TW GHANA ODS PROJECT VERIFICATION REPORT

Document Prepared By GHD Limited

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Summary:

Tradewater, LLC (Tradewater) retained GHD Limited (GHD) to complete an independent third-party verification of the TW Ghana ODS Project (Project Activity), Verified Carbon Standard ID 1752, located in East Liverpool, Ohio under the requirements of the Verified Carbon Standard (VCS). Tradewater is the Project Proponent and owner of the Project Activity. The verification was conducted for the 13-04-2018 to 12-04-2019 monitoring period.

The Project Activity consists of the collection of recovered and stockpiled ozone depleting substances (ODS) in Ghana. The ODS is then shipped to the United States for destruction at the Heritage Thermal Facility. Verified Carbon Units (VCUs) are generated from the destruction of the ODS which would have been released into the atmosphere.

The Project Proponent utilizes:

- VMD0048 Activity Method for the Determination of Additionality for Recovered and Stockpiled ODS Refrigerant Projects, v1.0
- VMD0016 Recovery and Destruction of Ozone-Depleting Substances from Products, v1.1

The scope of this verification is such that GHD, as an independent third-party recognized as a Validation and Verification Body (VVB) by VCS (Registration Number 027) is responsible for reviewing the Monitoring Report including accompanying materials, the previous Validation Report, and the Project Description (PD). GHD utilized a risk-based analysis against the relevant requirements of both the VCS Program Guide Version 3.7 (Program Guide) and VCS Standard Version 3.7 (Standard).

As part of the verification process, GHD reviewed the completeness, conservativeness, and accuracy of the underlying evidence for the assumptions and claims made, and data sources used. The results of this investigation were then, together with the results of the review of other areas, combined to form the necessary input for the verification report and opinion.

The verification report and associated appendices document a total of eighteen (18) findings which include:

- Eleven (11) Corrective Action Requests (CAR)
- Six (6) Clarification Requests (CLs)
- One (1) Forward Action Request (FAR).

Upon review of the documentation and explanations provided by the Project Proponent and, all CAR and CL findings were closed in a clear and transparent manner. The FAR relates to the inclusion of electricity emissions from ODS recovery. GHD is issuing a Positive Verification Opinion and therefore recommends/certifies that the registered Project Activity has obtained the reported emission reductions of 135,784 tonnes of carbon dioxide equivalent (tCO_2e).

Table of Contents

1 INTRODUCTION

1.1 Objective

Tradewater, LLC (Project Proponent) retained GHD Limited (GHD) to complete an independent third-party verification of the following Verified Carbon Standard (VCS) Project Activity:

- TW Ghana ODS Project, located in East Liverpool, Ohio, USA, VCS Project ID: 1752 (Project Activity)

GHD completed the verification pursuant to the relevant requirements of the VCS guidance, consisting of the VCS Program Guide Version 3.7 (VCS Program Guide) and VCS Standard Version 3.7 (VCS Standard). As detailed in Section 5.1.1 of the Standard, "Verification is the periodic ex post independent assessment by a validation/verification body of the GHG emission reductions and removals that have occurred as a result of the project during the monitoring period, conducted in accordance with the VCS rules." The objective of GHD, on behalf of the VCS, is to ensure that only Project Activities that meet the established criteria receive a positive and unconditional verification statement. Specifically, the criteria states that the registered Project Activity must result in emission reductions that are:

- Relevant
- Complete
- Consistent
- Accurate
- Transparent
- Conservative

The objective of this verification was to evaluate whether the Monitoring Report and supporting documents submitted by the Project Proponent for the reporting period of 13-09-2018 to 12-04-2019 for the Project are free of any discrepancies, omissions or misreporting, which may result in a material misstatement, and to ensure that the Project is in conformance with the VCS Program Guide, and VCS Standard.

GHD Limited, as an independent third-party recognized as a VVB by the VCS (Registration Number 027), is responsible for reviewing the Monitoring Report including accompanying materials, the VCS Project Description (PD), and the VCS Verification and Validation Reports.

Per the VCS Verification and Validation Manual, during verification VVBs must evaluate the Monitoring Report and assess the following:

- The extent to which methods and procedures, including monitoring procedures, have been implemented in accordance with the VCS PD. This includes ensuring conformance with the monitoring plan; and
- The extent to which GHG emission reductions and removals reported in the monitoring report are materially accurate.

1.2 Scope and Criteria

The scope of the independent third-party verification services completed by GHD are as follows:

- Verification of the TW Ghana ODS Project (ID 1752) located in East Liverpool, Ohio, USA for the monitoring period of 13-09-2018 to 12-04-2019, under the requirements of the VCS.

The Project Activity falls under Sectoral Scope 11, which is one of the sectoral scopes in which GHD is accredited.

GHD reviewed the VCS PD, Monitoring Plan, Monitoring Reports, methodology, and related information along with preparing the Verification Report and Verification Deed of Representation (Verification Representation) for the crediting period.

GHD adhered to the requirements outlined in the following documents as verification criteria:

- VCS Program Guide, Version 3.7, dated 21 June 2017 (VCS Program Guide)
- VCS Standard, Version 3.7, dated 21 June 2017 (VCS Standard)
- VCS Validation and Verification Manual, Version 3.2, dated 19 October 2016 (VCS VVM)
- ISO 14064-3:2006 Specification with guidance for the validation and verification of greenhouse gas assertions
- VM0016 Recovery and Destruction of Ozone-Depleting Substances (ODS) from Products, v1.1, 30 November 2017
- VMD0048 Activity Method for the Determination of Additionality for Recovered and Stockpiled ODS Refrigerant Projects, v1.0, 30 November 2017

This verification covers the GHG emission sources and reductions at the Project, which was located at the following address:

Heritage Thermal Services
1250 St. George Street,
East Liverpool, OH 43920

The Project's destruction location and address were confirmed during the Site Inspection.

1.3 Level of Assurance

The verification was conducted to a reasonable level of assurance. Per the VCS Standard Section 5.3.1, "The threshold for materiality with respect to the aggregate of errors, omissions and misrepresentations relative to the total reported GHG emission reductions and/or removals shall be five percent for projects and one percent for large projects."

Based on the reported emission reductions (i.e. less than 300,000 tCO_2e), the Project Activity is classified as a project, therefore the materiality was set at 5 percent.

1.4 Summary Description of the Project

The Project Proponent collects and aggregates ODS from refrigerants and other appliances that have been taken out of service in addition to stockpiled consumer quantities. In Ghana, the Project Proponent partnered with City Waste Recycling (City Waste) to identify, collect and aggregate the ODS.

The Project Proponent destroyed 140 pounds of 99.85 percent pure R12 which was collected in Ghana, and transported to the USA. The destruction occurred between 13-09-2018 to 12-04-2019 and was

destroyed at Heritage Thermal Services in East Liverpool, Ohio. The destruction resulted in 135,784.33 tCO_2e in emission reductions.

The crediting period is 11 September 2018 through 10 September 2028. This is the reporting period for the Project Activity.

2 VERIFICATION PROCESS

2.1 Method and Criteria

GHD has assessed and verified that the implementation of the Project Activity, and the steps taken to report emission reductions, comply with the VCS criteria and relevant guidance provided by the VCS. The criteria used in the verification has been outlined in Section 1.2 above. The verification included a review of relevant documentation, records, and completion of a Site Inspection.

GHD followed a risk-based verification approach. GHD identified the key reporting risks related to the claimed emission reductions and assessed to what extent the Project Activity's control systems are adequate for mitigating any perceived reporting risks.

Key reporting risks that are not sufficiently addressed by the Project Activity's control system represents residual risks. GHD conducted a detailed verification and Site Inspection to investigate the residual risks. Key risks assessed during the verification included, but were not limited to, verification of correct use of emission factors, correct use of conversion factors, and consistency in aggregation of emissions data. Wherever practical, direct reading instruments were to be used to ensure that any reporting risks were kept within equipment and instrumentation performance limits. GHD included a Risk Assessment and Sampling Plan within the Verification Plan. The Verification Plan was updated throughout the verification as necessary. The final Verification Plan has been provided as Appendix A.

During the verification process, the GHD Project Team considered both quantitative and qualitative information on emission reductions. Quantitative data was comprised of the monitoring report and accompanying information submitted to the GHD Project Team by the Project Proponent. Qualitative data was comprised of information on internal management controls, calculation procedures, and procedures for transfer, frequency of emissions reports, and review and internal audit of calculations/data transfers.

The outcome of the verification process was the creation of a Findings Assessment. The Findings Assessment was issued to the Project Proponent for response to any corrective actions or clarification requests. Upon closing all findings identified by GHD, a Draft Verification Report was prepared. The Technical Reviewer completed a peer review of the Draft Verification Report, and any there were no additional findings that required additional response from the were presented to the Project Proponent, as applicable. Upon receipt of the Project Proponent's response, GHD issued a Draft Verification Report to the Project Proponent for review and comment. GHD then incorporated the Project Proponent's comments, as applicable and issued the Final Verification Report along with a completed Verification Representation.

The Verification Representation conclusion was based on the interaction of three key verification principles as follows:

1. Compliance with the monitoring plan
2. Accuracy

3. Quality of evidence

2.2 Document Review

The VCS verification process relies heavily upon document review. The primary document for review is the Monitoring Report. The Project Proponent provided GHD with the Monitoring Report and revised Monitoring Report as detailed below:

Document Date	Date Issued to GHD	Version Number	Methodology
6 June 2019	6 June 2019	1.0	VM0016 VMD0048
3 July 2019	6 July 2019	2.0	VM0016 VMD0048
28 July 2019	29 July 2019	2.2	VM0016 VMD0048
8 August 2019	8 August 2019	NA	VM0016 VMD0048
14 August 2019	14 August 2019	3	VM0016 VMD0048
5 November 2019	5 November 2019	4	VM0016 VMD0048
17 November 2019	17 November 2019	4.1	VM0016 VMD0048
6 December 2019	6 December 2019	4.2	VM0016 VMD0048

The above submissions were reviewed by GHD. No issues were identified in the Monitoring Report Version No. 4.2, following the resolution of the eleven CARs and six CLs which were identified and discussed in Section 4 below.

During the document review, GHD became familiar with the Project Activity in order to be able to compare the situation and status on site with the situation as described in the underlying documentation. GHD completed the following:

- Review of the data and information presented to verify completeness
- Review of the VCS PD and Monitoring Report, paying particular attention to the frequency of measurements, the quality of metering equipment including calibration requirements, and the quality assurance and quality control procedures
- Evaluation of data management and the quality assurance and quality control system in the context of their influence on the generation and reporting of emission reductions
- Review of the last revision of the previous verification and validation reports
- Review of operation licenses from local authorities
- Cross-check of available documentation with the VCS PD and Monitoring Report

GHD followed the audit trails and data sets on site for specific indicators, and cross-checked with the applicable records.

The following documents were reviewed by verification team members at a minimum:

- Certificate of Destruction
- Regulatory and compliance permits
- Startup, Shutdown and Malfunction Plan for Heritage
- Scale Calibration certificates
- Universal/s609/s608 certificates
- CEMS data
- Monitoring Report
- Ownership documents
- Point of Origin and Chain of Custody information
- Hazmat Certificates for the transport companies
- Calculation tool
- Sample Analysis
- Pre- and Post-Weigh tickets

2.3 Interviews

GHD held discussions with the following individuals regarding the verification:

Date	Name, Company	Topic Discussed
June and July 2019 (In person during the site inspection and via the telephone)	Rachel Kanan, Tradewater, LLC	Discussed verification findings and Tradewater's response to those findings.

Date	Name, Company	Topic Discussed
19 June 2019 (In person during the site inspection)	John "J.T" Higgins, Product Management Coordinator, Heritage Thermal Services Steve Lorah, Materials Processing Manager, Heritage Thermal Services Yvonne Masello, EHS Engineer, Heritage Thermal Services	Reviewed Heritage's processes, discussed data management systems, reviewed greenhouse gas reports/burn reports, reviewed notices of violations and EPA ECHO database, discussed the LDAR (leak detection) process.

2.4 Site Inspections

GHD completed the Site Inspection on 19 June 2019, and undertook the following:

- A walk-through of the Site and observation of the Project Activity's implementation status.
- Interview personnel with knowledge of the Project Activity and its implementation/operation to cross-check information provided.
- Assessed the operations, functionality, data control systems, and review GHG measurement and monitoring techniques.
- Confirmed that all applicable eligibility criteria to design, measure, establish the chain of custody, and monitor the project conforms to the applicable requirements.
- Checked that all project boundaries, GHG emissions sources, GHG sinks, and GHG reservoirs are identified appropriately, in accordance with the applicable criteria.
- Reviewed and understood the data management systems used by the Project Proponent to track, quantify, and report GHG reductions, or other data required as applicable. This includes reviewing data collection processes and procedures, sampling techniques and metering accuracy, calibration records, inspection data, quality assurance/quality control processes and procedures, and missing data procedures. The Verification Team member will evaluate the uncertainty and effectiveness of these systems.
- Interviewed key personnel involved in collecting project data and preparing the Monitoring Report.
- Made direct observations of equipment for data sources and equipment supplying data for GHG emission sources in the sampling plan determined to be high risk.
- Collected and reviewed other information that, in the professional judgment of the verification team, is needed in the verification process.
- Confirmed the offset project conforms to all local, regional, state, or national environmental regulatory requirements including health and safety regulations.

GHD also verified that the Project Activity is located at the Heritage Thermal Services, Destruction Facility, located in East Liverpool, Ohio.

2.5 Resolution of Findings

GHD has provided the final Findings Assessment in Appendix B, which contains the findings, responses, and any changes applied to Project Activity documents. The Project Proponent was required to complete the appropriate responses and to provide, where necessary, documentation as evidence of their assumptions and/or responses. A summary of the number of findings per finding category is presented as follows:

Finding Category	Number of Findings
CAR	11
FAR	1
CL	6
Total	18

A description of each finding and resolution are discussed throughout the remaining sections of this report. No material discrepancies were observed by GHD in the verification of the Project Activity.

2.5.1 Forward Action Requests

GHD raised one FAR to be reviewed in future reporting periods. It was observed during this monitoring period, that the Project Proponent did not quantify $EC_{PJ,y}$ (amount of electricity at the ODS recovery facility from the grid during year y), even though it is defined in the VCS PD as a monitoring parameter.

As a result, GHD notes that for future verifications should determine whether $EC_{PJ,y}$ was quantified in accordance with the VCS PD.

2.6 Eligibility for Validation Activities

Not Applicable.

3 VALIDATION FINDINGS

There were no validation activities that took place during the verification of this reporting period.

3.1 Participation under Other GHG Programs

GHD verified that the project is not registered under any other programs.

3.2 Methodology Deviations

As per the VCS PD, the Project Proponent deviates from the methodology by using a destruction facility that is subject to the Resource Conservation and Recovery Act (RCRA) with a RCRA permit for ODS destruction efficiency of at least 99.99 percent. GHD confirms that the methodology deviation to use a destruction facility that is instead subject to RCRA is acceptable.

3.3 Project Description Deviations

In the VCS PD, $EF_{grid,y}$ and TDL_y were identified as monitored parameters, when they actually apply default values. Therefore, for this monitoring period, the $EF_{grid,y}$ and TDL_y were correctly listed in the Monitoring Report under Section 3.1. Further, ODS was not recovered during the reporting period so there was $EC_{PJ,y}$ was estimated to be 0.0 MWh year. GHD reviewed the project description deviations and confirm that they are in accordance with the monitoring period.

3.4 Grouped Project

This is the second Project Activity in this instance.

4 VERIFICATION FINDINGS

4.1 Project Implementation Status

The Project Activity received its Validation Representation with VCS on 18 December 2018 as a Sectoral Scope 11 Project. The Project Activity was registered utilizing the approved methodology VM0016 Recovery and Destruction of Ozone-Depleting Substances, Version 1.1, dated 30 November 2017 and the VMD0048 Activity Method for Determination of Additionality for Recovered and Stockpiled Refrigerant Projects, Version 1.0, dated 30 November 2017. The Project start date is 11 September 2018. The Project Activity's crediting period is 11 September 2018 through 10 September 2028. This is the first crediting period.

The Project Activity achieves emission reductions through the destruction of ODS which has been imported into the USA from Ghana. The destruction facility is located in East Liverpool, Ohio.

The implementation status of the Project Activity was confirmed during the Site Inspection, specially confirming the following details:

- Chain of Custody from Ghana through to Destruction Facility
- Interviewing destruction facility staff
- ODS destruction, measurement, and monitoring techniques
- GHG reports, emission reduction calculations, and associated values
- Data management systems
- Location of scales at the destruction facility and their serial numbers

GHD verified how the monitoring data was collected for the monitoring period during the Site Inspection on 19 June 2019. GHD reviewed the scales calibrations, chain of custody documentation and the CEMs data and determined that it was appropriate.

As per the VCS PD, the Project Proponent deviates from the methodology by using a destruction facility that is subject to the Resource Conservation and Recovery Act (RCRA) with a RCRA permit for ODS destruction efficiency of at least 99.99 percent.

GHD performed a check of other relevant registries and confirmed that the Project Activity does not participate in any other GHG programs or systems.

This Project Activity contributes to sustainable development through supporting the United Nations sustainable development goals 1 (No Poverty), 12 (Responsible Consumption and Production), and 13 (Climate Action), In addition, the Project Activity contributes to grass roots economic development in Ghana through the collection and removal of ODS from consumers.

4.2 Accuracy of GHG Emission Reduction and Removal Calculations

The following is a list of monitoring parameters that the Project Proponent measured and recorded in order to calculate the claimed emission reductions throughout the monitoring period:

Data/Parameter	Monitoring Parameter Description (Units)	Frequency of monitoring/recording
$M_{DESTR,refr,i.u}$	Quantity of ODS refrigerant *i* destroyed by the Project Activity in year *y* ($tODS_i$)	Each container with ODS sent to destruction
$EC_{PJ,y}$	Amount of electricity consumed at the ODS recovery facility from the grid during year *y* (MWh)	Continuously monitored, recorded monthly, aggregated at least annually

CL #7 raised that the parameters TDL_y and $EF_{grid,y}$ were included Section 3.2 of the Monitoring Report, relating to monitored values when they are instead default values. The Project Proponent updated the monitoring report to address this issue, listing them instead under Section 3.1 as these parameters were not monitored during the reporting period.

GHD reviewed the Monitoring Report, VCS PD, applied methodology and verified the following:

- The appropriateness of the default values used in the Monitoring Report and emission reduction calculations.
- The methods and formulae set out in the VCS PD for calculating baseline emissions and project emissions have been followed.
- Leakage emissions do not require quantification based on the VCS PD.
- With the exception of CAR #8 identified below, there were no issues with the accuracy of GHG calculation spreadsheet formulae, conversions, aggregations, and data and parameters were consistently used.

CAR #8 identified that the calculation tool provided by the Project Proponent does not include electricity emission emissions from the recovery of ODS. An updated calculation tool was provided by the Project Proponent as soon as this issue was raised, however, the omission of this parameter from the calculation tool resulted in a FAR for future verifications.

GHD reviewed the final calculation of emission reductions and did not identify any errors or discrepancies. The GHG emission reductions have been quantified correctly in accordance with the VCS PD and applied methodology.

4.3 Quality of Evidence to Determine GHG Emission Reductions and Removals

The Project Proponent provided GHD with all pertinent documentation in order to verify this Project. This included monitoring reports, calculation tool, chain of custody documentation, technician certificates, lab analysis, scale calibration documents, and shipper information. GHD thoroughly reviewed all information provided by Tradewater, and independently calculated the emission reductions based on raw project data.

During the Site Inspection, GHD was also able to verify the location of the destruction facility, and obtain an overview of the destruction process. Scale calibration certificates were provided to GHD and GHD determined the scale calibrations, which occurred bi-monthly, occurred on a sufficient frequency.

The following table summarizes the calibrations and accuracy testing completed on the scales used at the destruction facility:

Scale	Serial number	Calibration dates
Ebay WTX WI-150	003718	9 February 2019 13 April 2019
Front Gate WTX 1310	070206483	9 February 2019 13 April 2019

GHD raised CL #1 requesting that scale calibrations from April 2019 be provided. GHD has reviewed the calibration records for the two scales used at the destruction facility and noted no issues.

The project information provided to GHD and the site inspection tour was determined to be transparent and in accordance with the validated Project Description and methodology requirements outlined in Section 1.2.

4.4 Non-Permanence Risk Analysis

The Project Activity is not an Agriculture, Forestry, and Other Land Use (AFOLU) project, therefore a non-permanence risk analysis is not required.

5 SAFEGUARDS

5.1 No Net Harm

There are no potential negative environmental or socio-economic impacts resulting from this project.

5.2 Local Stakeholder Consultation

City Waste conducted local community support for the Project, and in addition Emmanual Osae-Quansah, Head of Energy Resources Climate Change & Ozone Department Ghana EPA was engaged to ensure laws around the handling and export of ODS from Ghana complied with applicable laws.

Despite attempts to engage the community and seek stakeholder input regarding the collection of ODS material, the Project Proponent obtained no local stakeholders input concerning the collection of ODS and activities associated with the Project.

Given the extent that the Project Proponent and City Waste tried to engage the community and received no feedback, GHD concludes that the stakeholder consultation was undertaken sufficiently.

6 VERIFICATION CONCLUSION

GHD, as a VVB, is responsible for reviewing the Monitoring Report and any supporting documentation to ensure that the principles of Program Guide and Standard are met, specifically that the registered Project Activity has resulted in emission reductions that are:

- Relevant
- Complete
- Consistent
- Accurate
- Transparent
- Conservative

Per the VVM, during the verification GHD evaluated the Monitoring Report and assessed the following:

- The extent to which methods and procedures, including monitoring procedures, have been implemented in accordance with the VCS PD. This includes ensuring conformance with the monitoring plan.
- The extent to which GHG emission reductions and removals reported in the monitoring report are materially accurate.

7 VERIFICATION OPINION

The verification was performed in accordance with the VCS Program Guide and VCS Standard. Through the destruction of ODS under the VM0016 methodology, the registered Project Activity has resulted in a reduction of GHG emissions that are relevant, complete, consistent, accurate, transparent, and conservative.

It is GHD's opinion that that all relevant VCS criteria have been satisfied. Within the Monitoring Report, it was demonstrated and confirmed by GHD that the Project Proponent has applied the monitoring plan per the VCS PD. GHD confirms the Project Activity has been implemented in accordance with the VCS PD. Therefore, it is GHD's opinion that the emission reductions attributable to the registered Project Activity during the monitoring period of 13-09-2018 to 12-04-2019, are materially correct and are a fair representation of the implemented Project Activity per the PD.

All CARs and CLs raised by GHD have been satisfactorily addressed by the Project Proponent and closed. No material error was identified by GHD. GHD confirmed that the Project Activity has been implemented in accordance with the VCS PD.

GHD is issuing a Positive Verification Opinion in regards to this Project Activity and therefore recommends/certifies that the Project Activity has obtained the reported emission reductions as follows:

Verification period: From 13-09-2018 to 12-04-2019.

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

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)
TW Ghana ODS Project (13-09-2018 to 12-04-2019)	135,883.46	99.13	0.0	135,784.33
Total	135,883.46	99.13	0.0	135,784

The Verification Deed of Representation is provided in Appendix C.

APPENDIX A: FINAL VERIFICATION PLAN

December 6, 2019 Reference No. 11197310

Ms. Rachel Kanan
Tradewater, LLC
1411 West Carroll Ave. Suite North
Chicago, Illinois
60607

Dear Ms. Kanan:

Re: Verification Plan – Tradewater Ghana ODS Project – East Liverpool, OH
VCS Project ID: 1752
VM0016 Recovery and Destruction of Ozone-Depleting Substances (ODS) from Products, v1.1

1. Introduction

GHD Limited (GHD) was engaged by Tradewater, LLC (Tradewater or TW) to conduct an independent third-party greenhouse gas (GHG) verification services for the TW Ghana ODS Project (Project) under the requirements of Verra: Verified Carbon Standard (VCS). Tradewater is the Project Proponent. The Project's destruction facility is located in East Liverpool, Ohio (Site).

This verification covers reported emission reductions claimed by Tradewater during the monitoring period of April 13, 2018 to April 12, 2019. The crediting period is from September 11, 2018 to September 10, 2028.

VCS is established under Verra to provide a global standard for both validation and verification projects on a voluntary basis. VCS takes the most stringent principles and standards available to the international GHG market, including and comprising of the United Nations Framework Convention on Climate Change (UNFCCC) and Climate Action Reserve, with reporting completed to the International Standards Organization (ISO) ISO-14604 Part 3 standard.

GHD is a VCS-recognized GHG Validation/Verification Body (VVB) and is accredited by the American National Standard Institute (ANSI) [1] under ISO 14065 to provide organizational and project level validation and verification services.

The VCS defines verification as "the periodic ex-post independent assessment by a validation/verification body of the [greenhouse gas (GHG)] emission reductions and removals that have occurred as a result of

[1] ANSI is a member of the International Accreditation Forum (IAF).

the project during the monitoring period, conducted in accordance with the VCS rules".[2] This Verification Plan has been prepared in accordance with the requirements presented in the following documents:

- VCS Program Guide, Version 3.7, dated June 21, 2017 (VCS Program Guide)
- VCS Standard, Version 3.7, dated June 21, 2017 (VCS Standard)
- VCS Validation and Verification Manual, Version 3.2, dated October 19, 2016 (VCS VVM)

In accordance with the VCS Program Guide, eligible GHG emissions reductions projects are to be evaluated by an accredited Validator/Verifier who has been approved under an accredited GHG program. GHD is a recognized Validator/Verifier under the VCS for projects within the following sectoral scopes:

- Sectoral Scope 1 - Energy industries (renewable/non-renewable sources)
- Sectoral Scope 4 - Manufacturing industries
- Sectoral Scope 5 - Chemical industry
- Sectoral Scope 10 - Fugitive emissions from fuels (solid, oil, and gas)
- Sectoral Scope 11 – Fugitive emissions from industrial gases (halocarbons and sulphur hexafluoride)
- Sectoral Scope 12 - Solvents use
- Sectoral Scope 13 - Waste handling and disposal

2. Verification Objective

The objective of this verification was to evaluate whether the Monitoring Report and supporting documents submitted by the Tradewater for the monitoring period of April 13, 2018 to April 12, 2019 for the Project are free of any discrepancies, omissions or misreporting, which may result in a material misstatement, and to ensure that the Project is in conformance with the VCS Program Guide, VCS Standard, as well as translational guidance from the UNFCCC CDM.

GHD, as an independent third-party recognized as a VVB by the VCS (Registration Number 027), is responsible for reviewing the Monitoring Report including accompanying materials, the VCS Project Description (PD), and any previous VCS Verification and Validation Reports.

Per the VCS VVM, during verification VVBs must evaluate the Monitoring Report and assess the following:

- The extent to which methods and procedures, including monitoring procedures, have been implemented in accordance with the validated PD. This includes ensuring conformance with the monitoring plan.

[2] http://verra.org/wp-content/uploads/2018/03/VCS_Standard_v3.7.pdf (Section 5.1.1)

- The extent to which GHG emission reductions and removals reported in the monitoring report are materially accurate.

To verify that the Monitoring Report is free of material misstatements, GHD:

- Reviewed the methods and factors used to develop the Monitoring Report and the Project's conformance with the verification criteria (detailed in Section 3.1).
- Conducted a Site Visit to confirm implementation and conformance to the verification criteria.
- Independently reviewed the SSRs and calculations used by Tradewater against the requirements in the COP.
- Determined whether there is a reasonable level of assurance that the reported emissions are within the five percent materiality threshold allowable under the VCS Standard.
- Confirmed that the Project has not been registered in any other carbon registry or program.

As required by VCS, the verification team developed an issues log that identified any issues in the course of verification activities that might affect determinations of material misstatements and nonconformance, and also outlined how those issues were resolved by the Tradewater.

3. Verification Criteria and Scope

3.1 Verification Criteria

GHD adhered to the requirements outlined in the following documents as verification criteria:

- VCS Program Guide, Version 3.7, dated June 21, 2017 (VCS Program Guide)
- VCS Standard, Version 3.7, dated June 21, 2017 (VCS Standard)
- VCS Validation and Verification Manual, Version 3.2, dated October 19, 2016 (VCS VVM)
- ISO 14064-3:2006 Specification with guidance for the validation and verification of greenhouse gas assertions
- VM0016 Recovery and Destruction of Ozone-Depleting Substances (ODS) from Products, Version 1.1, dated November 30, 2017
- VMD0048 Activity Method for the Determination of Additionality for Recovered and Stockpiled ODS Refrigerant Projects, Version 1.0, dated November 30, 2017
- Climate Action Reserve, Article 5 Ozone Depleting Substances Project Protocol, Version 2.0, June 27, 2012

3.1.1 Geographical and Operational Boundaries

This verification covers the GHG emission sources and reductions at the Project, which was destroyed at the following address:

Heritage Thermal Services
1250 St. George Street
East Liverpool, Ohio 43920

The Project's destruction location and address was be confirmed during the Site Visit.

3.2 Level of Assurance

The verification was be conducted to a reasonable level of assurance.

4. Scope of Services

The Project consisted of the destruction of 29,140 lbs. of ODS which was destroyed at the Heritage Thermal Facility in East Liverpool, OH. The ODS was sourced internationally from Ghana from collection and aggregation of small, dispersed sources of refrigerants and other appliances, as well as stockpiled consumer quantities of ODS.

The pre-Project baseline consisted of the emissions that would have occurred over the ten-year crediting period had the destroyed ODS been used in existing refrigeration or air conditioning equipment.

The Project activity consisted of the destruction of concentrated ODS refrigerant at the Heritage Thermal Facility. GHD understands the destruction involved mostly CFC-12. This Project Activity falls under VCS Sectoral Scope 11 – Fugitive emissions from industrial gases, which is one of the sectoral scopes for which GHD is accredited. GHD understands for the purposes of the works associated with the verification scope of work, all correspondence with respect to this Project Activity will be with Tradewater, unless otherwise noted.

The verification activities were be completed pursuant to the most up-to-date related rules, requirements, regulations, modalities, criteria, guidelines, emission reductions yield, and principles in relation to the PD supplied by the Project Proponent. The Project Activity utilizes the VSC approved methodology, VM0016 Recovery and Destruction of Ozone-Depleting Substances (ODS) from Products, Version 1.1, and VMD0048 Activity Method for the Determination of Additionality for Recovered and Stockpiled ODS Refrigerant Projects, Version 1.0.

GHD reviewed the PD, Monitoring Report, and related information and prepared a Verification Report and Verification Deed of Representation (Verification Representation) for the monitoring period.

4.1 Sources, Sinks, and Reservoirs

The following table presents the sources, sinks, and reservoirs (SSRs) for the Project, their relevance to the baseline and Project operations. Each GHG SSR was confirmed during the Site Visit and through review of calculations.

Table 4.1 SSRs

Relevant to Project Baseline (B) or Project (P)	GHG Source	Gas	Included / Excluded
Baseline	Emissions through the release of ODS refrigerants into the atmosphere	ODS	Included
		CO_2	Excluded
		CH_4	Excluded
		N_2O	Excluded
Project	Emissions through on-site fossil fuel and electricity consumption at the recovery facility	CO_2	Included
		CH_4	Excluded by methodology for simplification. This emission source is assumed to be very small.
		N_2O	
Project	Emissions through transportation of ODS from the recovery facility to the destruction facility	CO_2	Included
		CH_4	Excluded by methodology for simplification. This emission source is assumed to be very small.
		N_2O	
Project	Emissions associated to the destruction process of ODS	ODS	Included
		CO_2	Included
		CH_4	Excluded by methodology for simplification. This emission source is assumed to be very small.
		N_2O	

5. Verification Team

5.1 Roles and Responsibilities

The Verification Team consists of the following members:

- Valerie Chan – Lead Verifier
- Jason Clarke – Independent Reviewer
- Michelle Hirst - Verifier
- Ben Gerber – Support Staff

6. Verification Procedures

The main components of the GHD verification process are as follows:

- Document Review
- Preparation of Assessment List and Completion of a Site Visit
- Verification Assessment and Issuance of Corrective Action Requests (CARs)/Clarification Requests (CLs)
- Response to CAR(s)/CL(s)
- Review and/or development of Forward Action Requests (FARs), as applicable
- Draft Verification Report Issuance
- Final Verification Report Issuance
- Technical Review and Verification Representation

The timelines associated with each of these items are discussed in the sections to follow.

6.1 Overview of Verification Process

The Verification Team assessed and verify that the implementation of the Project Activity and the steps taken to report emission reductions comply with the VCS criteria and relevant guidance provided by the VCS. The verification included a review of relevant documentation, records, and an on-site visit.

During the verification process, the Verification Team considered both quantitative and qualitative information on emission reductions. Quantitative data is comprised of the monitoring reports submitted to the Verification Team by the Project Proponent. Qualitative data is comprised of information on internal management controls, calculation procedures, and procedures for transfer, frequency of emissions reports, and review and internal verification of calculations/data transfers.

The verification conclusion will be based on the interaction of three key verification principles as follows:

- Compliance with the monitoring plan
- Accuracy
- Quality of evidence

6.2 Verification Findings

During the verification process, the Verification Team may identify issues related to the Project Activity's ability to meet VCS requirements and achieve credible emission reductions. Although there are different methods of reporting such results, it is imperative that these issues are transparently identified, discussed, and concluded in the Verification Report.

If during the verification of the Project Activity, the Verification Team identified issues that need to be addressed to confirm that the Project Activity meets the VCS requirements, the Lead Verifier issued a CAR CL, and/or a FAR, as appropriate, via a findings assessment to the Project Proponent.

Iterations of these requests continued until such a time as the Lead Verifier can adequately resolve or "close out" the identified CAR(s), CL(s), and/or FAR(s), as applicable.

Each of these procedures is discussed in further detail below.

Corrective Action Request (CAR)

A CAR was issued during a verification if the VVB identified a material discrepancy or non-conformance that the Project Proponent must address. More specifically, the CDM provides a standard that the VVB can use for the issuance of CARs, as detailed below, based on Section 9.1.3.2 of the CDM Validation and Verification Standard[3]:

- Non-compliance with the registered monitoring plan, the applied methodologies, the applied standardized baselines or the other applied methodological regulatory documents is found in monitoring and reporting and has not been sufficiently documented by the Project Participant(s), or if the evidence provided to prove conformity is insufficient.
- Modifications to the implementation, operation and monitoring of the registered CDM project activity has not been sufficiently documented by the Project Participant(s).
- Mistakes have been made in applying assumptions, data or calculations of GHG emission reductions or net anthropogenic GHG removals that will impact the quantity of emission reductions or removals.
- Issues identified in a FAR during the validation to be verified during the verification or the previous verification(s) have not been resolved by the Project Participant(s).

The above issues could result in the expected emission reductions not being realized.

The Lead Verifier resolved or "close out" CARs only if the Project Proponent modifies the Monitoring Report, or provides adequate additional explanations or evidence that satisfies the Verification Team's concerns and the VCS requirements. GHD is unable to issue a Verification Representation prior to the resolution of all CARs. The Verification Team reported on all CARs in the findings assessment and Verification Report.

Clarification Request (CL)

In general, a CL is a request for additional clarification made by the Verification Team to the Project Proponent when the Project Activity reporting, lacks transparency, is unclear, and further information is needed to determine whether the applicable requirements are met.

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[3] https://cdm.unfccc.int/filestorage/e/x/t/extfile-20181221092105822-Reg_stan06v02.pdf/Reg_stan06v02.pdf?t=ZkN8cG1rbHN2fDCo96_nfomdAxiCn7MAbxxF

The Lead Verifier resolved or "close out" CLs as the Project Proponent provided adequate additional explanations or evidence that satisfies the Verification Team's concerns and the VCS requirements. The Verification Team reported on all CLs in the findings assessment and Verification Report.

Forward Action Request (FAR)

A FAR is "a request made by the [VVB] during verification" to "highlight issues related to project implementation that require review during the first verification of the Project Activity."[4]

The Lead Auditor raised one FAR during verification to highlight issues related to project implementation that require review during the first verification of the Project Activity. In addition, FARs may also require review in subsequent verifications. The Verification Team reported on all FARs in the findings assessment and Verification Report.

6.3 Site Visit Agenda

GHD completed the Site Visit component of the verification on June 19, 2019. During the Site Visit, GHD conducted the following

- Walk-through of the Site
- Determined whether the Project boundary is appropriately defined.
- Assessed the operations, functionality, data control systems, and review GHG measurement and monitoring techniques.
- Confirmed that all applicable eligibility criteria to design, measure, establish the chain of custody, and monitor the project conforms to the applicable requirements.
- Checked that all project boundaries, GHG emissions sources, GHG sinks, and GHG reservoirs are identified appropriately, in accordance with the applicable criteria.
- Reviewed and understood the data management systems used by the Tradewater to track, quantify, and report GHG reductions, or other data required as applicable. This includes reviewing data collection processes and procedures, sampling techniques and metering accuracy, calibration records, inspection data, quality assurance/quality control processes and procedures, and missing data procedures. The Verification Team member evaluated the uncertainty and effectiveness of these systems.
- Interviewed key personnel involved in collecting project data and preparing the Monitoring Report.
- Made direct observations of equipment for data sources and equipment supplying data for GHG emission sources in the sampling plan determined to be high risk.
- Collected and reviewed other information that, in the professional judgment of the verification team, is needed in the verification process.

[4] CDM Rule Book, A-Z, http://cdmrulebook.org/3919, accessed on December 30, 2009.

- Confirmed the project conforms to all local, regional, state, or national environmental regulatory requirements including health and safety regulations.
- Reviewed all chain of custody documents as required.

6.4 Reporting

The Verification Report described the verification process, any findings raised, resolution of findings, and to conclusions reached by the VVB during the verification.

The results of the verification gave the necessary input for the Verification Representation. The Verification Report provided all required details identified in Section 5.3.9 of the VCS Standard, Version 3.7:

- Description of the level of assurance of the validation or verification.
- Description of the objectives, scope and criteria of the validation.
- Description as to whether the data and information supporting the GHG assertion were hypothetical, projected and/or historical in nature.
- Inclusion of the validation/verification body's conclusion on the GHG assertion, including any qualifications or limitations.

The Verification Report shall state the volume of verified GHG emission reductions or removals generated during the monitoring period.

7. Risk Assessment

Based on GHD's initial review of the Facility's operations, the following table summarizes the potential risk and magnitude of potential errors, omissions or misrepresentations, as currently known:

Table 7.1 Risk Assessment

Potential Risk Area[5]	Total Emissions and Percent Magnitude of SSR (%)	Risk Categorization (Inherent, Control, Detection)	Risk Level (High, Medium, Low)	Justification
PE – Emissions through transportation of ODS from the recovery facility to	99. MT CO_2e 100% of total project emissions	Inherent	Low	Complexity was low for project emission calculations from transportation and destruction of ODS as they are based on default emission factors and starting mass of ODS.

[5] PE: Project Emission
BE: Baseline Emission

Table 7.1 Risk Assessment

Potential Risk Area[5]	Total Emissions and Percent Magnitude of SSR (%)	Risk Categorization (Inherent, Control, Detection)	Risk Level (High, Medium, Low)	Justification
the destruction facility (CO_2) PE – Emissions associated to the destruction process of ODS (ODS and CO_2)		Control	Medium	Emission estimates are based on multiple sources of information from numerous third-parties (i.e., Point of origin, chain of custody data). There was a medium risk that the Project Proponent would not detect and correct any errors in the data.
		Detection	Low	Based on the low/medium inherent and control risks, the allowable detection risk is high; however, GHD reviewed all documentation for the reporting period in order to mitigate the risk to low.
BE – Emissions through the release of ODS refrigerants into the atmosphere	135,883MT CO_2e 100% of total baseline emissions	Inherent	Low	High magnitude source; however, complexity was low for baseline emission calculations from refrigerant ODS as they are based on default GWP values and cumulative emission rates.
		Control	Medium	Emission calculations are based on multiple sources of information from numerous third-parties (i.e., Point of origin, chain of custody data, weigh slips, and laboratory data). There was a medium risk that the Project Proponent would not detect and correct any errors in the data.
		Detection	Low	Based on the low/medium inherent and control risks, the allowable detection risk is high; however, to mitigate the risk to low, GHD reviewed all documentation for the reporting period.
Data Management Systems	NA	Inherent	High	High complexity in data management was high as there were various data sources used in this Project.
		Control	Medium	Medium control risk as all multiple sources of data (i.e., Certificates of Destruction, Point of origin, chain of custody data, weigh slips, and laboratory data) are provided by numerous third-parties.
		Detection	Low	The allowable detection risk was low. In order to maintain a low risk that GHD would not detect a discrepancy in the data, GHD reviewed all available data used in the Project calculations.

8. Sampling Plan

GHD prepared the below sampling plan for the verification.

Table 8.1 Sampling Plan

Data/Information Description	Data/Information Source	Collection Frequency	Sample Size/Action
Detailed Process Overview	• Project Description	N/A	Reviewed the process and project description. Conducted the Site Visit and interview project personnel.
Emission Calculations	• Calculation spreadsheet(s) • References to Emission factors, calculations, and reporting methods • Justification for use of data quality calculation methodologies	N/A	Reviewed data/information sources and supporting documentation.
Eligibility	• S608/s609/Universal Certifications • Permits as required by local, state, or federal law • RCRA permit with a 99.99% DE was confirmed • Source testing	N/A	GHD reviewed these aspects of the project to ensure eligibility was achieved.
Project Emissions			
Emissions through on-site fossil fuel and electricity consumption at the recovery facility (CO_2)	• Mass of refrigerant ODS destroyed • Calculation Methodology • Information required to be determined based on calculation methodology • Third-party electricity provider data if default factor not used	Per destruction event	GHD reviewed the calculation methodology, and supporting calculations and documents for the reporting period. GHD recalculated the project emissions.
Emissions associated to the destruction process of ODS (ODS, and CO_2)	• Mass of refrigerant ODS destroyed • Calculation Methodology • Information required to be determined based on calculation methodology • Laboratory Analytical Reports • Fossil fuel consumption records if default factor not used	Per destruction event	GHD reviewed the calculation methodology, and supporting calculations and documents for the reporting period. GHD recalculated project emissions.

Data/Information Description	Data/Information Source	Collection Frequency	Sample Size/Action
Emissions through transportation of ODS from the recovery facility to the destruction facility (CO_2)	• Calculation Methodology • Information required to be determined based on calculation methodology • Tons-miles travelled for destroyed ODS (obtained from Point of Origin documentation) if default factor not used	Per destruction event	GHD reviewed factors and calculation methodology, and recalculate project emissions
Baseline Emissions			
Emissions through the release of ODS refrigerants into the atmosphere (ODS)	• Mass of refrigerant ODS destroyed • GWPs of ODS • Calculation Methodology	Per destruction event	GHD reviewed the calculation methodology, and supporting calculations and documents for the reporting period.
Data Management			
Backup of data acquisition systems	• Facility	N/A	Reviewed frequency of data backup and interview Site personnel.
Data acquisition, collection and process monitoring system software	• Facility	N/A	Reviewed data systems at Project and interview Site personnel.

9. Timing of Verification Services

The Project followed the schedule below:

Table 9.1 Schedule

Schedule Item	Date
Contract is signed by Tradewater	May 24, 2019
Kick-off call	June 6, 2019
Tradewater provides VCS Monitoring Report, Monitoring Plan and Project Description to GHD	June 6, 2019
GHD sends Verification Plan to Tradewater	June 13, 2019
GHD Verification Team issues a summary of findings to Tradewater following documentation review and formulation of CARs, CLs, and/or FARs	Throughout the verification process
Site Visit and interview with Site personnel	June 19, 2019

Table 9.1 Schedule

Schedule Item	Date
Tradewater submits documentation addressing all CARs/CLs/FARs in a single submission package to GHD for the Project Activity	August 13 (up to 30 days after submittal of issues log)
Independent review	August 13, 2019
Issued Draft Verification Report	August 14, 2019
Closeout meeting	August 22, 2019
Issue Final Verification Report and Statement	August 22, 2019

GHD notes that the approval for commencement of the Project from Tradewater was received by GHD on May 24, 2019.

10. Quantitative Testing

Quantitative data or raw data was be made available to GHD. GHD assessed the completeness of the data and evaluate the GHG emission calculation methodologies to ensure they are consistent with VCS requirements. GHD recalculated the emission estimates based on the underlying activity data in order to determine whether material misstatements are present.

11. Closing

The Verification Plan is considered to be a dynamic document that require modification and adaptation to conditions as encountered during the completion of the Verification process. GHD communicated the changes to the verification plan with Tradewater throughout the verification.

Sincerely,

GHD Services Inc.

Valerie Chan, Lead Verifier

VC/ce/1

APPENDIX B: FINDINGS ASSESSMENT

Issues Log and Information Requests
TW Ghana 2

Ver.	Issues Log Date	Response Date
1	14-Jun-19	8-Jul-19
2	11-Jul-19	29-Jul-19
3	1-Aug-19	8-Aug-19
	13-Aug-19	14-Aug-19

Issue No.	Type	Issues, Information Requests, Clarifications	Explanation/Response	Status
1	Clarification Request	Please provide the scale calibrations that were recorded in April 2019.	See Dropbox - Destruction facility requirements under Scale Calibration.	TW provided the requested scale calibrations. This issue is closed.
2	Corrective Action Request	Section 1.6 of the Monitoring Report specifies a crediting period of April 10, 2019 to April 12, 2019, which does not match the crediting period listed in the Project Description of September 11, 2018 to September 10, 2028.	Will update	TW updated the crediting period in Section 1.6 of the Monitoring Plan. As a result, this issue is closed.
3	Clarification Request	In "Ghana 2 Project Assertion Spreadsheet", in cell G33, 0.03% is present and listed as "other". Please clarify where this value comes from as the COD does not list any ODS under "other".	Sum of all other refrigerants as per Ghana I.	GHD reviewed TW's response. This issue is closed.
4	Clarification Request	In Section 4.4 of the monitoring report, it is not clear that Year B is TW Ghana 2. Please provide context in this section re Year A and Year B or alternatively, only include the baseline, project, leakage and emission reduction values for TW Ghana 2.	Will update and rename as TW Ghana 2	TW updated the monitoring report to include only emissions associated with the Project. This issue is closed.
5	Clarification Request	In Section 3.2 of the Monitoring Report, titled "Data and Parameters Monitored", the 'Value Applied' rows indicate that "Tradewater estimates a value of ...". As these parameters and data are monitored, the information should reflect actual values.	Updated monitoring report provided	TW updated the monitoring report to include the value applied. This issue is closed.
6	Clarification Request	In the Monitoring Report, the units for $EF_{ODS\_Transport+Destruction,y}$ are tCO_2. GHD notes that this matches the units listed in the methodology, however, it does not match the units listed in the referenced source document.	Updated monitoring report provided	GHD reviewed TW's response. This issue is closed.
7	Clarification Request	In Section 3.2 of the Monitoring Report, TW applies default values for some of the parameters. GHD notes that inclusion of these parameters under the "Data and Parameters Monitored" sections of the Monitoring Report and Project Description is not accurate.	Updated monitoring report provided.	TW updated parameter relating to electricity to ensure they were specific for the reporting period. GHD reviewed Monitoring Report v2.2 and noted that parameter TDL_y is listed both in Sections 3.1 and 3.2, while parameter $EF_{grid,y}$ remains in Section 3.2 despite applying a default value. For completeness, Project Description / Methodology Deviations should be detailed in Section 2.2 of the Monitoring Report. Update accordingly. GHD notes that VM0016 makes reference to the "monitoring period". The Monitoring Report states "project period". Please update accordingly for consistency. In addition, text in Section 2.2.2, there is no mention that the $EF_{grid,y}$ factor is a default value matching the applied methodology. Please update this section accordingly. Furthermore, the text in Section 2.2.2 discussed electricity, for clarity please detail if this refers to $EC_{PJ,y.}$ TW provided an updated monitoring report, which addressed the issues. This issue is now closed.
8	Corrective Action Request	In "Ghana 2 Project Assertion Spreadsheet", details regarding electricity consumption at the ODS recovery site are not included, even though they are included as a monitored parameter. Update accordingly.	Updated calculation tool provided	TW provided an updated calculation tool which included electricity emissions. This issue is closed.

Issues Log and Information Requests
TW Ghana 2

Ver.	Issues Log Date	Response Date
1	14-Jun-19	8-Jul-19
2	11-Jul-19	29-Jul-19
3	1-Aug-19	8-Aug-19
	13-Aug-19	14-Aug-19

Issue No.	Type	Issues, Information Requests, Clarifications	Explanation/Response	Status
9	Corrective Action Request	The VSC Monitoring Report Template has specific instructions regaring the text size, font, and color. Please review these instructions and update the monitoring report accordingly.	Updated monitoring report provided	TW provided an updated monitoring report which addressed the text size and font requirements. This issue is closed.
10	Corrective Action Request	The VCS Monitoring Report Template has specific requirements which must be addressed. The VCS Monitoring Report template requirements are based on the VCS Standard. Please review Section 1.1 to ensure that all pertainent aspects of the project are included and update accordingly.	Updated monitoring report provided	TW provided an updated monitoring report which addresses the requirements in Section 1.1. This issue is closed.
11	Corrective Action Request	The VCS Monitoring Report Template has specific location requirements which are to be included in Section 1.7. Please update Section 1.7 of the monitoring report accordingly.	Updated monitoring report provided	TW provided an updated monitoring report which addressed the requirements of Section 1.7. However, GHD requests clarfication on the language used and consistency between "ODS", "Material" and "Project". Update accordingly. TW provided an updated monitoring report which addressed the language. This issue is closed.
12	Corrective Action Request	The VCS Monitoring Report Template has specific requirements which must be addressed in Section 1.8. Please review these requirements, and update Section 1.8 of the monitoring report accordingly.	Updated monitoring report provided	TW provided an updated monitoring report which addressed the requirements in Section 1.8. This issue is closed.
13	Corrective Action Request	Under Section 1.9 of the Monitoring Report, a more detailed description of whether the project is registered under any other programs is required. Update accordingly.	Updated monitoring report provided	TW provided an updated monitoring report which addressed the requirements in Section 1.9. This issue is closed.
14	Corrective Action Request	The VCS Monitoring Report Template has specific requirements for Section 2.1. Please review and update Section 2.1 of the monitoring report accordingly.	Updated monitoring report provided	TW provided an updated monitoring report which addressed the requirements in Section 2.1. This issue is closed.
15	Corrective Action Request	In Section 1.5 of the Monitoring Report, detail the start date of the Project Activity, in accordance with the definition provided in Section 3.7 of the VCS Standard.	Updated monitoring report provided	TW provided an updated monitoring report which addressed the requirements of Section 1.5. This issue is closed
16	Corrective Action Request	Please update the version number and the date of the Monitoring Report. (refer to the Monitoring Report template for guidance).	updated monitoring report provided	TW provided an updated monitoring report which provides an updated version number and date of the Monitoring Report. This issue is closed
17	Corrective Action Request	In Ghana 2 Project Assertion Spreadsheet (3).xlxs, in tab "Energy Consumption", cell D6, there is no value provided for $EC_{pj,y}$. Please update accordingly.	Updated calculation tool provided	TW provided an updated calculation tool which includes a value for Ecpj,y. This issue is closed.
18	Corrective Action Request	The incorrect monitoring period was identifed. Update accordingly.	TW updated the monitoring report to reflect the correct monitoring period.	This issue is closed

APPENDIX C: VERIFICATION DEED OF REPRESENTATION

VCS VERIFICATION DEED OF REPRESENTATION

BY

GHD LIMITED

THIS DEED OF REPRESENTATION is made on 18 November 2019

BY

GHD Limited, 455 Phillip Street, Waterloo, Ontario, Canada N2L 3X2 (as **VVB**)

THIS DEED WITNESSES as follows:

1. **INTERPRETATION**

1.1 In this Deed:

"Accountholder" means any person holding a VCU account with a VCS Registry;

"**AFOLU**" means agriculture, forestry and other land use;

"**GHG**" means greenhouse gas;

"**GHG Program**" means a formal or organized program, scheme or arrangement for the recognition of activities leading to Reductions, or the crediting or issuance of instruments representing, or acknowledging, Reductions;

"Project" means TW Ghana ODS Project;

"Project Crediting Period" means the time period for which GHG emission reductions or removals generated by the Project are eligible for issuance as VCUs (the rules with respect to the length of such time period and the renewal of the project crediting period are set out in the *VCS Standard*);

"**Project Ownership**" means the legal right to control and operate the project activities. Distinct from proof of right;

"**Project Proponent**" means an individual or organization that has overall control and responsibility for the Project, or an individual or organization that together with others, each of which is also a Project Proponent, has overall control or responsibility for the Project. The entity(s) that can demonstrate Project Ownership in respect of the Project;

"Reduction" means a reduction or removal of one tonne of CO_2e caused by the activities of a Project during the Project Crediting Period;

"VCSA" means the Verified Carbon Standard Association;

"Validation/Verification Body" or "**VVB**" means an organization approved by the VCSA to act as a validation/verification body in respect of providing validation and/or verification services in accordance with the VCS Rules;

"VCS Program" means the GHG Program operated by the VCSA which establishes the rules and requirements that operationalize the VCS to enable the validation of GHG projects and the verification of GHG emission reductions and removals;

"**VCS Project Database**" means the central project database that records all projects registered and VCUs issued under the VCS, and provides public access to all project and VCU information, including retirement and tracking of the AFOLU pooled buffer account;

"VCS Registry" means a registry operating within the VCS Registry System and holding a current, valid agreement with the VCSA to provide registry services on behalf of the VCSA. VCS Registries interact with the VCS Project Database to issue VCUs, and hold, transfer (to and from other VCS registries), retire, suspend, cancel and provide custodial services for VCUs on behalf of its Accountholders;

"**VCS Registry System**" means the system established by the VCS Program, comprised of the VCS Project Database and the VCS Registries, to provide project proponents with the ability to register projects, and issue, transfer, hold and retire VCUs;

"VCS Rules" means the rules and requirements set out in the *VCS Program Guide*, the *VCS Standard* and the other VCS Program documents, as such rules and requirements may be updated from time to time;

"Verification Report" means the written report of verification covering the Reductions generated by the Project from 12-09-2018 to 12-04-2019 and prepared by the VVB in accordance with the VCS Rules; and

"**Verified Carbon Unit**" **(VCU)** means a unit issued by, and held in a VCS Registry representing the right of an Accountholder in whose account the unit is recorded, to claim the achievement of a Reduction that has been verified by a validation/verification body in accordance with the VCS Rules. Recordation of a VCU in the account of the Accountholder at a VCS Registry is *prima facie* evidence of that Accountholder's entitlement to that VCU.

1.2 Documents referred to in this Deed but not defined shall be the VCS documents, as updated from time to time, to which the relevant term relates.

2. REPRESENTATIONS

2.1 I am the Validation/Verification Body in relation to the verification of the Project.

2.2 I hereby represent and warrant that:

2.2.1 I have independently verified the Reductions generated by the Project in accordance with the VCS Rules;

2.2.2 In relation to any validation findings and conclusions provided in the Verification Report, I have independently validated the Project's compliance with the VCS Program requirements as set out in the VCS Rules; and

2.2.3 All factual information that I provide in relation to this Deed or have provided in the Verification Report is to the best of my knowledge following due inquiry true, accurate and complete in all material respects and I have not made or provided, and will not make or provide, false, fraudulent or misleading statements or information in relation to this Deed or the Verification Report.

2.3 I hereby acknowledge and agree that:

2.3.1 The following persons may rely on and enforce the terms of this Deed:

(a) the VCSA;

(b) each person who is an Accountholder holding VCUs relating to the Project at any given time;

(c) each person on whose behalf VCUs relating to the Project were retired by an Accountholder; and

(d) each of the successors and assigns of those persons listed in clauses 2.3.1(a), 2.3.1(b) or 2.3.1(c);

2.3.2 Neither the VCSA, the VCS Registries, nor any of their respective affiliates, directors, employees, agents, licensors and/or contractors, shall be liable with respect to any claims whatsoever arising out of this Deed or erroneous information within the Verification Report submitted to the VCS Registry System for indirect, consequential, special, punitive or exemplary damages, including, without limitation, claims brought against the VCSA or the VCS Registries by Accountholders, other VCS Registries, Project Proponents, other Validation/Verification Bodies or any other third party. This paragraph shall apply regardless of any actual knowledge or foreseeability of such damages;

2.3.3 I have read, understood and will abide by the VCS Rules; and

2.3.4 The VCSA has an absolute right to amend any of the VCS Rules at any time and shall not bear any liability for loss or damage or liability of any kind sustained by the Validation/Verification Body or any other party involved in the Project in any way under the VCS Program as a consequence of such amendment.

3. GOVERNING LAW AND JURISDICTION

This Deed is governed by and interpreted in accordance with English law, and the English courts shall have exclusive jurisdiction to settle any dispute arising from or connected with this Deed including a dispute regarding the existence, validity or termination of this Deed or the consequences of its nullity.

4. SOVEREIGN IMMUNITY

To the extent that the Validation/Verification Body enjoys any right of immunity from set-off, suit, execution, attachment or other legal process with respect to its assets or its obligations under this Deed, the Validation/Verification Body waives all such rights to the fullest extent permitted by law.

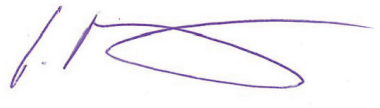
5. COUNTERPARTS

This Deed may be executed in any number of counterparts, each of which when executed and delivered is an original and all of which together evidence the same deed.

6. DELIVERY

This Deed is delivered on the date written at the start of the Deed.

EXECUTED by GHD Limited as a deed



_____ Signature of director

Gordon Reusing Name of director

_____ Signature of director/secretary

_____ Name of director/secretary