VERIFICATION REPORT

Tradewater US – ODS - #4 Reporting Period: December 4, 2023 – December 27, 2023

> ACR Project ACR936 Bowling Green, Ohio

> > April 5, 2024

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1 Introduction

Tradewater, LLC. (Tradewater) contracted SES, Inc. (SES) to perform the validation and verification of the Tradewater US – ODS #4 project for the reporting period December 4, 2023 through December 27, 2023, with a crediting period of December 4, 2023 through December 27, 2023, under the ACR program. The Project ID is ACR936.

1.1 **Project Overview**

The project involves GHG emission reductions from the destruction of ozone depleting substances (ODS) that would have otherwise been released into the atmosphere. This reporting period consisted of two non-mixed and one mixed ODS destruction events. For each destruction event, the ODS material was aggregated into cylinders or an International Standards Organization (ISO) tank at the Elk Grove Village, Illinois, Tradewater facility and shipped for destruction to the A-Gas US Inc. (A-Gas) facility in Bowling Green, Ohio.

The A-Gas facility uses two Plascon arc plasma systems to destroy ODS by pyrolysis. The destruction facility is not a permitted U.S. Environmental Protection Agency (EPA) hazardous waste combustor (HWC) but does meet the requirements of the ACR Standard and the ACR Methodology for the Quantification, Monitoring, Reporting and Verification of Greenhouse Gas Emissions Reductions and Removals from the Destruction of Ozone Depleting Substances and High-GWP Foam for non-permitted destruction facilities. This reporting period consisted of three destruction events that began on December 4, 2023 and ended on December 27, 2023. The three destruction events are summarized in Table 1 below.

Certificate ID	Primary ODS	ODS Destroyed (lbs)	Dates of Destruction
Plas-1226	CFC-11	1,283	December 4 – 6, 2023
Plas-1227	R-502 (Azeotropic Mix of CFC-115 and HCFC-22)*	2,970	December 7 – 11, 2023
Plas-1228	HCFC-22	16,530	December 12 – 27, 2023

Table 1. Summary of Destruction Events

* ACR issued an Errata and Clarification on February 9, 2024, that clarified that manufactured blends of eligible ODS refrigerants such as R-502 can be treated as "non-mixed" refrigerant gases for the purposes of this Methodology.

1.2 Objectives

The objective of the validation is to review the Project Plan and evaluate its conformance with requirements in the ACR Standard and the ACR Methodology for the Quantification, Monitoring, Reporting and Verification of Greenhouse Gas Emissions Reductions and Removals from The Destruction of Ozone Depleting Substances and High-GWP Foam, herein referred to as the Methodology. To accomplish this objective, SES evaluated project planning information, monitoring and reporting procedures, and reported GHG emission reductions.

The objective of the verification is to verify the information in Tradewater's Monitoring Report is consistent with the GHG Project Plan and to verify Tradewater's assertion in the Monitoring Report that the project has generated 27,780 tons of GHG emission reductions during the period of December 4, 2023 – December 27, 2023. To accomplish these objectives, SES must be able to verify that the project meets all applicable criteria, and that the quantification of emission reductions is, in all material respects, in conformance with the ACR Standard, the specific requirements for ACR ODS Destruction projects, and confirm that all project calculations are correct.

1.3 Scope

The verification covers the period of December 4, 2023 – December 27, 2023. The GHGs addressed are refrigerants (HCFC-22, CFC-11, and R-502 (HCFC-22 and CFC-115), with trace amounts of CFC-12, CFC-114, CFC-13, CFC-113, HCFC-123 and carbon dioxide (CO₂). The geographic boundary is the A-Gas Destruction Facility in Bowling Green, Ohio. The organizational and GHG assessment boundaries to be considered are described in the applicable sources, sinks and reservoirs (SSRs):

- SSR 4: Transport to Destruction Facility (CO₂). Fossil fuel emissions from the vehicular transport of ODS from aggregation point to final destruction facility
- SSR 5: Recovered ODS Stockpile (ODS). Emissions of ODS from recovered ODS stockpiles and end-of-life (EOL) equipment (if not sent for destruction)
- SSR 6: Destruction (ODS). Emissions of ODS from incomplete destruction at destruction facility
- SSR 6: Destruction (CO₂). Emissions from the oxidation of carbon contained in destroyed ODS
- SSR 6: Destruction (CO₂). Fossil fuel emissions from the destruction of ODS at destruction facility
- SSR 6: Destruction (CO₂). Indirect emissions from the use of grid-delivered electricity

Other scope elements evaluated during the validation and verification activities included:

- Physical infrastructure, activities, technologies, and processes of the GHG project
- Baseline scenarios
- Methods and calculations used to generate estimates of emissions and emission reductions/removal enhancements
- Original underlying data and documentation as relevant and required to evaluate the GHG assertion
- Process information, source identification/counts, and operational details
- Data management systems
- Roles and responsibilities of project participants or client staff
- Quality Assurance/Quality Control (QA/QC) procedures and results
- Processes for and results from uncertainty assessments
- Project-specific conformance to ACR eligibility criteria

1.4 Validation and Verification Criteria

The criteria used for this validation and verification are specified in:

- The ACR Standard, Version 8.0, July, 2023; and
- The ACR Methodology for the Quantification, Monitoring, Reporting and Verification of Greenhouse Gas Emissions Reductions and Removals from The Destruction of Ozone Depleting Substances and High-GWP Foam, Version 2.0, February 2023 (Methodology), and the associated Errata and Clarification from February 2024.

Validation and verification procedures were based on:

- The ACR Validation and Verification Standard, Version 1.1, May 2018, and
- ISO 14064-3: Specification with Guidance for the Validation and Verification of Greenhouse Gas Assertions, 2019.

The Project Plan, the final version of which is dated April 5, 2024, was compared to the validation criteria. The verification criteria were applied to the project's final GHG assertions as shown on the final Project Monitoring Report, dated March 18, 2024.

1.5 Level of Assurance and Materiality

ACR requires that all verifications be completed based on a reasonable level of assurance. Level of assurance is not applicable to the validation activities.

The verification was conducted to ACR's required materiality threshold of +/-5% of the GHG project's emissions reductions or removal enhancements.

2 Validation and Verification Process

SES followed the validation and verification procedures specified by SES's Policies and Procedures Manual and the ACR Standard when it reviewed and analyzed the Tradewater US – ODS #4 project information. The following subsections describe the validation and verification process in more detail.

2.1 **Pre-Engagement Activities**

The following subsections describe the pre-engagement process for the Tradewater US – ODS #4 project verification.

2.1.1 Conflict of Interest Determination

Prior to submitting a bid to Tradewater to conduct validation and verification of the Tradewater US – ODS #4 project, SES conducted an internal conflict of interest (COI) review. This review found that the potential for COI was low, so SES proceeded to submit a bid for the project. After Tradewater accepted the bid, SES prepared an ACR COI Attestation form for this project and the project proponent and submitted this form to ACR on January 2, 2024. ACR notified SES that this COI evaluation was approved on January 2, 2024.

2.1.2 Rotation of Validation and Verification Bodies (VVB)

This is the first ACR project that SES has provided validation and verification services to Tradewater. ACR allows a Project Proponent to utilize the same VVB for a maximum of 5 years or five projects, whichever comes first.

2.1.3 Validation and Verification Team

The following individuals comprised the SES validation and verification team for this project:

- Validation/Verification Team Leader (Lead Validator/Verifier): Patrick Splichal
- Independent Reviewer (Senior Internal Reviewer): Rob Dobson
- Validation/Verification Team Member: Victoria Frank

2.1.4 Kick-Off Meeting

An initial kick-off meeting was held by conference call on January 5, 2024. Mr. Splichal from SES and Ms. Gina Sabatini from Tradewater were participants in the kick-off meeting call. During this call, SES requested the information and data for the Tradewater US – ODS #4 project to enable SES to begin initial validation and verification services. SES also discussed the scope of the verification services, the SES team, verification schedule, and what personnel from A-Gas would need to be present for the site visit. After the call, Tradewater uploaded the first set of verification documents to a third-party file sharing service. SES reviewed these documents to plan for the site visit and data checks.

2.1.5 Validation and Verification Planning

SES prepared a Validation/Verification Plan for the Tradewater US – ODS #4 project. This Plan was communicated to Tradewater. The Validation/Verification Plan identified the Verification Team Members and described the objectives, scope, and criteria for the project. The Validation/Verification Plan also provided an overview of project activities and a proposed schedule for these activities, including the proposed dates for the planning meeting, the site visit, and completion of the validation/verification services. SES completed the planning meeting, site visit, and interviews with project staff on the dates proposed in the Validation/Verification Plan. The final discussion with Tradewater and submittal of the first draft of the Validation/Verification Report was planned for February 15, 2024, but occurred on March 18, 2024.

Tradewater provided sufficient information for SES to conduct a strategic analysis to assess the nature, scale, and complexity of the validation/verification services required for the Tradewater US – ODS #4 project, and to conduct a qualitative risk assessment. After conducting the strategic analysis and assessment of risk, SES developed an Evidence-Gathering Plan. The Evidence-Gathering Plan described the amount and type of evidence needed for the validation and verification; provided a ranking of the highest-risk data sources; discussed the risks of errors, omissions or misstatements associated with evidence, and described the methodology for selecting a random sample of data for review.

A summary of the information analyzed in the data checks and document reviews during the site visit and desk audit is recorded on the SES ODS Data Check Worksheet (Worksheet) for the project. SES revised the Evidence-Gathering Plan and Worksheet as tasks were completed and new information became available, and then updated and finalized the Evidence-Gathering Plan (including the Worksheet) at the conclusion of verification services. SES will retain, in paper or electronic format, the Verification Plan and Evidence-Gathering Plan and all other material received, reviewed, and generated as part of the verification services for at least two years following the end of the crediting period.

2.2 Site Visit

A site visit was conducted at A-Gas on January 12, 2024, for the Tradewater US – ODS #4 project. Mr. Splichal from SES conducted the site visit. Ms. Sabatini from Tradewater attended the site visit virtually. During the site visit, SES assessed GHG project boundaries, site operations, data collection processes, and information management systems, as well as conducted interviews with key project personnel. These personnel included:

- Zach Babb-Environmental Projects Developer
- Tammy Myers- Environmental, Health and Safety (EHS) Manager
- Josh Benner-ODS Sampler and Plascon Operator
- Nick Alsip-ODS Sampler and Plascon Operator
- Rick Miller-Plascon Operator

The plant tour included direct observations of: (1) the laboratory, (2) scales used to weigh the containers, (3) container receiving and shipping area, (4) bulk handling area, (5) tanks holding ODS for mixing and destruction, (6) control panel used to monitor all destruction events and collect destruction data, and (7) Plascon destruction units.

2.3 List of Findings and Corrective Actions

During the assessment of GHG data and information, SES identified issues that required corrective action from Tradewater. SES assessed whether these issues could affect the determination of nonconformance or a material misstatement. These issues are summarized in the List of Findings associated with this project (See Attachment A). Tradewater provided clarification as appropriate and made all possible improvements and corrections to the Project Plan and Monitoring Report in response to these findings.

2.4 Assessment of Material Misstatement

SES made an independent calculation of baseline emissions, project emissions, and net emission reductions (ER) to determine if Tradewater's reported ERs are free of material misstatement. SES also assessed whether the procedures used to provide data were in conformance with the ACR Standard and the ACR ODS Methodology. SES did not identify any errors, omissions, or discrepancies in the calculations during the verification. SES's and Tradewater's calculated ERs were identical to two decimal places. This resulted in a 0.00% error, meaning the ER assertion contains no material misstatement.

After a final discussion had occurred with Tradewater, and the corrective action requests had been addressed, and SES determined there was no material misstatement, SES prepared and issued this Verification Report and Verification Statement for the Tradewater US – ODS - #4 project. These two documents were reviewed following procedures from SES's Quality Management Plan and ACR Standard. Mr. Dobson, the Independent Reviewer, reviewed these documents and concurred with the Verification Report and Verification Statement. Mr. Dobson maintained independence from the verification services provided for the project. After Mr. Dobson approved the Verification Report and Verification Statement, SES provided Tradewater with the Verification Report and Offset Verification Statement. After a review by Tradewater, SES submitted the Verification Report and Offset Verification Statement to ACR.

3 Validation and Verification Findings

The following subsections contain details about SES's conclusions regarding the Tradewater US – ODS #4 project's conformity to the verification criteria identified in Section 1.4.

3.1 **Project Boundary and Activity**

The reporting period of this project included three destruction events in which eligible ODS species (CFC-11, CFC-12, CFC-13, CFC-113, CFC-114, CFC-115, HCFC-22, and HCFC-123) were destroyed at a single qualifying destruction facility. The project reporting period occurred from December 4, 2023 – December 27, 2023, well within the Methodology requirement of 12 consecutive months. A-Gas issued a Certificate of Destruction for each destruction event. The ODS was destroyed at the A-Gas facility in Bowling Green, Ohio.

The Project's geographic boundary is the A-Gas destruction facility in Bowling Green, Ohio. The Project's temporal boundary is the reporting period from December 4, 2023 to December 27, 2023. This is one reporting period that is less than 12 months in length, which complies with the temporal boundary stated in the Methodology.

The Project boundary includes fossil fuel emissions from the vehicular transport of ODS from the aggregation point to final destruction facility (SSR 4), emissions of ODS from recovered ODS stockpiles (SSR 5), and destruction emissions (SSR 6). SSR 5 is applicable to both baseline and project emissions, while the other SSRs are only applicable to project emissions. SES assessed the SSR determination included in the GHG Project Plan and found the justification accurate and in accordance with the Methodology. Overall, Tradewater provided an accurate description of the Project boundary and a comprehensive justification for the project SSRs.

3.2 Eligibility

Chapter 3 of the ACR Standard and Chapter 2, 3, and 4 of the Methodology identify criteria that must be met for a project to be eligible for credits. SES reviewed all these criteria for the Tradewater US – ODS - #4 project. Based on this review, SES concludes with a reasonable level of assurance that the project meets all of them.

3.2.1 ACR Eligibility

SES confirmed the following ACR eligibility criteria listed in the ACR Standard, Version 8.0 by reviewing the project proponent's Project Plan, Monitoring Report, and calculations as well as other supporting documentation described throughout this report.

- **Start Date:** The project start date is December 4, 2023. This was confirmed by SES through a review of the destruction data provided by the A-Gas destruction facility.
- **Minimum Project Term:** Projects with no risk of reversal subsequent to crediting have no required minimum project term.
- Crediting Period: The crediting period is equal to the reporting period, as specified by the Methodology (December 4, 2023 December 27, 2023).
- **Real:** ODS destruction activities are performed in accordance with an approved ACR methodology to produce verifiable evidence of emissions mitigation. The GHG reductions occurred after the ODS was destroyed.
- Emission or Removal Origin: Tradewater retains ownership of emission reductions via contractual agreements with upstream and downstream customers.

- Offset Title: Tradewater of Chicago, Illinois, is the Project Proponent. SES reviewed the Transfer of Ownership and Custody Documentation, BOLs, and Tradewater receiving reports for subsample selections of all shipments of ODS material. These documents demonstrated that Tradewater purchased ODS material from multiple suppliers who transferred "ownership, custody and all rights" to the ODS to Tradewater. The project proponent then destroys the refrigerant at an eligible facility. SES also reviewed the Environmental Services Agreement (ESA) with A-Gas for the mixing, sampling, and destruction of the ODS material. The ESA with A-Gas and Transfer of Ownership and Custody Documentation with the ODS suppliers confirmed that Tradewater retained all environmental attributes from the destruction of the ODS material. SES verified that Tradewater retains all legal claims to the environmental attributes and GHG benefits of the offset project.
- Leakage: Leakage does not apply under the Methodology.

3.2.2 Methodology Eligibility

SES reviewed the Project against the ACR Methodology eligibility requirements and confirmed the following:

- The Project occurs in the United States. The A-Gas destruction facility is located at 1100 Haskins Road, Bowling Green, Ohio 43402. The facility at A-Gas is an eligible destruction facility.
- The Project occurs at a destruction facility that is a TEAP certified facility with an ODS destruction efficiency of 99.99%.
- The refrigerant meets the definition of eligible refrigerant sources, which must originate from equipment, systems, or other supplies in the United States.
- The CFC-11 solvent meets the definition of eligible solvents because it originates from U.S. sources, and it is unused solvent in its virgin state (in its original container) that is not determined to be hazardous waste and is not required to be destroyed by the U.S. EPA Resource Conservation and Recovery Act (RCRA).
- This project included three destruction events in which eligible ODS species (CFC-11, CFC-12, CFC-13, CFC-113, CFC-114, CFC-115, HCFC-22, and HCFC-123) were destroyed at a single destruction facility. A-Gas issued a Certificate of Destruction for each destruction event.

3.2.3 Eligible ODS Sources

Tradewater supplied documentation including a chain of ownership or cylinder summary spreadsheets, bills of lading (BOLs), and attestations that allowed SES to verify that all refrigerant and virgin solvent ODS was sourced in the U.S. This documentation also demonstrated that the source of the eligible ODS material met the requirements for Chapter 2.2 of the Methodology.

3.2.4 Additionality

SES confirmed that Tradewater met the additionality requirement because it destroyed ODS that originated from U.S. sources, and utilized a facility that meets the requirements of the Technology & Economic Assessment Panel (TEAP) for ODS destruction. SES also found no mandates for the destruction of any of the eligible refrigerants in the U.S. according to 40 Code

of Federal Regulations (CFR) Part 82 which allows for the continued use of the refrigerants in the U.S.

The Project meets the requirements for the demonstration of additionality specified by the ACR Standard by exceeding the approved performance standard defined in the Methodology and demonstrating surplus to regulations.

3.2.5 Regulatory Compliance

SES reviewed the information provided by Tradewater and A-Gas related to regulatory compliance. SES also reviewed EPA's Enforcement and Compliance History Online (ECHO) database (http://echo.epa.gov) for Tradewater and A-Gas and the Ohio EPA's online public records database for A-Gas. No violations were shown in EPA ECHO or in the Ohio EPA's online public records database for A-Gas or Tradewater for this reporting period. In addition, SES interviewed Ms. Myers, A-Gas EHS Manager, during the site visit. Ms. Myers asserted that she was not aware of any environmental non-compliance issues from Federal, State, or Local agencies during this reporting period.

Tradewater and A-Gas provided EPA Section 608 or 609 Technician Certifications for their personnel who handled the ODS material aggregated in this project. These documents included the technician names and certification types. Tradewater maintains a Department of Transportation Hazardous Materials Certificate, and Tradewater maintains the Hazardous Materials Certificates for the transportation carriers of the ODS material.

The destruction units at A-Gas generate wastewater from the pyrolysis process. This wastewater is discharged to a sewer and is treated by the City of Bowling Green (City) Office of Municipal Utilities. A-Gas has an Industrial User Permit (Permit No. BGIUP 000-07) from the City of Bowling Green's Industrial Pretreatment Program. The permit requires total daily flow and pH monitoring as well as total dissolved solids (TDS) monitoring once per week, and the submittal of monthly monitoring reports to the City. SES noted no exceedances of the effluent limitations for pH and TDS and noted that the monthly reports had been submitted to the City during this reporting period. Mr. John Bella and Mr. Brad Tussing with the City conducted an Industrial Pretreatment Inspection on November 17, 2023, and issued a report to A-Gas. There were no violations noted in the report and the report indicated all areas inspected were "satisfactory."

Based on this review, SES concludes that the project complies with all environmental laws and regulations directly related to project activities during the reporting period.

3.2.6 Permanence

The emissions reductions from the destruction of ODS can be deemed permanent because the material is permanently destroyed.

3.2.7 Independently Validated and Verified

Tradewater contracted SES to provide independent and objective third-party validation and verification services to the Project. SES is an ANSI National Accreditation Board (ANAB)-accredited and ACR-approved VVB.

3.2.8 Environmental and Community Impacts

The project plan includes a comprehensive summary of the project activity's net positive environmental impacts. Destroying ODS avoids the future leakage of the ODS into the atmosphere. There are no negative community or environmental impacts for this project. Tradewater holds all required environmental permits to operate its facility and A-Gas holds all required environmental permits to operate its destruction facility. The Project Plan also identifies contributions as aligned with relevant sustainable development goals (SDGs) including Good Health and Well Being (SDG 3.9); Industry, Innovation, and Infrastructure (SDG 9.4); Responsible Consumption and Production (SDG 12.4); Climate Action (SDG 13.2), Life Below Water (SDG 14.1), and Life on Land (SDG 15.1).

Tradewater provided the Environmental and Social Impact Assessment form (E&S Impact Report) per the requirements of Chapter 8 of the ACR Standard. SES applied verification criteria to the project's environmental and community impact assertions as shown in the final version of the E&S Impact Report, dated April 5, 2024. SES confirmed that this project is not a community-based project and that there are no negative environmental or community impacts resulting from this project.

3.2.9 Baseline Scenario

The baseline determines the emissions that would occur in the absence of the project. The Methodology establishes the baseline scenario as an emissions rate of 100% of the CFC and HCFC refrigerants. These refrigerants produced prior to the phasing out of production are either still in use for outdated or retrofitted equipment, or stored, posing a risk of leakage into the atmosphere. The baseline scenario for the virgin solvents is continued leaks from their original containers. The project activity is the destruction of eligible CFC and HCFC refrigerants and solvents. By destroying these eligible CFCs and HCFCs, the project prevents potential emissions from these ODS materials, aligning with the Methodology's aim to reduce GHG emissions. SES confirmed that the Project Plan appropriately identifies the baseline scenario.

3.2.10 Approved Variance or Deviations

The Project did not obtain deviations from ACR during the validation/verification process.

3.3 Monitoring and Operations

The monitoring plan described within the GHG Project Plan includes all relevant data and parameters required to obtain a reliable result of generated emission reductions and meets the requirements of the Methodology. The GHG Project Plan includes a complete description of the frequency, responsibility, and procedures for recording, storing, monitoring, and measuring all project data. All requirements in Chapter 6.1 of the Methodology are addressed in the GHG Project Plan.

The sections below discuss relevant aspects of the GHG Project Plan as they relate to the requirements for data collection and parameters to be monitored in Chapter 6 of the Methodology.

3.3.1 Point of Origin Documentation

SES verified, through records supplied by Tradewater, that the ODS material destroyed in the project had originated from sources in the U.S. Points of origin included Lawrence Livermore

National Lab, a Veterans Affairs Medical Center, Tradewater customers, and Tradewater's facility where the remainder of the ODS was aggregated from small quantities shipped or transported directly to the Tradewater facility in Elk Grove Village, Illinois.

The "Collection References" spreadsheet and associated documentation contained the vendor information, location of material, index numbers given to each cylinder, type of refrigerant, the net weight of the refrigerant in the cylinders, and the shipment name associated with the cylinders aggregated in this project. SES reviewed documentation to ensure that Tradewater met all point of origin (POO) requirements according to the Methodology, Chapters 6.1 and 6.2, including:

- Facility name and physical address
- Point of origin zip code
- Serial or ID number of containers used for storage and transport

For these reasons, SES concludes that the ODS destroyed was eligible and that documentation of its POO was adequate.

3.3.2 Chain of Custody

The Transfer of Ownership and Custody Documentation was reviewed for a subsample selection of individual tanks/cylinders purchased by Tradewater. This included the location of material, purchase date, and attestations. Each of the BOLs for the shipments with consolidated vendor material was reviewed. In addition, SES reviewed the BOLs for the shipment of the containers from the Tradewater Elk Grove facility to the A-Gas destruction facility in Bowling Green, Ohio. There were two shipments from Tradewater to A-Gas. The Tradewater shipment details are:

- Three half-ton cylinders of R-502 and one half-ton cylinder and one 240-pound cylinder of CFC-11 shipped on 11/4/2023 using Central Transport.
- HCFC-22 shipped in an ISO container on 11/20/2023 using Triple M Logistics, BOL net weight of 16,858 pounds.

SES concluded from these documents that Tradewater documented the custody and ownership of the ODS as required by the Methodology.

3.3.3 Concentrated ODS Composition and Quantity Analysis

Eligible non-mixed CFC-11 and R-502 (as clarified in the ACR Errata and Clarification from 2/9/24), and mixed HCFC-22 ODS were aggregated at Tradewater in Elk Grove Village, Illinois, and shipped to the A-Gas facility in Bowling Green, Ohio as described above. After arrival at A-Gas, the R-502 and HCFC-22 material was transferred from the Tradewater containers into Batch Tanks 5008 and 5001, respectively, which also served as the feed tanks for these three destruction events. The CFC-11 material was consolidated into the original Tradewater half-ton container which served as the feed tank for the CFC-11 destruction event.

The A-Gas facility uses feed tanks that are mounted on load cells, which continuously measure the weight of the tank. A-Gas personnel print out a weight ticket at the beginning and end of each run, as well as intermediate weight tickets printed out daily. For the CFC-11 destruction event, the half-ton container was placed on a cylinder scale to record the beginning and ending weights. SES reviewed these weight tickets for each of the destruction events and confirmed that the same load cell or scale was used for beginning and ending weights and that the weights were recorded no more than 48 hours prior to the beginning of the event, nor 48 hours after the end of the event, and that two beginning and two ending weight tickets were generated at least three minutes apart. SES also verified that the beginning and ending weights on the weight tickets matched the values on the CODs. A-Gas explained to SES that, during the destruction events, A-Gas does not put a vacuum on the feed tank, and the remaining amount of refrigerant known as the "vapor heel" is removed from the feed tank. The load cells and cylinder scales are calibrated quarterly. SES reviewed documents showing that a third-party (Antibus Scales and Systems) calibrated load cells for Tank 5001 and 5008 and the cylinder scale used for the CFC-11 destruction event on September 19, 2023. This meets the requirements of the Methodology for a non-RCRA facility.

One ODS sample was collected from the CFC-11 half-ton container and Tank 5008, and two ODS samples were collected from Tank 5001 by Mr. Nick Alsip or Mr. Josh Benner, both A-Gas trained ODS sampling technicians and operators of the Plascon units, for the three destruction events. Prior to sampling the HCFC-22 material in Tank 5001, the contents were mixed. By reviewing A-Gas's Batch Sampling and Mixing Forms, ODS Sampling Certificates, and associated chain-of-custody documentation, SES verified that all the mixing and sampling requirements of the Methodology were met, and appropriate records retained. All ODS samples were submitted to National Refrigerants, Inc. (NRI) for analysis. SES confirmed that NRI is an Air-conditioning, Heating, and Refrigeration Institute (AHRI)-certified laboratory for analysis by gas chromatography. The results of the samples used for ER calculations for each of the three destruction events are summarized in Table 2. SES confirmed that Tradewater used the more conservative sample for the ER calculations for Plas-1228 (mixed HCFC-22).

Certificate	Sample #	Eligible ODS%	Moisture	Moisture	% High
ID			(parts per million)	Saturation (ppm)	Boiling Residue
D1 122(CFC-11: 99.10	7	05	0.210
Plas-1226	LB40001UN	HCFC-12: 0.69	/	95	0.219
		CFC-11: 0.03			
		CFC-12: 0.98		502	0.023
	LB00195UN	CFC-13: 0.02	257		
Plas-1227		CFC-113: 0.01			
		CFC-114: 0.05			
		CFC-115: 49.89			
		HCFC-22: 48.88			
		CFC-11: 0.27			
	LB40003UN	CFC-12: 0.31	122	527	0.699
		CFC-13: 0.08			
Plac 1228		CFC-113: 0.21			
F1a5-1220		CFC-114: 0.03			
		CFC-115: 12.24			
		HCFC-22: 85.85			
		HCFC-123: 0.02			

Table 2. Summary of Analytical Results

All parameters of the AHRI-700 analysis exceeded the requirements of the Methodology and demonstrated the type of refrigerant in the feed tank for each destruction event.

3.3.4 Destruction Facility Requirements

The A-Gas facility is not a RCRA-permitted HWC. Therefore, the facility must have third-party confirmation of compliance with TEAP requirements, in addition to meeting the TEAP requirements during each destruction event. SES reviewed audit reports from Intertek for both PDU-1 and PDU-2 from October 2022, and a TEAP Certification Letter from Intertek that shows both PDU-1 and PDU-2 are TEAP certified through October 27, 2025. Intertek certified that A-Gas is in conformance with the requirement in the TEAP Code of Good Housekeeping. The destruction technology, are plasma pyrolysis, is approved under the Montreal Protocol for ODS destruction. As part of the certification, Intertek reviewed emissions data and the results of a measurement of destruction and removal efficiency (DRE). The DRE (using CFC-114) was found to be >99.99% for PDU-1 and PDU-2, which is compliant with the TEAP requirement of 99.99%.

SES verified both the regulatory compliance of the destruction facility and its conformity with the requirements of the Methodology and TEAP requirements during the destruction events. The continuous emissions monitoring system (CEMS) parameters are monitored continuously and recorded every minute and data are downloaded to Excel. The following information was tracked during the destruction events:

- Date and time
- ODS feed rate (kg/hr)
- Temperature (°C)
- Pressure (inches of H₂O)
- Carbon Monoxide (CO) emissions (ppm)
- Effluent flow rate (m3/h)
- Effluent pH level

SES reviewed data from the continuous emissions monitoring system (CEMS) to confirm that the facility was operating similarly to the period during which the DRE was determined. The destruction unit has a supervisory control and data acquisition (SCADA) system that controls the plant based on operating and CEMS data. The system is designed to shut down if the destruction process operates outside the limits of the TEAP Code of Good Housekeeping. SES reviewed A-Gas's Plascon Control Manual and observed the SCADA interface during the site visit to confirm this. Because the facility does not have a CAA permit, it is not required to have a Startup, Shutdown, and Malfunction Plan approved by a regulatory agency. SES verified that A-Gas does have defined procedures for startup and shutdown issues. SES reviewed maintenance logs from each of the destruction events that showed the routine maintenance that occurs on the Plascon unit and other causes of shutdowns during these destruction events. There were shutdowns in each of the three destruction events; however, there were no leaks or venting of ODS during these shutdowns.

3.3.5 Certificate of Destruction

SES confirmed that the Certificates of Destruction contained Methodology required parameters.

- Offset Project Operator or Authorized Project Designee
- Destruction facility
- Certificate of Destruction ID number
- Serial, tracking, or ID number of all containers for which ODS destruction occurred
- Weight and type of material destroyed from each container
- Destruction Start Date
- Destruction End Date

3.3.6 Data Management Systems

SES interviewed key personnel from Tradewater and the A-Gas destruction facility who were responsible for the project to gain an understanding of the controls put in place to account for refrigerant recovered, aggregated, and destroyed. SES reviewed Tradewater's processes for data collection and management and determined that they were sufficient to meet all ACR and Methodology requirements.

3.3.7 Emissions Reductions

SES separately calculated project emission reductions from information on the weight tickets, independent laboratory analysis reports, and the CODs. SES's calculations assessment included confirming the weight total as defined by the weight tickets and as defined in Tradewater's "Chain of Ownership" and "Cylinder Summary" spreadsheets and BOLs from Tradewater to A-Gas. SES verified that the constants, default factors, and emission factors were correctly applied in Tradewater's assertion. SES verified that the raw data inputs were correct, and the formulas were applied correctly. Table 3 shows a summary of SES's and Tradewater's ER calculations and where/if any discrepancies occurred.

Destruction	SES	Tradewater	SES	Tradewater	SES	Tradewater
Event	Baseline	Baseline	Project	Project	Emission	Emission
	Emissions	Emissions	Emissions	Emissions	Reductions	Reductions
	CO ₂ e					
	(metric	(metric	(metric	(metric	(metric	(metric
	tons)	tons)	tons)	tons)	tons)	tons)
Plas-1226	2,726.10	2,726.09	4.36	4.36	2,721.73	2,721.73
Plas-1227	6,457.45	6,457.44	10.10	10.10	6,447.35	6,447.35
Plas-1228	18,667.99	18,668.00	56.23	56.23	18,611.76	18,611.76
Totals	27,851.54	27,851.53	70.70	70.70	27,780.84	27,780.84

SES confirmed that A-Gas calculated ER totals in conformance with the Methodology. SES performed a final calculation to determine if a material misstatement was present using the equation in Chapter 9.B of the ACR Standard. This equation is shown below:

% Error = (Project Emission Reduction Assertion-Verified Emission Reduction Recalculation)/(Verified Emission Reduction Recalculation)*100

SES did not identify any errors, omissions, or discrepancies in the calculations during the verification. SES's and Tradwater's calculated ERs were identical to two decimal places.

% Error = (0/27,780)*100% = 0.000%

Because the % Error is much less than the 5% defined by ACR, SES concludes with reasonable assurance that the ER assertion contains no material misstatement.

4 Validation Conclusions

SES confirms that the GHG Project Plan for Tradewater US – ODS #4 Project conforms to the ACR Standard Version 8.0, and the Methodology for the Quantification, Monitoring, Reporting and Verification of Greenhouse Gas Emissions Reductions and Removals from the Destruction of Ozone Depleting Substances and High-GWP, Version 2.0 (February 2023). No qualifications or limitations exist with respect to the validation opinion reached by the validation/verification team.

5 Verification Conclusions

Based on the verification activities described above, SES concludes, with a reasonable level of assurance, that Tradewater's assertions of ER generated from ODS destruction are consistent with the verification criteria and free of material misstatements. The verified ER total is 27,780 metric tons CO₂e for the period of December 4, 2023 – December 27, 2023. Table 4 summarizes the ER calculations for this reporting period.

Emissions Verified	CO ₂ e (metric tons)
Baseline Emissions	27,851
Project Emissions	70
Emission Reductions	27,780

Table 4. Emission Reductions Verified for December 4, 2023 – December 27, 2023

6 Signatures

Lead Validator/Verifier Signature:

atur Schild

Date: April 5, 2024

Independent Reviewer Signature:

Date: April 5, 2024

ATTACHMENT A LIST OF FINDINGS

List of Findings Tradewater US-ODS-#4, ACR936 Verifier: SES, Inc. Reporting Period: December 04, 2023 - December 27, 2023

Turne of Janua	Finding	Citation (Program Standard or	Category (Misstatement/ Non-	Connection Action
Type of Issue		Protocol/ Wethodology Section)	Conformance)	
Additional Documentation Request	for the Tradewater personnel handling the ODS material.	ODS Methodology Section 2.2XI	Potential Non- Conformance	Tradewater provided the EPA 608 Certifications. Finding closed.
Misstatement	In the GHG calculations tab in the Project Assertion Spreadsheet, the GWP is incorrect for CFC-113 and CFC 114.	ODS Methodology Equation 3, Table 4	Non-material misstatement	Tradewater corrected the GWPs in Version 2 of its GHG calculations. Finding closed.
Misstatement	In the GHG calculations tab in the Project Assertion Spreadsheet, the formula in Column H used to calculate the amount of high-boiling residue (HBR) is incorrect.	ODS Methodology Section 5.1, Equation 3	Non-material misstatement	Tradewater corrected the HBR formula in Version 2 of its GHG calculations. Finding closed.
Clarification Request	In the GHG calculations tab in the Project Assertion Spreadsheet, please provide a summary of total BE, PE, and ERs being claimed for all three destruction events.	ODS Methodology Section 5.1	Potential Non- Conformance	Tradewater provided the total values in Version 2 of its GHG calculations.
Additional Documentation Request	The GHG Project Plan, dated 12/20/23 (electronic file date of 1/5/24) has several pieces of information left blank, e.g. pounds of ODS material destroyed in Section A.3, Reporting Period in Section B3, and BE, PE, and ER values in Section E. Please provide an updated Monitoring Report with this missing information included.	ACR Standard Chapter 6.B	Potential Material Misstatement	Tradewater updated the GHG Project Plan. Finding closed.
Additional Documentation Request	The Monitoring Report, with an electronic file date of 1/5/24 has several pieces of information left blank, e.g. pounds of ODS material destroyed in Section II and BE, PE, and ER values in Section VI. Please provide an updated Monitoring Report with this missing information included.	ACR Standard Chapter 6.E	Potential Material Misstatement	Tradewater updated the Monitoring Report (V1.1). Finding closed.
Clarification Request	In Section V, Page 7 of the Monitoring Report, please clarify the term "Low" for the Source of Data for the Legal Requirement Test Monitoring Parameter.	ACR Standard Chapter 4:A.1 and 6.E	Potential Material Misstatement	Tradewater clarified that is this was a copy/paste error, and corrected it to "US EPA" in version 1.1 of the Monitoring Report. Finding closed.
Misstatement	On Page 8 of the Monitoring Report, the term "incineration" is used to describe the destruction activities at A-Gas. A-Gas uses a plasma arc pyrolysis destruction process.	ACR Standard Chapter 6.E	Non-material misstatement	Tradewater adjusted the language in version 1.1 of the Monitoring Report. Finding closed.

List of Findings Tradewater US-ODS-#4, ACR936 Verifier: SES, Inc. Reporting Period: December 04, 2023 - December 27, 2023

Type of Issue	Finding	Citation (Program Standard or Protocol/ Methodology Section)	Category (Misstatement/ Non- Conformance)	Corrective Action
Clarification Request	Please clarify how government sourced material is designated in the Collection References tab of the Project Assertion Spreadsheet.	ODS Methodology Sections 2.2.1, 6.1 and 6.2	Potential Non- Conformance	Tradewater clarified that they input the client name in the Project Assertion Spreadsheet, though it is not obvious that they represent a governmental institution based on name alone. The address, when put into a search engine, brings up the government facility. In addition, the email address associated is a "dot gov" email address; all indications that this is government material. Finding closed.
Additional Documentation Request	The Tradewater Stockpile Attestation pdf document is an editable document.	ODS Methodology Section 6.2	Potential Non- Conformance	Tradewater provided a second version of the Attestation that is not editable. Finding closed.
Clarification Request	The Point of Origin rider associated with purchase agreement D-66908 states the R-502 material was "collected" from a demolition job. Please clarify if this material was recovered from equipment.	ODS Methodology Section 6.1 and 6.2	Potential Non- Conformance	Tradewater clarifed that the material was leftover in the containers described and discovered on site during the time of demolition. No recovery was performed. Finding closed.
Clarification Request	Point of Origin: For the All Seasons Ice Rinks material (Purchase Agreement D-69646), please clarify who aggregated the R-22 material.	ODS Methodology Section 6.1 & 6.2	Potential Non- Conformance	Tradewater clarified that All Seasons Ice Rinks stored the material on site since 2011, and that there was no transfer of material, as the refrigerant was in the original containers on site since 2011. The client handled the containers himself. Finding closed.
Additional Documentation Request	Point of Origin Review: Page 3 is in fillable/editable format for Tank ID 2023LA366.	ODS Methodology Section 6.1 & 6.2	Potential Non- Conformance	Tradewater provided a second version that is not editable. Finding closed.
Additional Documentation Request	Point of Origin Review: Page 4 of documentation is in fillable/editable format for Tank ID 2023BA0629.	ODS Methodology Section 6.1 & 6.2	Potential Non- Conformance	Tradewater provided a second version that is not editable. Finding closed.
Clarification Request	Point of Origin Review: The weight recorded in the Project Assertion Spreadsheet is slightly higher than the documentation provided for Tank ID: 2023IL0258, 2023IL6415, and 2023IL8297, 2023IL8564, 2023JJ031. Please clarify this discrepancy.	ODS Methodology Section 6.1 & 6.2	Material Misstatement	Tradewater clarified that the Project Assertion Spreadsheet includes final fill weights, which are determined at filling in its warehouse. The weights recorded on RPAs and Point of Origin riders are estimates based on weights of individual containers taken on-site prior to ship back to warehouse, utilizing estimated tare weights. Occassionally, the actual tare weight of a container will cause a pound swing in either direction for the net weight of material. That was the case here, as all weight differences are a pound or less. Finding closed.

List of Findings Tradewater US-ODS-#4, ACR936 Verifier: SES, Inc. Reporting Period: December 04, 2023 - December 27, 2023

Turne of Iccus	Finding	Citation (Program Standard or	Category (Misstatement/ Non-	Corrective Action
Type of issue	Finding	Protocol/ Methodology Section)	Conformance)	
Additional Documentation Request	Point of Origin Review: Tank ID 2023LA183 is missing the BOL for the 3/21/2023 shipment.	ODS Methodology Section 6.1 & 6.2	Potential Non- Conformance	Tradewater clarified that the BOL is on page 9 of the packet. Finding closed.
Clarification Request	Tank ID 2023LA183: Please provide documentation that the Lawrence Livermore National Lab, a Department of Energy federal government facility, was not required to destroy the material.	ODS Methodology Section 2.2.1	Potential Non- Conformance	Tradewater clarified that LLNL's solicitation for bid, starting on page 1, does not mention that there is a requirement for destruction of the material to be eligible for bidding. Destruction is not a requirement for the purchase of the refrigerant. Finding closed.
Clarification Request	Point of Origin Review: The documentation for purchase numbers associated with Tank ID 2023MK0141 and 2023LA366 show the material type is "R-11 Solvent". Please clarify if this was solvent material.	ODS Methodology Section 2.2.5	Potential Non- Conformance	Tradewater clarified that R-11 that contains the word "solvent" on the label is considered to be R-11 solvent. Tradewater keeps photo documentation of the R-11 solvent cylinders. R-11 was sold new ("virgin") in disposable cylinders. Tradewater determines whether a disposable cylinder of R-11 was manufactured as solvent by checking the label and looking for any mention of "solvent." Disposable cylinders contain virgin refrigerant as they are designed to not be able to be refilled. Finding closed.
Misstatement	There is no mention of eligible solvents in the GHG Project Plan or the Monitoring Report.	ODS Methodology Sections 2.2.5, 6.1 and 6.2	Potential material misstatement	Tradewater added verbiage for eligible R-11 solvent in this project to both the GHG Project Plan (V2.1) and the Monitoring Report (V1.2). Finding closed.
Misstatement	Section D.1 of the GHG Project Plan has an incorrect frequency for scale calibrations at the destruction facility.	ODS Methodology Section 6.3	Non-material misstatement	Tradewater corrected the calibration from monthly to quarterly in V1.2 of the GHG Project Plan. Finding closed.