

Verification Report for True Manufacturing Company, Inc.

American Carbon Registry

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TABLE OF CONTENTS

1. Introduction	1
2. Objectives	1
3. Verification Scope	1
4. Verification Criteria.....	2
5. Overview of the Verification Process.....	2
5.1 Conflict of Interest Review	2
5.2 Audit Team	3
5.3 Audit Kick-off.....	3
5.4 Development of the Verification Plan	3
5.5 Site Visit.....	3
5.6 Emissions Reduction Data and Calculation Assessment	3
5.7 Corrective Actions and Supplemental Information.....	3
5.8 Verification Reporting.....	3
6. Project Conformance with Verification Criteria	4
6.1 Project Eligibility.....	4
6.2 Offset Title	4
6.3 Regulatory Compliance.....	4
6.4 Project Monitoring and Management System.....	4
6.5 Monitoring Instrument QA/QC.....	5
7. Verification Results.....	5
7.1 GHG Information Verified.....	5
7.2 Verification Assessment Techniques and Processes Employed.....	7
8. Audit Results.....	7
9. Verification Conclusion.....	7
10. Lead Verifier Signature	8
11. Independent Reviewer Signature	9
APPENDIX A – Verification Findings.....	10

TABLES

TABLE 1: Parameters Monitored..... 4

1. Introduction

First Environment, Inc. (First Environment) provides this verification report to True Manufacturing Co., Inc. (True) as a deliverable of the American Carbon Registry (ACR) project verification process. It covers the verification of the following Projects and reporting periods:

Project Name	ACR Project ID	Reporting Period
Advanced Refrigeration US49 - ARS 004	ACR598	January 1 – December 31, 2019
Advanced Refrigeration CAL - ARS 004B	ACR599	
Advanced Refrigeration CAN - ARS 004C	ACR600	

Each Project reports emission reductions for a single 10-year crediting period beginning on January 1 of the reporting year.

During the verification process, Dentons US LLP (Dentons) acted as the project advisor for True. As such, First Environment communicated directly with Dentons regarding most verification activities.

True manufactures Stand-Alone Commercial Refrigeration units, an eligible Refrigerant Sector and Segment under the Methodology. The Projects consist of the transition from high-global warming potential (GWP) refrigerants to a low-GWP refrigerant, R-290 (propane), in the manufacture of these refrigeration products. The transition to a low-GWP refrigerant results in a net reduction in greenhouse gas (GHG) emissions over the lifetime of the manufactured refrigeration products.

2. Objectives

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

- the objectives of the ACR Validation and Verification Standard Chapter 8.B are met;
- the Projects conforms to the requirements of the verification criteria 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 for each project are outlined in the table below:

Geographic Boundaries	True manufacturing plants located in: <ul style="list-style-type: none"> • O'Fallon, MO • Bowling Green, MO • Mexico, MO • Pacific, MO
Greenhouse Gases Verified	Emissions reductions (expressed in units of Carbon Dioxide equivalents (CO ₂ -e) resulting from refrigerant replacement; Project emissions from use of eligible refrigerant R-290 (propane))
Reporting Period	1/1/2019 – 12/31/2019
Data Sources	Historical True sales and accounting records Equipment product specifications

Level of Assurance	Reasonable assurance
Definition of Materiality	Misstatements greater than five percent of each Project's emission reductions assertion were considered material. Qualitative non-conformities with and discrepancies in the Monitoring Reports between and verification criteria were also considered material.

4. Verification Criteria

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

Standards of Verification	<ul style="list-style-type: none"> • ACR Standard, Version 6.0, July 2019 (ACR Standard) • Methodology for the Quantification, Monitoring, Reporting and Verification of Greenhouse Gas Emissions Reductions and Removals from Advanced Refrigeration Systems, Version 2.0 (the Methodology) • GHG Project Plan, dated December 2020
Verification Process	<ul style="list-style-type: none"> • ACR Validation and Verification Standard, Version 1.1, May 2018 • ISO 14064-3: Specification with guidance for the validation and verification of greenhouse gas assertions, 2006

The ACR Monitoring Report prepared by True for the reporting period was also used to inform the criteria applied to the verification process.

5. Overview of the Verification Process

To review the Projects' GHG information, the following verification process was used:

- conflict of interest review;
- selection of Audit Team;
- initial interaction and kickoff meeting with primary True contact;
- development of the verification plan and sampling plan;
- review and evaluation of GHG information systems and data;
- follow-up interaction with True contact for corrective action or supplemental data as needed; and
- final statement and report development.

The verification process was utilized to gain an understanding of the Projects' 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.

5.1 Conflict of Interest Review

Prior to beginning any third-party assessment, First Environment conducts an evaluation to identify any potential conflicts of interest associated with the engagement. No potential conflicts were found for these Projects. A project-specific conflict of interest form was also filed with the ACR for each Project.

5.2 Audit Team

First Environment's Audit Team consisted of the following individuals who were selected based on their verification experience, as well as familiarity with industrial gas operations:

Lead Verifier – Michael Carim
Verifier – Emily Saul
Independent Reviewer – James Wintergreen

5.3 Audit Kick-off

The audit process was initiated with a kick-off conference call on December 4, 2020 with the primary True contact. The meeting focused on confirming the audit scope, objectives, criteria, schedule, and the information required for the verification process.

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 verification process during the kick-off meeting. True was afforded the opportunity to comment on the key elements of the plan for verification. Based on items discussed and agreed upon with True, 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 and established project deliverables. A separate data-sampling plan was designed to review all project elements in areas of potentially high risk of inaccuracy or non-conformance.

5.5 Site Visit

Mr. Michael Carim performed a site visit at True's headquarters and manufacturing facility in O'Fallon, Missouri on November 14, 2019, and a site visit at True's Bowling Green, Missouri manufacturing facility on November 15, 2019 during previous validation/verification activities for True. The site visits included interviews with key personnel and facility tours to assess GHG project boundaries, site operations, data collection processes, and information management systems. The data management system assessed during these site visits is the same system utilized for data collection in the current Projects; therefore, no additional on-site inspection was warranted for the current verification process.

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 Audit Team made requests for corrective action and clarification during the verification process. True provided sufficient responses to all requests. These requests and True's responses are described in Appendix A of this report.

5.8 Verification Reporting

Verification reporting, represented by this report, documents the verification process and identifies its findings and results. Verification reporting consists of this report for True, along

with a verification statement. Both the report and statement are submitted to ACR as part of the verification reporting process.

6. Project Conformance with Verification Criteria

6.1 Project Eligibility

First Environment completed the validation of the Projects' GHG Project Plan in December 2020. This demonstrates that the Project is eligible under the Methodology.

The Projects do not currently participate in any other GHG emission trading or compliance programme and has not previously been rejected by another GHG programme.

6.2 Offset Title

True retains rights to GHG emission reductions associated with the refrigerant transition through equipment warranty terms and conditions with end users. Based upon the review of True's customer warranty, First Environment concluded that True holds title to emission reduction credits associated with the Projects.

6.3 Regulatory Compliance

True provided the required regulatory attestation to First Environment during the verification process. The attestation confirmed that the Projects complied with all laws and regulations for the duration of the reporting period and did not disclose any violations.

First Environment performed a check of the US EPA's ECHO database for the True facilities within the scope of the verification to further inform the regulatory compliance assessment. Database search results for the facilities did not identify any violations or instances of non-compliance during the reporting period.

6.4 Project Monitoring and Management System

The Projects were implemented in conformity with the GHG Project Plan. The primary parameters monitored, and their associated monitoring methodologies, are presented in Table 1 below.

TABLE 1: Parameters Monitored

Monitoring Parameter	Method of Estimation	Frequency of Measurement	Unit of Measurement	Frequency of Recording
Quantity of refrigerant used in the baseline system ($Q_{BR,j,i}$)	Sales records and Table 4 of Methodology	Each sale of refrigeration units	Kilograms	Each sale of refrigeration units
Quantity of alternative refrigerant used in the project system ($AR_{k,i}$)	Sales records and US EPA SNAP Regulation	Each sale of refrigeration units	Kilograms	Each sale of refrigeration units
Annual amortized emission rate of refrigerant in baseline system ($ER_{REF,j}$)	Table 4 of Methodology	Once at validation	Percentage	Once

Monitoring Parameter	Method of Estimation	Frequency of Measurement	Unit of Measurement	Frequency of Recording
Annual emission rate of alternative refrigerant in project system ($ERA_{REF,k}$)	Set equal to emission rate of baseline system	Once at validation	Percentage	Once
GWP of the baseline refrigerant ($GWP_{REF,j}$)	Table 4 of Methodology ¹	Once at validation	Dimensionless	Once
GWP of alternative refrigerant used in project system ($GWP_{REF,k}$)	Table 3 of Methodology	Once at validation	Dimensionless	Once

The Monitoring Report includes complete descriptions of the frequency, responsibility, and procedures for recording, storing, monitoring, and measuring all input parameters for required emission reduction quantification. The monitoring procedures described in the Monitoring Report and implemented on site are consistent with Section D of the GHG Project Plan and address all relevant monitoring requirements in the Methodology. The adequacy of the data management systems described in the monitoring plan was assessed during the site visit conducted prior assessment activities and through interviews with individuals holding responsibility for carrying out Project monitoring and data reporting.

6.5 Monitoring Instrument QA/QC

The Monitoring Report describes QA/QC procedures for data that meet the requirements of the Methodology. Specifically, datasets documenting sales of advanced refrigeration units can be compared to bills of lading to confirm equipment shipments. Further, the data management system used to record equipment sales and ARS equipment production serves as the basis for customer billing by True and is subject to both internal accounting controls and external audits, thereby providing an additional layer of quality assurance.

Due to the strong QA/QC procedures surrounding production and sales records, minimal data uncertainty is foreseen.

7. Verification Results

During the verification process, First Environment reviewed the Projects' Monitoring Reports, GHG emission reduction assertions, and supporting documentation for the current reporting period to ensure consistency with the GHG Project Plan and the Methodology. Discrepancies between Project documentation and the verification criteria were considered material and identified for corrective action. Additionally, First Environment assessed the GHG emission reduction assertions and underlying monitored data to determine if either contained material or immaterial misstatements. The results of these assessments are discussed in greater detail below.

7.1 GHG Information Verified

Emission reduction calculations were reviewed to ensure accuracy in the formulas used and the raw data used as inputs. Formulae were tested to ensure they were consistent with the

¹ Certain equipment within the scope of Advanced Refrigeration CAL - ARS 004B (ACR599) utilize a GWP of 1410. See Section 7.1 below for details.

calculation methodology described in the Methodology and GHG Project Plan. Total baseline emissions for were quantified in accordance with Equations 1 from the Methodology.

The quantity of refrigerant used in the baseline system ($Q_{BR,j,i}$) was calculated from sales data documenting the number of units, equipment type, and location of refrigeration units sold during each reporting period. Equipment type was designated based on the model identification codes of each unit and the corresponding default charge size was assigned for each transaction. Equipment type is supported by product specification sheets available on True's website. The quantity of units, geographic location, and model associated with each transaction can be traced through True's accounting system and is recorded on bills of lading.

In projects ACR598 and ACR600, the annual amortized emission rate of the baseline refrigerants ($ERA_{REF,j}$) and GWP of baseline refrigerants ($GWP_{REF,j}$) were correctly selected from the Methodology based on refrigerant segment type

For ACR599, True obtained a deviation approval to allow an alternate value for the parameter $GWP_{REF,j}$ to be applied for new medium temperature stand-alone refrigerators with a compressor capacity of 2,200 Btu/hour or less and without a flooded evaporator. The deviation was necessary because California regulations in force as of January 1, 2019 prohibit the use of HFC-134a in this class of equipment; therefore, the default GWP described in Table 4 of the Methodology is no longer valid. True obtained a deviation to allow the use of an alternate baseline refrigerant blend for this equipment category with an associated GWP of 1410. True further demonstrated that equipment compressor horsepower rating serves as a valid proxy to determine whether individual refrigeration units in the data set are subject to the California regulation and receive the alternate GWP.

For the remaining refrigeration units within the scope of ACR599 that are not subject to the California regulation in 2019, the default value for $GWP_{REF,j}$ was correctly selected from Table 4 of the Methodology based on refrigerant segment type. For all refrigeration units in ACR599, the annual amortized emission rate of the baseline refrigerants ($ERA_{REF,j}$) was correctly selected from Table 4 in the Methodology based on refrigerant segment type.

Project emissions associated with equipment operation and disposal were quantified using Equation 2 from the Methodology. The quantity of alternative refrigerant used in the project system was calculated from the same sales data used for the baseline system. The quantity of units and location of each sales transaction was used, and a maximum refrigerant charge size of 0.15kg was assumed for each unit sold based on the maximum allowable charge size for propane in stand-alone commercial refrigeration equipment specified by US EPA SNAP regulations. First Environment determined this charge size to be conservative in determining the quantity of alternative refrigerant used by the Projects.

The annual amortized emission rate of the alternative refrigerants ($ERA_{REF,k}$) was set equal to the emission rate of the baseline refrigerants and the GWP of alternative refrigerant ($GWP_{REF,k}$) was correctly selected from the Methodology.

Total emission reductions were computed using Equation 3 from the Methodology. All emission sources within the project boundary are properly accounted for in calculations.

7.2 Verification Assessment Techniques and Processes Employed

Copies of the sales data used in the calculations, including the equipment type and quantity of units sold by location and shipping bills of lading, were compared with the data used in the final calculations and tested for transcription or mathematical errors. First Environment sampled all areas identified as being of high risk of inaccuracy, uncertainty, or misstatement and performed other data checks in order to assess whether True sufficiently mitigated data uncertainty. The assessments performed on this data, as described above, confirmed the reliability of the evidence provided and verified the accuracy of the information flow. Additionally, First Environment performed recalculations of emission reductions for the entire reporting period to assess whether they were free of material misstatement. First Environment found the emission reduction calculations to be free of material misstatement.

The evidence provided was consistent with the requirements of the Methodology and the validated GHG Project Plan and meets generally accepted evidentiary standards for best practices in GHG accounting.

8. Audit Results

True provided good documentation for its emissions estimates as well as its procedures surrounding the data collection process. To complete the verification process, First Environment issued corrective action and clarification requests. Through communications with the Audit Team, True resolved all requests made by First Environment during the verification processes. The findings issued, as well as True's responses, are summarized in Appendix A of this report.

9. Verification Conclusion

First Environment was retained to provide verification services for the Projects' GHG emission reductions assertions based on the following fundamentals:

- *Level of assurance:* Reasonable assurance.
- *Objectives of verification:* To assure project conformance with the verification criteria and that the requirements of the ACR Validation and Verification Standard, Chapter 8.B are met.
- *Verification criteria:* American Carbon Registry Standard, Version 6.0, July 2019; Methodology for the Quantification, Monitoring, Reporting and Verification of Greenhouse Gas Emissions Reductions and Removals from Advanced Refrigeration Systems, Version 2.0; approved GHG Project Plan.
- *Definition of materiality:* Misstatements of greater than five percent of the GHG reduction assertion and qualitative non-conformities with verification criteria are considered material.
- *Scope, including:*
 - *Boundaries of the assertion:* Manufacturing plants where refrigeration unit manufacture occurs and use phase of the manufactured refrigeration units.
 - *The physical infrastructure, facilities, and activities within the assertion:* Stand-Alone Commercial Refrigeration equipment.

- *GHG sources, sinks, and reservoirs included within the assertions:* Emissions reductions (expressed in units of Carbon Dioxide equivalents (CO₂-e) resulting from refrigerant replacement; Project emissions from use of eligible refrigerant R-290 (propane)).
- *The time period for the assertions:* January 1, 2019 to December 31, 2019.

Based on the assessments performed and the historical evidence collected, First Environment concludes that the Projects' GHG emissions reductions, due to the transitions to a low-GWP refrigerant by the True manufacturing plants for the above-referenced time period, can be considered with a reasonable level of assurance:

- consistent with the GHG Project Plan,
- in conformance with the ACR standard and the Methodology, and
- without material discrepancy.

Verified results show:

ACR598

January 1, 2019 – December 31, 2019	Total
Baseline Emissions (m.t.CO ₂ e)	401,521
Project Emissions (m.t.CO ₂ e)	68
Emissions Reductions (m.t.CO ₂ e)*	401,452

*As measured and calculated in accordance with the Project Methodology

ACR599

January 1, 2019 – December 31, 2019	Total
Baseline Emissions (m.t.CO ₂ e)	44,581
Project Emissions (m.t.CO ₂ e)	9
Emissions Reductions (m.t.CO ₂ e)*	44,571

*As measured and calculated in accordance with the Project Methodology

ACR600

January 1, 2019 – December 31, 2019	Total
Baseline Emissions (m.t.CO ₂ e)	34,732
Project Emissions (m.t.CO ₂ e)	6
Emissions Reductions (m.t.CO ₂ e)*	34,725

*As measured and calculated in accordance with the Project Methodology

10. Lead Verifier Signature



Michael M. Carim
Senior Associate

11. Independent Reviewer Signature

A handwritten signature in black ink, appearing to read "James Wintergreen". The signature is fluid and cursive, with a large initial "J" and a long horizontal stroke extending to the right.

James Wintergreen
Senior Associate

APPENDIX A – Verification Findings

ID	Corrective Action Request	Summary of Participant Response	Verification Conclusion
1	An incorrect baseline default charge size is assigned to several types of equipment in the project dataset. See attachment for details.	The project datasets were revised to correct the identified charge size issues.	Response is acceptable.
2	<p>The following types of equipment in the project dataset for ACR599 appear to be incorrectly classified as Stand-alone medium-temperature units with a compressor capacity below 2,200 Btu/hr based on the confirmed horsepower rating for the model:</p> <p>FLM-27F~TSL01 TUC-44F-HC TUC-60F-HC TUC-67F-HC TUC-67F-HC~SPEC3 TWT-60-32F-HC GDM-19T-HC~TSL01 GDM-23-HC~TSL01 TVM-48SL-HC~VM01 TVM-48SL-HC~VM02</p> <p>See tab 'Misstatements' for detailed description.</p>	The project datasets were revised to correct the identified equipment classification issues.	Response is acceptable.
3	<p>The following sections of the Monitoring Reports do not address the requirements of the ACR Template:</p> <ul style="list-style-type: none"> Section VII does not discuss the desk review verification for the current reporting period. 	The Monitoring Reports were revised to resolve the issue in Section VII.	Response is acceptable.

ID	Clarification Request	Summary of Participant Response	Verification Conclusion
1	<p>Please confirm the horsepower rating for the following equipment models:</p> <p>TG2R-2S-HC TG1R-1S-HC GDM-41SL-48-HC-LD TG1R-1SLH-HC GDM-41CPT-48-HC-LD</p> <p>See tab 'Clarification Requests' for detailed description.</p>	True provided confirmation of the compressor horsepower rating for all requested equipment models.	Response is acceptable.

ID	Clarification Request	Summary of Participant Response	Verification Conclusion
2	<p>Please confirm the correct equipment type from Table 4 of the methodology for the following equipment models:</p> <p>TGO-36~TSL01 TCR1/2-CL-SS-DL-DR TDR48-RISZ1-L-B-SG-1 TDR48-RISZ1-L-X-SG-1 TDR52-RISZ1-L-B-SG-1 TDR52-RISZ1-L-S-SG-1 TDR52-RISZ1-L-S-SS-1 TDR48-RISZ1-L-B-SS-1 TDR48-RISZ1-L-S-SS-1 TDR60-RISZ1-R-B-SS-1</p>	<p>True provided confirmation of the equipment type for all requested model numbers.</p>	<p>Response is acceptable.</p>