



Verification Report for

EOS Climate Inc.
San Francisco, CA USA
EOS-CAR2012 Domestic
Fourth Reporting Period

Climate Action Reserve Project CAR946

U.S. Ozone Depleting Substances
Project Protocol, Version 1.0

April 10, 2012

Report Prepared for

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Report Prepared by

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Summary

EOS Climate engaged NSF International Strategic Registrations (NSF-ISR) to verify its destruction of ozone depleting substances from a project defined in accordance with the requirements of the Climate Action Reserve U.S. Ozone Depleting Substances Project Protocol, Version 1.0. In this fourth reporting period of the third project, EOS Climate destroyed one ISO container of pure ODS (i.e. >90% purity) refrigerant obtained from a single source in the United States aggregated by Polar Technology (Polar) in Nashville, Tennessee. The refrigerants were destroyed at the Clean Harbors Environmental Services' hazardous waste incinerator in El Dorado, AR (Clean Harbors). The destruction facility is a permitted U.S. EPA hazardous waste combustor (HWC) described by the NAICS code 562211.

This project reporting period consisted of one destruction event from 2012-03-05 to 2012-03-10. The destruction event incinerated 14,620 pounds of ODS refrigerant that was entirely sourced within the United States of America from non-government sources. The project reduced future emissions into the atmosphere of 26,314 metric tons of CO₂-e.

1. Introduction

1.1 Objective

The objective of this verification audit was to determine, with reasonable assurance, that EOS Climate had quantified, monitored, and fairly reported to the Climate Action Reserve its emission reductions from the destruction of U.S.-sourced pure ODS refrigerant and to confirm the project's eligibility.

1.2 Scope

The scope of the engagement included verification of the quantification, monitoring and reporting of greenhouse gas emission reductions from the project. It also included verification of the project's eligibility and the calculation of project emissions associated with substitute emissions from replacement refrigerants over a ten-year period, and transportation and destruction-related project emissions.

1.3 Criteria

NSF-ISR verified the reported project emission reductions against criteria in the Climate Action Reserve U.S. Ozone Depleting Project Protocol, Version 1.0 (February 3, 2010), including the Errata and Clarifications issued by the Climate Action Reserve on December 15, 2011 (the "Protocol"). The project also was verified against applicable requirements of the Climate Action Reserve's Program Manual (October 26, 2011). The verification methodology conformed to requirements in Climate Action Reserve Verification Program Manual (Dec. 20, 2010), and ISO 14064:2006 Part 3, *Greenhouse gases – Specification with guidance for the validation and verification of greenhouse gas assertions*.

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1.4 Materiality

In accordance with the Climate Action Reserve Verification Program Manual, emission reduction reports were considered fairly stated if they varied by no more than 1% from a complete statement of the project's emission reductions. Thresholds of materiality defined by the Verification Program Manual allowed verifiers of emission reduction reports to consider as immaterial discrepancies of 1% or less.

1.5 Level of Assurance

This engagement was performed at the reasonable level of assurance.

2. Verification Approach

2.1 Team Appointment and COI Review

This verification was performed by Michael DeBusschere, Lead Verifier. The verification was internally reviewed by Sally Livingston, Lead Verifier. Conflict of Interest inquiries were completed for NSF-ISR and for the verification team and a finding of low COI risk was confirmed by the Climate Action Reserve.

2.2 Document Review

The verification team conducted a document review to inform the planning process in advance of performing verification activities. Documents and records reviewed were provided by EOS Climate, Polar Technology and by the Clean Harbors Environmental Services' El Dorado, AR, destruction facility.

2.3 Planning

NSF-ISR's verification approach is risk-based. It draws upon our understanding of risks to fair statement of reported emissions and the operation of controls to reduce such risks. As a result of the document review and correspondence with project management personnel at EOS Climate, a verification plan and a sampling plan were developed for this engagement.

2.4 Verification Activities

During the first reporting period of the project, NSF-ISR conducted a site visit to the Clean Harbors destruction facility in El Dorado, AR. The site visit to Clean Harbors was performed to verify continued conformance by the destruction facility to the Protocol's requirements. For the fourth reporting period of the EOS-CAR2012 Domestic project, NSF-ISR concluded after conducting a risk assessment that a site visit was not needed at Polar Technology's facility in Nashville, Tennessee as NSF had previously conducted a site visit to Polar during the fifth reporting period of the second project. All verification activities were conducted via a desk review and phone interviews. This report is based upon the examination of documented evidence

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and confirming interviews with persons having responsibility for various aspects of the project. Verification activities included:

- Confirmation of the project start date, eligibility, ownership of ODS, and quantification of project emission reductions.
- Review of the control environment, information management systems and monitoring plans of EOS Climate, Polar Technology and Clean Harbors Environmental Services.
- Verification of the controls on the custody and traceability of the ODS shipment from outside sources to its reception and consolidation at Polar Technology and from Polar Technology to its reception and destruction at Clean Harbors.
- Verification of compliance with Department of Transportation requirements associated with the shipment of hazardous material.
- Review of the Certificate of Destruction issued by the Clean Harbors destruction facility in El Dorado, AR.
- Review of the most recent scale calibration records.
- Verification that Clean Harbors' monitoring program and data management system addressed and recorded Protocol and Title V Operating Permit required monitoring parameters continuously during the period of ODS destruction.
- Verification that operating conditions during the destruction event at the Clean Harbors facility complied with performance standards established in the facility's Title V Operating Permit.

We relied in part on the verification work conducted by NSF-ISR during earlier reporting periods of the first EOS project, CAR604 EOS-JA-09-01 and the second EOS Project, CAR804 EOS CAR2011 Domestic and this third EOS Project, CAR 946 CAR2012 Domestic for evidence to demonstrate the adequacy of the following:

- The control environment, information management systems and monitoring plans of EOS Climate, Polar Technology and Clean Harbors Environmental Services.
- The records management system implemented at EOS Climate for acquisition and retention of all project protocol required information.

3. Verification Findings

3.1 Project Description

This verification report covers the fourth reporting period of EOS Climate's third ozone depleting substances (ODS) project EOS-CAR2012 Domestic. In this reporting period

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EOS Climate acquired >90% purity CFC-11 ODS from the Polar Nashville, Tennessee facility. For this project, all ODS was sourced from Polar Technology through two channels: (1) reclamation activities acquiring CFC-11 from suppliers in cylinders under 500 lbs, and (2) reclamation activities acquiring CFC-11 from two large chiller systems in San Jose, CA collected in cylinders over 500 lbs. Once the ODS for the current reporting period was aggregated in Polar's Nashville facility, it was shipped in ISO container SECU 1221588 to Clean Harbors Environmental Services destruction facility in El Dorado, AR.

At Clean Harbors in El Dorado, the refrigerant was sampled, analysis performed, and then incinerated at high temperatures to achieve the required minimum destruction and removal efficiency of 99.99 percent.

3.2 Eligibility

Location. This fourth reporting period for the EOS-CAR2012 Domestic third destruction project involved destruction of eligible pure ODS at a single destruction facility located in the United States. The ODS destroyed was sourced entirely within the United States and did not come from U.S. government stockpiles. For material acquired by Polar from two chiller systems in San Jose, California, NSF-ISR drew this conclusion by reviewing purchase orders and bills of lading and container listings warranting that the material was sourced solely within the United States and was not a part of a U.S. government stockpile.

For the portion of the ODS coming from Polar in Nashville, NSF-ISR confirmed the material was sourced within the United States and did not come from U.S. Government stockpiles by reviewing Polar's source inventory for points of origin of small quantity ODS aggregated for this report period (<500 lbs) by tank identity, origin and purity. In addition, NSF-ISR reviewed documentation that the Polar ODS was of U.S. origin and concluded that the refrigerant provided by Polar as a part of its reclamation business was sourced in the United States. NSF-ISR drew this conclusion from a review of Polar's certification that the material was sourced in the U.S. and was not part of a U.S. Government Stockpile which was documented in their purchase agreement with EOS Climate.

Project Definition. EOS Climate has planned its ODS destruction project to include multiple destruction events of eligible ODS at a single destruction facility located in the United States spanning a period of time not to exceed 12 months. This verification report addresses the fourth reporting period of EOS Climate's third ODS destruction project, "EOS-CAR2012 Domestic."

Project Start Date. The start date of the project, defined by the Protocol as the date on which destruction activities in the first reporting period commenced, was January 12, 2012. On that date, a container of pure ODS was destroyed at a single qualifying destruction facility. NSF-ISR has concluded that the fourth reporting period's destruction event occurred within twelve months of the project start date.

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Crediting Period. The crediting period for EOS Climate's EOS-CAR2012 Domestic project extends to January 12, 2022. The Reserve's U.S. Ozone Depleting Substances Protocol accounts for project emissions during the ten-year duration of the crediting period.

Qualifying Destruction Facility. The ODS in this reporting period was destroyed at a RCRA-permitted HWC, Clean Harbors Environmental Services, in El Dorado, AR. RCRA-permitted HWCs are considered to meet the Protocol's requirements by default.

Single Application of Certificate of Destruction SECU 1221588 03-12-12. The Attestation of Title obligated EOS Climate to report emission reductions from the reporting period that is the subject of this verification report to the Climate Action Reserve and to no other registry, and not to sell or transfer the project reductions other than by permitted transfers under the terms of its agreement with the Climate Action Reserve. NSF-ISR has previously interviewed the Vice President of Operations of EOS Climate and believes on the basis of his statements that EOS Climate will not seek to report their ODS emission reductions for this reporting period to any other registry. EOS Climate has provided management certification that this remains the case.

3.3 Additionality

Legal Requirement Test. NSF-ISR reviewed the Attestation of Voluntary Implementation submitted by EOS Climate for this reporting period. In addition, NSF-ISR reviewed internal records generated by EOS Climate as part of its project monitoring to determine, on a periodic basis, whether applicable international, federal, state or local regulations had recently been modified to require ODS destruction. During this reporting period EOS Climate found no such modified regulations on websites maintained by the Montreal Protocol, the U.S. Environmental Protection Agency, the California Air Resources Board, Tennessee Department of Environment & Conservation, or the Arkansas Department of Environmental Quality. From this evidence NSF-ISR concluded that no changes had occurred in applicable law that would require ODS destruction. NSF-ISR was able to confirm to a reasonable level of assurance that the project passed the legal requirement test.

Performance Standard Test. EOS Climate met the Performance Standard Test because it destroyed ODS sourced in the United States that did not originate with U.S. federal government installations or stockpiles, and it utilized for destruction a RCRA-permitted HWC at Clean Harbors Environmental Services of El Dorado, AR. NSF-ISR established from its review of project documentation that prior to its transfer to EOS Climate, the ODS destroyed in container SECU 1221588 was owned by EOS or Polar, was not imported material, and did not originate from U.S. government stockpiles. NSF-ISR verified from records that the ODS in the ISO container was destroyed at the Clean Harbors RCRA-permitted facility in El Dorado, AR.

Regulatory Compliance. NSF-ISR reviewed the Attestation of Regulatory Compliance completed by EOS Climate dated March 19, 2012, for the reporting period. In addition, NSF-ISR reviewed detailed CEMs operating records of Clean Harbors during the destruction, and a five year compliance history documentation of the facility. This information supported the conclusion that the Clean Harbors HWC facility remained in material compliance with applicable environmental and safety laws and regulations during the destruction period. NSF-ISR reviewed

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documentation related to the transportation of ODS both from the chiller systems in San Jose to Polar in Ontario, California, between Polar in Ontario to Polar in Nashville, and between Polar in Nashville to Clean Harbors in Arkansas and found no deficiencies with respect to the requirements of the U.S. Department of Transportation. With respect to the hazardous waste combustion facility operated by Clean Harbors, NSF-ISR re-verified that Clean Harbor's is in material compliance with their Title V, RCRA and NPDES, that the permits were current and that the facility has performed the required Combustion Performance Test (CPT) demonstrating a DRE in excess of 99.99% with a material less combustible than the destructed ODS. In addition NSF-ISR verified in this reporting period that monitoring required by Clean Harbors' Title V permit and Section 6.7 of the Protocol was conducted for the entire period of each destruction event, and that the incinerator's performance remained within prescribed limits of both the permit and the Protocol throughout. NSF-ISR also confirmed that there were no instances of material non compliance noted from regulatory agencies for environmental or safety deficiencies during the reporting period.

3.4 Ownership

Project Developer and Ownership. EOS Climate Inc., of San Francisco, CA, is the project developer. For this reporting period EOS Climate attested to its ownership of the emission reductions through a signed Attestation of Title dated March 19, 2012, which NSF-ISR reviewed. The Attestation of Title appeared free from defect.

The ODS destroyed in this reporting period was owned by EOS Climate. NSF-ISR established by review of the Polar contract with EOS that title for the ODS and its environmental attributes transferred to EOS once it was placed in shipping containers in preparation for shipment to Clean Harbors.

NSF-ISR confirmed from a review of service agreements, contracts, and purchase orders that title of the ODS was correctly transferred from the owner of the chiller systems to a distributor, to Polar Technology, and then to EOS upon arrival at Clean Harbors.

NSF-ISR has reviewed the agreements for evidence of ownership of the ODS sent for destruction at Clean Harbors. From this evidence NSF-ISR has concluded that EOS Climate was the legal owner of the ODS destroyed during this reporting period and that EOS Climate is the owner of the greenhouse gas emission reduction credits associated with this ODS destruction project reporting period.

3.5 Project Boundaries and Emission Sources

Sources, Sinks and Reservoirs. NSF-ISR has verified that for this project reporting period, the relevant sources, sinks and reservoirs (SSRs) were SSR 1, appliance collection; SSR 2, refrigerant recovery and collection; SSR 4, substitute refrigerant; SSR 5, transport to destruction facility; SSR 6, refrigeration; and SSR 7, destruction; as these sources, sinks and reservoirs are defined in the U.S. ODS project protocol.

3.6 Project Management System

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Management System. NSF-ISR had assessed the EOS Climate management system at company headquarters in San Francisco in April 2010. NSF-ISR relied in part upon that evidence for this reporting period. Further evidence was obtained through NSF-ISR's document review conducted for this reporting period of EOS Climate's management system, monitoring plan and quality assurance system, and through interviews with EOS Climate management personnel.

Project Documentation. NSF-ISR verified that the required documents for the project had been completed and submitted to the Reserve. These included the Project Submittal form, uploaded at the beginning of the project, and current versions of the signed Attestation of Title form, the signed Attestation of Regulatory Compliance form, the signed Attestation of Voluntary Implementation form, the Certificate of Destruction, the CRT vintage and quantity, the certified laboratory ODS analysis and the project diagram.

3.7 Performance Against Project Protocol/Methodology

Monitoring and Operations Plan. In accordance with protocol requirements, EOS Climate has established a monitoring and operations plan entitled "EOS Climate ODS Destruction Monitoring and Operations Plan" updated 03/21/12. This document addressed monitoring, operations and reporting and described how relevant parameters required by the protocol in Table 6.2 were to be collected and reported, including any errata and clarifications provided by the Reserve related to the protocol. NSF-ISR verified that the Monitoring and Operations Plan had been implemented for this reporting period.

Reserve Project Data Base. NSF-ISR verified that EOS Climate had uploaded relevant documents to the Reserve project database prior to verification, including Clean Harbors Environmental Services' Certificate of Destruction, the laboratory analysis of the material, required attestations and the project diagram.

Point of Origin Documentation. NSF-ISR verified, through correspondence and records review that the refrigerant destroyed during this reporting period had two points of origin:

- 1) From two chiller systems in San Jose, California, 6753 pounds of ODS was removed, aggregated and shipped to Polar. The point of origin location of this material was confirmed by reviewing the chain of custody documents and other identifying information such as the date, address and specific location of the chiller whose contents were extracted, tank listings, bills of lading, service agreement, record of collection and purchase order all generated at the time of collection and transport of the ODS from the chiller system to Polar in Ontario.
- 2) Polar aggregated at its Nashville facility 7867 pounds of ODS from cylinders of less than 500 pounds from different locations within the United States. To establish the point of origin of the aggregated inventory material acquired by Polar, Polar's management provided documentation confirming to confirm the point of origin of the 7867 pounds aggregated by Polar was its Nashville facility. All cylinders were under 500 pounds.

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Since title transferred from Polar to EOS upon delivery to the loading dock of a designated common carrier, NSF-ISR has concluded from this information that the point of origin was properly recorded for the refrigerant shipped for destruction in this reporting period. Further it confirmed the destruction facility information regarding ODS destroyed was properly recorded, and that the refrigerant destroyed was eligible. NSF-ISR has further concluded that for all ODS, the point of origin documentation agrees with the data reported at the destruction facility (weight and composition) with no significant discrepancies.

Custody and Ownership.

Some of the refrigerant in this project originated from two chiller systems in San Jose, California. The contents of the chiller system were extracted into fourteen (14) containers which were sent through a distributor and then to Polar Technology in Ontario, California. NSF-ISR verified all bills of lading, purchase orders, and contracts ultimately passing title to EOS. Finally, for all material aggregated at Polar in Nashville, title transferred to EOS upon delivery of the material by Polar to Clean Harbors. The transit company conveying all the material from Polar to Clean Harbors was Triad Transports Inc. The BOL for this shipment was verified by NSF-ISR. NSF-ISR has concluded from these documents that EOS Climate is the owner of the greenhouse gas emission reduction credits associated with this ODS destruction project reporting period.

Concentrated ODS Composition and Quantity Analysis. NSF-ISR verified that Composition and Quantity Analysis requirements were met. Upon reception at Clean Harbors, ISO container 1221588 was weighed. The ISO container was weighed again after conclusion of the destruction event. The weigh tickets were retained to establish pre- and post-destruction weight. A single, 120,000 lb. Fairbanks scale was used at Clean Harbors for the pre- and post-destruction weighings. Calibration records from February 24, 2012 were reviewed and found in order. Scale calibration test results were within manufacturer's tolerances ($\pm 0.1\%$).

ISO container 1221588 contained pure ODS, meaning that the shipment did meet the 90% purity standard. A sample was taken by Clean Harbors prior to destruction and sent to an AHRI 700-2006 certified laboratory for analysis. The analysis found the ODS was greater than 90% R-11. From these records NSF-ISR has concluded that all the requirements of Section 6 of the Protocol for sampling of ODS were met.

ODS aggregated at Polar arrived at the Clean Harbors facility in El Dorado, AR, in ISO container 1221588. ISO 1221588 was weighed at 8:21 AM p.m. 3/5/12, less than 48 hours before destruction commenced. The empty ISO container was weighed at 12:21 PM 3/10/12, within 48 hours of the end of destruction. Time limits for weighing pre- and post-destruction according to the protocol were respected.

Laboratory analysis of the ODS composition was uploaded to the Reserve's data base web site. The quantity of pure ODS based on the lab analysis was used in the calculation of ODS destroyed.

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Destruction Facility Requirements. The Clean Harbors destruction facility in El Dorado, AR, is a RCRA-permitted HWC. According to the Protocol, RCRA-permitted HWCs are considered to meet the TEAP requirements by default, and no further testing for TEAP compliance is required. NSF-ISR verified both the regulatory compliance of the destruction facility and its conformity with the requirements of the Reserve's ODS protocol. NSF-ISR previously reviewed Clean Harbors' destruction equipment monitoring and control system, its current Title V and RCRA permits in three prior site visits associated with previous EOS Climate projects in April, May, and June 2010, and a site visit for this project's first reporting period on January 19, 2012. At each site visit NSF-ISR compared performance parameters recorded during the reporting period destruction events with established permit limits and confirmed that required monitoring equipment was used. NSF-ISR also interviewed operating personnel on use of the monitoring database and controls and reviewed the data from the most recent MACT (maximum achievable combustion technology) and CPT (Combustion Performance Testing) to establish conformance with all parameters required by the Protocol and Title V permit. NSF-ISR reviewed additional regulatory permits (NPDES) and current 2012 Clean Harbors Standard Operating procedures for receiving and sampling CFC materials subject to the Protocol to confirm to NSF-ISR's satisfaction that the facility continued to meet the protocol's requirements as a "qualifying destruction facility." NSF-ISR also reviewed the Continuous Emissions Monitoring System data for the destruction event that took place during this reporting period; no material departure from operating requirements was observed. The foregoing analysis enabled NSF-ISR to conclude that Clean Harbors met Protocol requirements for a qualifying destruction facility.

Monitoring Parameters. NSF-ISR verified that EOS Climate had carried out the monitoring required by the Protocol. The requirements were summarized in EOS Climate's "EOS Climate ODS Destruction Monitoring and Operations Plan" updated 03/21/12, as described above in an earlier paragraph.

Project Emissions. NSF-ISR verified that project emissions for transportation and destruction were calculated using default methodologies, and included the weight of all ODS included in the shipment to the destruction facility.

3.8 Calculation of GHG Emission Reductions

NSF-ISR separately calculated project emission reductions from information about the ODS in this reporting period provided by the independent ODS laboratory analysis report from NRI Laboratories and the Clean Harbors Certificate of Destruction. NSF-ISR confirmed EOS Climate's claimed emission reductions did not vary from NSF-ISR's calculation by a material amount.

3.9 Corrective Action Requests

NSF-ISR issued and closed various findings during this reporting period. Details were provided to the project developer and to the Reserve in a List of Findings, a private document.

3.10 Approved Variances or Deviations

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There were no applications by EOS Climate for variances from any protocol requirements for the fourth reporting period of this project.

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4. Verification Results

4.1 Verification Team Recommendation

Based on the verification activities described above, the verification team has concluded that the EOS Climate ODS project, EOS-CAR2012 Domestic, fourth reporting period, has achieved the following emission reductions:

Reductions/Removals During This Reporting Period	Metric tons CO ₂ -e
Project baseline	28,000
- Project emissions	1,686
- Project adjustments (explain)	N/A
= Net project emission reductions/removals (rounded down)	26,314

4.2 Verification Audit Summary

Project Developer	EOS Climate Inc. 55 Hawthorne Street, Suite 610 San Francisco, CA 94105 USA
Project Location	Clean Harbors Environmental Services 309 American Circle El Dorado, AR 71730
Project Type	Destruction of Ozone Depleting Substances
Project Period	March 5-10, 2012
Protocol/Methodology	Climate Action Reserve, U.S. Ozone Depleting Substances Project Protocol, v. 1
Emissions/Removals Verified	Vintage 2012: 26,314 metric tons CO ₂ -e
Verification Conclusion	Based upon the verification activities described above, NSF-ISR has concluded that EOS Climate's reported 2012 vintage emission reductions of 26,314 metric tons CO ₂ -e reported to the Climate Action Reserve for the period March 5-10, 2012, are, in all material respects, fairly stated.
Lead Verifier	 Michael DeBusschere, April 08, 2012
Internal Reviewer	 Sally Livingston April 10, 2012
<i>This verification statement is valid when signed and dated by an NSF-ISR internal reviewer.</i>	