

Verification Report for RemTec International ODS Destruction Import Project No. 1

Climate Action Reserve

June 2011

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1. Introduction

This report is provided to Reclamation Technologies, Inc., which is also recognized by and does business under its trade name of RemTec International (RemTec), as a deliverable of the Climate Action Reserve (CAR) project verification process. This report covers the third verification of the RemTec International ODS Destruction Import Project No. 1 (the Project) for the period from January 1 through March 28, 2011. First Environment, Inc. (First Environment) conducted the verification from March to May 2011.

2. Objectives

The purpose of this verification was, through review of appropriate evidence, to establish that:

- the Project conforms to the requirements of the verification criteria, including all eligibility requirements, discussed in Section 4 of this report; and
- the data reported are accurate, complete, consistent, transparent, and free of material error or omission.

3. Verification Scope

Specific scope metrics for the verification are outlined in the table below:

Geographic Boundaries	Entire chain-of-custody of destroyed ozone depleting substances (ODS) from production and storage in Monterrey, Mexico to destruction at the Clean Harbors Environmental Services facility in El Dorado, Arkansas, USA.
Emission Reduction Sources, Project Emissions, and Greenhouse Gases	Emissions reductions (expressed in units of carbon dioxide equivalents (CO ₂ e)) resulting from destruction of CFC-12; project emissions of CO ₂ e from purchased electricity, fossil fuel combustion, and fugitive emissions of replacement refrigerants.
Reporting Period	January 1, 2011 through March 28, 2011
Data Sources	Metered and monitored data, official documents and records, and emission reduction calculations

4. Standards Used to Verify Emissions (Criteria)

The following table outlines the guidance and protocols used to conduct this verification:

Standard of Verification	• Climate Action Reserve Article 5 Ozone Depleting Substances Project Protocol - Destruction of Article 5 Ozone Depleting Substances Banks, Version 1.0, February 3, 2010 (CAR Protocol); • Climate Action Reserve Program Manual, March 16, 2010; • Article 5 Ozone Depleting Substances Project Protocol, Version 1.0 Errata and Clarifications, May 7, 2010
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Verification Process	• Section 8.0 of the CAR Protocol; • Climate Action Reserve Verification Program Manual, December 2010; • ISO 14064-3: Specification with guidance for the validation and verification of greenhouse gas assertions, 2006
Level of Assurance	Reasonable assurance
Materiality	• Misstatements greater than one percent of the Project's emission reductions assertion are considered material; • Qualitative non-conformities with the CAR Protocol are also considered material

5. Overview of the Verification Process

The verification process was utilized to gain an understanding of the Project's emission sources and reductions, to evaluate and verify the collection and handling of data, the calculations that lead to the results, and the means for reporting the associated data and results.

The following verification process was used:

- conflict of interest review;
- selection of Verification Team;
- initial interaction and kick-off meeting with RemTec;
- development of the verification and sampling plan;
- site visit;
- review and evaluation of project documentation;
- assessment of raw data and calculations for period under review;
- follow-up interaction with RemTec for corrective action, clarification, or supplemental data as needed; and
- final statement and report submittal.

5.1 Conflict of Interest Review

Prior to beginning any verification project, First Environment conducts an evaluation to identify any potential conflicts of interest associated with the Project. No potential conflicts were found for this project. First Environment also received authorization from CAR to proceed with verification activities for the Project in a notification dated March 1, 2011.

5.2 Verification Team

First Environment's Verification Team consisted of the following individuals who were selected based on their verification experience, as well as familiarity with ODS destruction projects.

Lead Verifier – Iris Caldwell
Verifiers – John Mosheim, Michael Carim, Mary Pat Campbell, Jeff Daley
Senior Internal Reviewer – Jay Wintergreen

5.3 Verification Kick-off

The verification was initiated with a kick-off meeting on March 16, 2011 with RemTec. The meeting focused on confirming the scope, schedule, and data required for verification.

5.4 Development of the Verification Plan

The team formally documented its verification plan as well as determined the data-sampling plan. The verification plan was developed based on the discussion of key elements of the project verification process during the kick-off meeting. RemTec was afforded the opportunity to comment on the key elements of the plan for verification. Based on items discussed and agreed upon with RemTec, the plan identified the First Environment project team members, project level of assurance, materiality threshold, and standards of evaluation and reporting for the verification. It also provided an outline of the verification process, established project deliverables, and presented a data-sampling plan designed to review all project elements in areas of potentially high risk of inaccuracy or non-conformance.

5.5 Site Visit

Iris Caldwell and Michael Carim conducted a site visit at the Clean Harbors Environmental Services (Clean Harbors) facility in El Dorado, Arkansas on March 31, 2011 to assess the Project's monitoring systems and overall compliance with the CAR Protocol's requirements for destruction facilities as well as interview personnel relevant to the Project for the reporting period. First Environment previously conducted a site visit during the initial reporting period to the ODS stockpile location in Mexico.

5.6 Emissions Reduction Data and Calculation Assessment

This assessment used information and insights gained during the previous steps to evaluate the collected data and the reported emissions reduction quantities, and identify if either contained material or immaterial misstatements.

5.7 Corrective Actions and Supplemental Information

The Verification Team issued requests for corrective action, clarification, and supplemental information during the verification process. RemTec provided sufficient responses to all requests.

5.8 Verification Reporting

Verification reporting documents the verification process and identifies its findings and results. Verification reporting consists of this report for RemTec, a separate verification statement, and a list of findings to be submitted to the CAR program.

6. Site's Conformance with Verification Criteria

6.1 Project Description

The Project consists of the importation of virgin ODS refrigerant, specifically CFC-12 (R-12), from Mexico to the United States for destruction by incineration at the Clean Harbors facility in El Dorado, Arkansas. The virgin R-12 refrigerant was imported from the Quimobasicos' S.A. de C.V (Quimobasicos) facility in Monterrey, Mexico where it was produced and privately

stockpiled. The project activity consists of the destruction of ODS, which results in a net reduction of CO₂ equivalent emissions.

The current reporting period covers the destruction of the third and fourth railcars purchased by RemTec and imported into the United States. Clean Harbors transported the ODS material to its facility in Baton Rouge, Louisiana where it was transferred to 10 ISO containers. Each ISO container was separately shipped to the Clean Harbors destruction facility in El Dorado, Arkansas. The destruction events occurred between January 1 and March 28, 2011.

Clean Harbors is an approved Hazardous Waste Combustor. First Environment reviewed the Certificates of Destruction issued by Clean Harbors for each destruction event and the CAR ODS tracking system in order to confirm that:

- RemTec is the owner and project developer for all ODS destroyed as part of the project;
- Clean Harbors in El Dorado, Arkansas was the same destruction facility identified on all Certificates of Destruction;
- the destruction activities occurred over a period less than 12 months; and
- no Certificates of Destruction are included as part of another project.

6.2 Eligibility

RemTec meets the eligibility requirements set forth in the CAR Protocol. Specifically, through review of a technical audit report and communication between Quimobasicos, RemTec, and Mexico's Secretariat of the Environment and Natural Resources, First Environment confirmed that the R-12 refrigerant is virgin material sourced from a private stockpile that was manufactured prior to production phase-out in Mexico and can be legally sold. This is consistent with the first eligible source type defined in Section 2.4 of the CAR Protocol. Additional eligibility requirements from the CAR Protocol are discussed separately below.

6.2.1 Ownership and Title

RemTec and Quimobasicos signed a purchase order for the R-12, which transferred the rights to any credits and offsets generated from the destruction of ODS to RemTec. First Environment reviewed this record as well as a signed attestation from Quimobasicos confirming RemTec's ownership of and title to the R-12 and the greenhouse gas (GHG) emission reduction credits associated with the project activity. First Environment also reviewed the purchase order between RemTec and Clean Harbors confirming that RemTec owns and has the rights to any emission reduction credits associated with the destruction of ODS. Additionally, First Environment relied on the Attestation of Title completed by RemTec for the current reporting period. The attestation is on file with CAR and was reviewed to confirm that it was completed correctly.

6.2.2 Location

The Project activity meets the location requirements specified in the CAR Protocol. Specifically, the Quimobasicos facility, where the R-12 refrigerant is sourced, is located in Mexico, an Article 5 country. The Clean Harbors facility, where the R-12 refrigerant is destroyed, is located in the United States.

6.2.3 Project Start Date and Crediting Period

The Project's start date is May 30, 2010, when destruction of the first railcar of R-12 commenced at the Clean Harbors facility. This date was confirmed during verification of the Project's first reporting period. The end of the third reporting period is March 28, 2011, which is within 12 months of the project start date as required by the CAR Protocol. In order to confirm the Project's destruction dates, First Environment reviewed the Certificates of Destruction issued by Clean Harbors for the 10 ISO containers.

RemTec submitted the voluntary pre-import notification to U.S. EPA on March 19, 2010, which is within 60 days of the effective date of the CAR Protocol. RemTec submitted the completed Entry Summary to U.S. Customs for the third and fourth railcars on June 28, 2010, which is prior to the June 30, 2010 date required by the CAR Protocol.

6.2.4 Additionality

The project passes both the Performance Standard Test and the Legal Requirements Test, as described below.

6.2.4.1 Performance Standard Test

According to the CAR Protocol, the destruction of ODS from Article 5 countries is not common practice. Therefore, projects that meet the project definition and the eligibility requirements of the CAR Protocol pass the Performance Standard Test. In addition to the eligibility assessment described above, First Environment reviewed the Project's Certificates of Destruction and evidence that the Clean Harbors facility is an approved Hazardous Waste Combustor in order to verify that the Project continues to meet the project definition and pass the Performance Standard Test.

6.2.4.2 Legal Requirements Test

RemTec completed the Attestation of Voluntary Implementation for the current reporting period. First Environment reviewed this document during the verification process and confirmed that it was completed correctly and is on file with CAR. Additionally, First Environment reviewed a letter from Mexico's Secretariat of the Environment and Natural Resources, which indicates that there are no regulations requiring the destruction of ODS in Mexico.

6.2.5 Regulatory Compliance

First Environment reviewed Clean Harbors' air operating permit and Resource Conservation Recovery Act (RCRA) permit as well as a written statement that the facility was in compliance with all activities associated with the project activity during the reporting period. During the site visit, First Environment interviewed Clean Harbors' personnel with responsibility for regulatory compliance in order to confirm this assertion. Additionally, through review of operational reports, First Environment confirmed that no permit exceedances were noted during the ODS destruction events.

First Environment also reviewed documentation related to the importation of the ODS into the United States. The evidence reviewed included custom and import records, EPA documents, shipping manifests, and chain-of-custody documentation. Based on this review, First Environment did not identify any instances of non-compliance during the reporting period.

First Environment also relied in part on the Attestation of Regulatory Compliance, completed by RemTec for the current reporting period, in order to confirm the Project's regulatory status. First Environment reviewed this document during the verification process and confirmed that it was completed correctly and is on file with CAR.

6.3 Project Performance Against CAR Protocol and Project Management System

The Project was implemented in conformity with the CAR Protocol. RemTec developed and implemented a Monitoring and Operations Plan to track relevant project parameters and data sources. The Monitoring and Operations Plan was reviewed to determine compliance with the requirements of the CAR Protocol. Based on observations made during the site visit and review of relevant project documentation, First Environment found the Monitoring and Operations Plan to meet the requirements set forth by the CAR Protocol and the Project to be implemented in accordance with the Monitoring and Operations Plan.

6.3.1 CAR ODS Tracking System

First Environment confirmed that the information from the Certificates of Destruction was accurately entered into the CAR ODS tracking system, as required by the CAR Protocol.

6.3.2 Point of Origin and Import Documentation

RemTec provided evidence of the point of origin and custody of the R-12 throughout the project activity, from the virgin stockpile in Mexico to final destruction in the United States. First Environment reviewed the following records in order to confirm that point of origin and chain-of-custody was adequately documented:

- hazardous waste manifests and bills of lading from Quimobasicos to Clean Harbors and any intermediate storage points in between;
- purchase order between RemTec and Quimobasicos;
- purchase order between RemTec and Clean Harbors;
- U.S. Customs import documentation, including Entry Summaries for each railcar; and
- ODS tank car GPS tracking record information.

Point of origin and chain-of-custody documentation included facility names, addresses, and identification numbers for the containers used for transportation and storage of the R-12. Clean Harbors also provided records of material transfers and ISO container inspections.

Through the review of bills of lading, Entry Summaries, hazardous waste manifests, material transfer records, and weight tickets, First Environment was able to track the ODS quantities from the point of origin at Quimobasicos to final destruction at the Clean Harbors facility. Apart from some minor unit conversion differences among the records, the quantities of ODS were consistent and clearly documented.

6.3.3 ODS Composition and Quantity Analysis

The weight of each ISO container was appropriately determined from a single scale at the Clean Harbors facility. First Environment reviewed the weight tickets for all 10 ISO containers to

ensure that measurements were taken within two days before and after destruction, as required by the CAR Protocol. The scale used during the current reporting period was calibrated once per month in accordance with Clean Harbors' air permit – December 26, 2010; January 27, 2011; February 25, 2011; and March 23, 2011. First Environment reviewed evidence of these calibrations, each of which indicated the scale was operating properly within five percent of reading.

Composition and concentration of each ISO container were determined according to the sampling and analysis requirements outlined in the CAR Protocol. First Environment reviewed the ODS Sampling Certificates completed by Clean Harbors, chain-of-custody documentation of all samples taken for analysis, and the Refrigerant Analysis Reports issued by the laboratory. First Environment also confirmed that sampling and analysis were conducted by third parties not affiliated with RemTec and that the samples were taken while in the possession of Clean Harbors. First Environment also reviewed the Air-Conditioning, Heating, and Refrigeration Institute's (AHRI) directory and other communication to verify that the laboratory, which conducted the analyses, was AHRI certified. The results of the analyses indicated that each ISO container contained greater than 90 percent R-12 and that the material met the moisture and high boiling point residue requirements identified in the CAR Protocol.

6.3.4 Destruction Facility Requirements

During the site visit, First Environment confirmed that the Clean Harbors' facility maintains a Title V air operating permit, RCRA operating permit, and National Pollutant Discharge Elimination System stormwater permit as required by local, state, and federal regulations. Compliance with relevant permit limits is monitored during each destruction event. First Environment also reviewed evidence of equipment calibrations and personnel training records.

Clean Harbors monitors operating parameters at five-minute intervals during each destruction event, including ODS feed rate, exit gas temperature, combustor pressure, scrubber water flow, pH, and carbon monoxide emissions. For the Project's destruction events, First Environment confirmed that the operating parameters were within the permit limits established during the last Comprehensive Performance Test.

Clean Harbors issued Certificates of Destruction for all R-12 destroyed by the Project. First Environment confirmed that the Certificates of Destruction included all the information required by the CAR Protocol and were prepared by Clean Harbors' personnel with the authority to execute such records.

6.4 Emissions Reduction Calculation Assessment

The emission reduction calculations were reviewed to ensure accuracy in the formulas used and the raw data used as inputs. The formulas were tested to ensure consistency with the calculation methodology described in the CAR Protocol.

Calculations for baseline emissions were performed in accordance with the CAR Protocol. RemTec correctly applied the global warming potential for R-12 and used the appropriate 10-year cumulative emissions rate for the first baseline scenario defined in Table 5.1 of the CAR Protocol. RemTec correctly calculated project emissions from substitute refrigerant, transportation, and destruction. RemTec used the default project emission factors for emissions

from ODS destruction and transportation. The table below summarizes the input parameters used in the emission reduction calculations.

Input Parameter	Name	Description/ Value
Q_i	Total quantity of refrigerant ODS / destroyed	Calculated from weight tickets and sample analysis reports
$ER_{refr,i}$	10 year cumulative emission rate of refrigerant ODS	94%
$GWP_{refr,i}$	Global warming potential of R-12	10,900 CO ₂ e
Sub _{ref} emission factor	Emissions factor for substitute refrigerants, i.e., HFC-134a	1101.1 tCO ₂ e / tsub
Tr + Dest emission factor	Default transportation and destruction emission factor	7.5 tCO ₂ e / tODS

Copies of the raw data used in the calculations, including weight tickets and sample analysis reports, were compared with the data used in the final calculations and tested for transcription or mathematical errors. First Environment reviewed all raw data sources and calculations and performed an independent recalculation of emission reductions using raw data from primary data sources in order to assess whether the submitted calculations were free of material misstatement. First Environment found the emission reduction calculations to be free of material misstatement.

6.5 *Approved Variance or Deviations*

No variances or deviations were obtained for the Project during this reporting period.

6.6 *Changes Due to Errata & Clarifications Issued by CAR*

The issuance of the Errata and Clarifications, dated May 7, 2010, clarified that destruction facilities with no specific scale calibration requirement in their RCRA permits must calibrate weigh scales quarterly to an accuracy of five percent. Because Clean Harbors' air permit requires that the scales are calibrated at least monthly and First Environment confirmed that no calibrations during the reporting period indicated that the scale used to weigh the ISO containers was outside the acceptable five percent accuracy range, this requirement was adequately met.

7. Verification Conclusion

Based on the evidence collected and the assessments performed, First Environment concludes that the Project's GHG emissions reductions, due to the destruction of R-12 refrigerant over the period of January 1 through March 28, 2011, can be considered with a reasonable level of assurance:

- in conformance with the verification criteria, and
- without material discrepancy.

Verified results show:

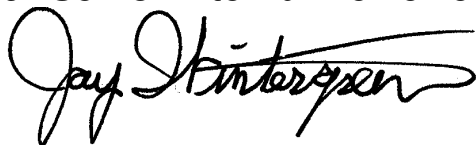
Reporting Period: January 1, 2011 to March 28, 2011	Total
Baseline Emissions (tCO ₂ e)	1,427,098
Project Emissions (tCO ₂ e)	154,409
Emissions Reductions (tCO ₂ e)	1,272,689

8. Lead Verifier Signature



Iris Caldwell
Engineer II

9. Senior Internal Reviewer Signature



James Wintergreen
Senior Associate