. There are also no ODS projects in VCS located in the Dominican Republic and RCE believes it very likely that no other ODS destruction projects have originated from the country for any carbon programs.

Based on the evidence provided, RCE agrees that the additionality of the project is justified according to the selected methodologies.

3.4.6 Quantification of GHG Emission Reductions and Removals

All quantification methods come from relevant methodologies listed in Section 3.4.1 above. RCE reviewed all data parameters listed in Section 5 Monitoring of the project description and confirmed that they were listed in the referenced methodologies, specified references and sources of each parameter used in the Baseline and Project equations, are reasonable in the context of the Project.

Leakage emissions are not applicable for this project type. There are no relevant uncertainties related to quantification of baseline or project emissions.

Baseline Emissions

Baseline emissions are calculated using the equation:

$$BE_{ODS\_ref,y} = \Sigma^{n}_{1} ((M_{DESTR,refr,i,y} \times VR_{refr} \times EF_{VR}) + (M_{DESTR,refr,i,y} \times RR_{refr,i,y} \times EF_{RR,refr,i,y}) + (M_{DESTR,refr,i,y} \times DR_{refr} \times EF_{DR})) \times GWP_{refr,i}$$

$$1 = VR_{refr} + RR_{refr,i,y} + DR_{refr} \quad (3)$$

Where:

$B_{,y}$	=	Baseline emissions from ODS refrigerants which would be released into the atmosphere in the absence of the project activity in year y
$M_{DESTR,refr,i,y}$	=	Quantity of ODS refrigerant i destroyed by the project activity in year y [tODSi]
VR_{refr}	=	Rate of ODS refrigerants (destroyed) which would be vented into the atmosphere in the baseline [%,0-100%]
EF_{VR}	=	Emission factor for the rate of ODS refrigerants (destroyed) which would be vented into the atmosphere [1]
DR_{refr}	=	Rate of ODS refrigerants (destroyed) by the project activity which would also be destroyed in the baseline [%,0-100%]
EF_{DR}	=	Emission factor for the rate of ODS refrigerants (destroyed) by the project activity which would also be destroyed in the baseline [0]
$RR_{refr,i,y}$	=	Rate of ODS refrigerants i which would be used, reused or remain in storage in the baseline [%,0-100%]
$EF_{RR,refr,i,y}$	=	Emission factor for the rate of ODS refrigerant i (destroyed) which would be reused in the baseline [0-1.0]
$GWP_{refr,i}$	=	Global warming potential of ODS refrigerant type i that converts 1 ton of ODS i to tons of CO2 equivalents. [tCO2e/tODSi]

$EF_{VR} = 1$

$EF_{DR} = 0$

$$EF_{RR,refr,i} = 1 - (1 - LR_{refr,i})^{tcp}$$

Project Emissions

Project emissions are calculated using the equation:

$$PE_y = PE_{Energy\_Consump,y} + PE_{ODS\_Transport,y} + PE_{ODS\_Destruction,y}$$

Where:

PE_y	=	Project emissions during year y [tCO2e]
$PE_{Energy\_Consump,y}$	=	Project emissions from energy consumption at the ODS recovery facility during year y [tCO2e]
$PE_{ODS\_Transpo}$	=	Project emission from ODS transportation during year y [tCO2e]
$PE_{ODS\_Destruct}$	=	Project emission from ODS destruction during year y [tCO2e]

RCE confirmed that the Project's project description has all relevant assumptions and data including their references and sources. RCE also confirmed that all data and parameter values used in the project description are reasonable, and all estimates of the baseline emissions can be replicated using the data and parameter values provided in the project description.

RCE concludes that the Project correctly applies the methodology and any referenced tools to calculate baseline emissions, project emissions, leakage and net GHG emission reductions and removals during the project crediting period.

3.4.7 Methodology Deviations

VM0016 requires moisture content of each ODS sample to be "less than 75% of the saturation point for the ODS based on the temperature recorded at the time the sample was taken". For containers that hold mixed ODS, the methodology also requires "the saturation point shall be assumed to be that of the ODS species in the mixture with the lowest saturation point that is at least 10 percent of the mixture by mass". Tradewater proposed that a higher moisture saturation than the 75% maximum be allowed for a single ODS Species if the overall mixed ODS saturation is below 75%.

RCE concurs that Tradewater's deviation is justified and permitted under the VCS Standard, because it relates to a requirement found in the monitoring or measurement section of the methodology and does not impact conservativeness as the moisture content is always removed from the weight of ODS destroyed for baseline emissions. Based on a full analysis of the ODS species in the sample, the weighted average moisture content was less than 26%, below the 75% threshold.

RCE's overall conclusion regarding the methodology deviation is that the deviation applied to the Project is valid, but not considered to be precedent setting.

3.4.8 Monitoring Plan

RCE confirmed the suitability of the implemented monitoring system by reviewing data collected as inputs into all methodology equations. Due to the nature of this project type, there are very few pieces of equipment that directly measure inputs into the calculations. Monitored parameters are scale measurements and lab analysis. RCE reviewed this information and found the implemented monitoring system to be suitable based on the fact that most of the monitored data parameters are measured by qualified independent parties. RCE confirmed that all data and parameters that are monitored and/or measured during the Project reporting period were correctly stated and defined. RCE concludes the monitoring plan adheres to all requirements of the Methodology.

RCE confirmed there were no PD deviations for this reporting period.

3.5 Non-Permanence Risk Analysis

The section is not applicable for this Project type.

4 VERIFICATION FINDINGS

4.1 Accuracy of GHG Emission Reduction and Removal Calculations

The Project Proponent calculates the Project's emission reductions in accordance with the equations described in VM0016 and the validated PD.

Baseline emissions are calculated by determining the source of ODS, the weight of ODS destroyed, the % composition of all eligible ODS species and using default emission factors. RCE reviewed all cylinder weights and scale measurements, lab analysis of the ODS samples, ODS mixing documentation and default values/emissions factors.

Project emissions are calculated using default emission factors based on ODS weight destroyed. RCE reviewed this calculation and confirmed it was accurate.

RCE reviewed the Tradewater GHG assertion spreadsheet to ensure the accuracy of the formulas, emission factors applied, and functionality of the spreadsheet. Tradewater applied the correct default values from the PD to the equations in the assertion spreadsheet and to confirm there were no transcription errors. RCE found the GHG emission reduction calculations to be in conformance with VM0016, the validated PD, and free of material misstatement.

4.2 Quality of Evidence to Determine GHG Emission Reductions and Removals

The Project Proponent provided adequate documentation for the emission reduction calculations as well as its information control systems and data management processes. RCE reviewed the Project's Monitoring Report, applicable measured data, and all emission reduction calculations.

As described in section 4.1, RCE performed sample recalculations of emission reductions from raw data, checked all functionality of the Project workbooks, and traced data and default values through input to the Project workbooks. RCE found the information provided to be transparently documented and in accordance with the validated PD and requirements of VM0016.

RCE interviewed Tradewater and HTS staff members and reviewed data collection processes and operational systems used to collect and report data. RCE found the systems employed result in adequate data collection and presentation with reliable controls. Quality assurance activities are present through data review techniques conducted by Tradewater personnel. RCE confirmed the Project's management and staff to be highly qualified and competent and determined that the GHG management system is sufficient to generate accurate and reliable data.

RCE concludes the Project data used to determine the GHG reductions and removals to be of sufficient quantity and appropriateness of quality in all instances.

5 VALIDATION AND VERIFICATION CONCLUSION

The scope of the validation and verification included the Project activities carried out at Secimar facility located in the Dominican Republic and the Heritage Thermal Services destruction facility in East Liverpool, OH that reduced GHG emissions compared to the baseline.

The goal of the Project validation is to ensure that the project plan and GHG calculation methods are materially correct and meet the methodology and CDM tool requirements, the project meets the eligibility requirements of the VCS program, and the planned project could reasonably be expected to achieve the claimed emission reductions.

RCE confirms that the validation was performed in accordance with the VCS Program Guide, Version 4.0, and VCS Standard, Version 4.1 in addition to CDM methodologies and tools with no qualifications or limitations. The Project Activity will result in a reduction of GHG emissions through separation and treatment of volatile solids in a non-anerobic environment, that is relevant, complete, consistent, accurate, transparent and conservative.

Upon completion of the crediting period validation process RCE concludes that that all relevant VCS validation criteria have been satisfied and the Project Activity properly applies the criteria of VM0016 and VMD0048. RCE concludes that the baseline is valid and that the emission

reductions attributable to the Project Activity are additional to any emission reductions that would occur in the absence of the Project.

All CARs, NMs, ADRs, and CRs raised by RCE have been satisfactorily resolved by the Project Proponent. The *ex-ante* emission reductions from the Project Activity are estimated to be 40,000 tonnes of CO_2e over a 10-year crediting period from 19 February 2021 to 18 February 2031. RCE considers it likely that the estimated quantity of emission reductions may be achieved by the Project Activity should the assumptions and operational conditions remain the same.

The goal of the verification is to ensure that the GHG assertion is materially correct, that the data provided to RCE can be documented and if errors or omissions are detected, they be corrected by the Responsible Party. The data and information supporting the GHG assertion were historical in nature.

RCE conducted a risk-based analysis of the Tradewater International Dominican Republic project including a strategic review of the Project data, documentation, and emission reduction calculations. RCE concludes to a reasonable level of assurance that the GHG assertion is free of material misstatement. The emission reductions resulting from methane avoided from LFG combustion for the reporting period 19 February 2021 to 20 February 2021 can be considered in conformance with the following criteria:

- VCS Standard version 4.1, 22 April 2021;
- VM0016 Recovery and Destruction of Ozone Depleting Substances (ODS), v1.1,
- Validated VCS PD, 25 May 2021,
- ISO 14064-3:2006 “Greenhouse gases – Part 3: Specification with guidance for the validation and verification of greenhouse gas assertions”

Verification period: From 19 February 2021 to 20 February 2021

Verified GHG emission reductions and removals in the above verification period (values in the table may not add up exactly due to rounding errors):

Year	Baseline emissions or removals (tCO2e)	Project emissions or removals (tCO2e)	Leakage emissions (tCO2e)	Net GHG emission reductions or removals (tCO2e)
2021	23,682.16	25.30	0.0	23,656.86
Total	**23,682.16**	**25.30**	**0.0**	**23,656.86**

Lead Validator/Verifier Signature

Zach Eyler

Vice President

Independent Reviewer Signature

Michael Cote

President

APPENDIX A: DOCUMENTS REVIEWED

#	Document
1	Chain of custody documentation for all shipments of ODS from point of origin
2	Continuous emissions monitoring system (CEMS) data report
3	Documentation of material ownership
4	ECHO reports for relevant parties
5	Emails from state agency representatives
6	Evidence of Project commencement date
7	Way Bill and Packing List
8	GHG assertion spreadsheet
9	Heritage Certificate of Destruction
10	Heritage ODS Sampling Certificate
11	Heritage Mixed Projects Form
12	Mixing tank specs and photos
13	Heritage relevant permits
14	Heritage weight tickets for destruction event
15	Bill of Ladings and Delivery Report
16	Rineco Receipt and Consolidation Report
17	NRI refrigerant analysis report for destruction event
18	OSHA searches for relevant parties
19	Point of origin documentation
20	Letter from Ministry of Env. and Natural Resources – Dominican Republic
21	Regulatory compliance documentation
22	Scale calibrations
23	Approval to Export
24	US EPA Import Permission
25	Heritage SOP
26	Emails from Dominican Republic Nat. Coordinator of Ozone Layer Protection
27	Emails from Secimar

APPENDIX B: RESOLUTION OF VALIDATION AND VERIFICATION FINDINGS

Corrective Action Request, Non-Material Finding, Additional Documentation Request, or Clarification Request ID#	Finding	Reference Document	Client response	RCE response	Additional client response	Additional RCE response	Open or Closed
CAR 1	Section 1.8 of the PD does not mention or demonstrate the ODS Project requirements relevant to start date.	VCS Standard 3.7.4-5.	Section 1.8 of the PD has been adjusted accordingly, considering requirements relevant to start date.	Correction acceptable.			Closed
CAR 2	The PD needs the following corrections: -Section 1.14: does not mention Heritage or other destruction facilities for regulatory compliance -Section 3.6 and Appendix E: The deviation is not clearly stated. The PD states "...proposed that the project Tradewater International Dominican Republic considers moisture from the actual sample results. That is, calculations will use a moisture level of 49 ppm...". This does not address the actual deviation (allowing ERs if sample is >75%). The method proposed is the same as the normal calculation (i.e. using moisture sample results and removing this from ODS destroyed weight). The highest specie ODS moisture (R12 at 44ppm in this case) is never used in the actual calculation, only total moisture (48/49). Also, please add language to satisfy requirement 3.17.1 of the VCS Standard. -LRsubstitute and Substitute chemical i parameter table: They both include information and values, but shouldn't this all be N/A since no leakage emissions are considered? Reference to Proklima International?	VCS PD Template, VCS Standard 3.17.1	- Section 1.14 of the PD has been adjusted accordingly. Adjusted version of the PD is now available with 21.04.05 date (Location: Validation Folder). - Section 3.6 of the PD and Appendix E have been adjusted accordingly. Adjusted version of the Appendix E is now available with 21.04.05 date (Location: Validation Folder). - Correct, no leakage emissions are considered. The tables for LRsubstitute and Substitute chemical i parameters have been adjusted accordingly in the PD and in the Monitoring Report. Adjusted version of the Monitoring Report is now available with 21.04.05 date (Location: Verification > Monitoring Report Folder).	*Section 1.14 corrected. *Section 3.6 and Appendix updated *Parameter table updated.			Closed
CAR 3	The calculations are not using the AR5 GWPs as required by the updated VCS Standard 4.1.	VCS Standard	Updated calculations, PD and Monitoring Report provided.	All corrected.			Closed
NM 1	For the ER calculations: -For sample 1 R-115 is not included and is eligible -The T&D default factor is incorrect for R-12 and R-114 -Project emissions for T&D are not using the weight of eligible and ineligible material.	VM0016 8.1 and 8.2	Calculations have been adjusted accordingly. Adjusted version of the Project Assertion Spreadsheet is now available with 21.04.05 date (Location: Verification > Quantification Folder). Monitoring report adjusted according to new values.	Corrected calculations confirmed.			Closed
ADR 1	Please provide documentation on the moisture saturation thresholds for R-22 and R-134a (830 and 730). I could not access 1990 ASHRAE Handbook.	PD 3.6	Table of information from the 2014 version of the Handbook has been provided. (Location: Verification > Destruction Documentation > Sampling - Analysis Folder)	Document provided.			Closed
ADR 2	Please provide the scale calibrations from February 2021.	VM0016 9.3	Scale Calibrations for February 2021 have been provided. (Location: Verification > Compliance Documentation > Heritage Compliance Documentation > Scale Calibrations Folder).	Scales cals provided.			Closed
CR 1	Please clarify how new instance additionality characteristics will be consistent with this initial instance for HCFCs, which uses first-of-its-kind justification for additionality.	VCS Standard 3.5.15 (5) and PD 1.4.	Section 1.4 and 3.5 of the PD have been adjusted accordingly.	Response acceptable.			Closed
CR 2	Please clarify how the flow rate (36.2 gpm) was observed and documented for the mixing of the ODS?	VM0016 9.3	The flow rate (36.2 gpm) was documented in the ODS Mixing Form provided by Heritage. (Location: Verification > Destruction Documentation > Mixing Folder). A micro motion mass flow Coriolis meter is used to measure the flow rate. Additional pictures of the flow meter display and of the pump with flow meter above it have also been included in this folder.	Photos provide information on how this value would be recorded by Heritage, closed.			Closed
CR 3	PD deviation noted for project emissions from electricity consumption at ODS recovery facility. When did recovery take place for material that is part of project? VM0016 notes consumption in given year (y), not the monitoring period.	VM0016 8.2	The ODS material from the Project was not recovered at Secimar's facility, the local waste manager, at any given time. Section 3.2.2 of the Monitoring Report has been adjusted accordingly.	Deviation potentially accepted, but see CR4.			Closed
CR 4	Please clarify why the recovery facility is not part of the project and part of the chain of custody. Since the recovery did not take place at SECIMAR, the entire Project Boundary is not accounted for. Where did the ODS originate from prior to SECIMAR?	VM0016 5	Section 3.2.2 of the Monitoring Report has been adjusted to include this clarification. Adjusted version of the Monitoring Report is now available with 21.04.08 date (Location: Verification > Monitoring Report Folder).	This clarification is acceptable: SECIMAR meets the definition of a recovery facility in VM16 as an aggregation facility. Update: It was determined that electricity monitoring was occurring, but was zero. Monitoring report updated.			Closed