



RUBY CANYON ENVIRONMENTAL

## Validation and Verification Report

# AC R629 Hudson Technologies HFC Reclamation Project Campaign 2020

September 30, 2021

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# TABLE OF CONTENTS

|        |                                                                   |    |
|--------|-------------------------------------------------------------------|----|
| 1      | Introduction.....                                                 | 3  |
| 1.1    | Objectives.....                                                   | 3  |
| 1.2    | Project Background.....                                           | 3  |
| 1.3    | Responsible Party.....                                            | 4  |
| 1.4    | Validation and Verification Team.....                             | 4  |
| 1.5    | Validation and Verification Criteria.....                         | 4  |
| 1.5.1  | Validation and Verification Standards, Guidelines, and Tools..... | 4  |
| 1.5.2  | Level of Assurance.....                                           | 4  |
| 1.5.3  | Materiality.....                                                  | 4  |
| 2      | Validation and Verification Process.....                          | 4  |
| 3      | Validation and Verification Findings.....                         | 5  |
| 3.1    | Project Boundary and Activities.....                              | 5  |
| 3.2    | GHG Sources Sinks, and Reservoirs.....                            | 6  |
| 3.3    | Eligibility.....                                                  | 6  |
| 3.3.1  | ACR Eligibility.....                                              | 6  |
| 3.3.2  | Methodology Eligibility.....                                      | 7  |
| 3.4    | Additionality.....                                                | 7  |
| 3.4.1  | Regulatory Additionality Test.....                                | 7  |
| 3.4.2  | PracticedBased Performance Standard Test.....                     | 8  |
| 3.5    | Permanence.....                                                   | 8  |
| 3.6    | Environmental and Community Impacts.....                          | 8  |
| 3.7    | Local Stakeholder Consultation.....                               | 8  |
| 3.8    | Baseline Scenario.....                                            | 8  |
| 3.9    | Data Management System and Monitoring Plan.....                   | 9  |
| 3.10   | Project Data and GHG Emissions Reduction Assertion.....           | 9  |
| 3.10.1 | Baseline Emissions.....                                           | 9  |
| 3.10.2 | Project Emissions.....                                            | 9  |
| 3.10.3 | Emissions Reductions.....                                         | 10 |
| 4      | Validation and Verification Results.....                          | 10 |
| 5      | Validation and Verification Conclusion.....                       | 10 |
| 6      | Appendix A–Documents Reviewed.....                                | 12 |
| 7      | Appendix B–List of Findings.....                                  | 13 |

# 1 INTRODUCTION

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Hudson Technologies Company (Hudson) contracted with Ruby Canyon Environmental, Inc. (RCE) to perform the validation and verification of the ACR 629 Hudson Technologies HFC Reclamation Project Champaign 2020 (Project) for the reporting period February 12, 2020 through December 22, 2020 a crediting period of February 12, 2020 to February 11, 2030 under the American Carbon Registry (ACR) program. This report is documentation of validation and verification activities that RCE performed for the Project located in Champaign, Illinois. For the validation, RCE reviewed the project information as described in the Project Plan "Hudson Technologies HFC Reclamation Project Champaign 2020" September 30, 2021. For the verification, RCE ensured that the GHG assertion was materially correct, that the data provided to RCE was well documented, and that Hudson made any material errors, that these errors were corrected.

## 1.1 OBJECTIVES

The objectives of the validation are to evaluate:

- Conformance to the ACR standard and the approved ACR Methodology for Certified Reclaimed HFC Refrigerants (Methodology);
- GHG emissions reduction project planning information and documentation in accordance with the applicable ACR approved methodology, including the project description, baseline, eligibility criteria, monitoring and reporting procedures, and quality assurance/quality control (QA/QC) procedures;
- Reported GHG baseline, ex ante estimated project emissions and emission reductions/removal enhancements, leakage assessment, and impermanence risk assessment and mitigation (if applicable).

The objectives of the verification are to evaluate:

- The emission reductions and to ensure that the assertion is materially correct;
- The data provided to RCE can be documented and if errors or omissions are detected, they be corrected

RCE retains all data and documents for seven years after the end of the project reporting period or for the duration required by the GHG program, whichever is longer

## 1.2 PROJECT BACKGROUND

The Project reclaims the HFCs R-134a, R-404a, R407c, and R410a from refrigerant recovery jobs. The project uses the reclaimed HFC to charge or recharge refrigeration or air conditioning equipment to avoid the future production and use of virgin HFCs

## 1.3 RESPONSIBLE PARTY

### Project Proponent

Hudson Technologies Company  
3402 N Mattis Ave.  
Champaign, IL 61822  
Jonathan Stack, Director of Sustainability  
802-496-3233  
[jstack@hudsonotech.com](mailto:jstack@hudsonotech.com)

## 1.4 VALIDATION AND VERIFICATION TEAM

Lead Validator and Verifier Nina Pinette  
Internal Reviewer Phillip Cunningham  
Team Member Garrett Heidrick

## 1.5 VALIDATION AND VERIFICATION CRITERIA

### 1.5.1 Validation and Verification Standards, Guidelines, and Tools

- Hudson Technologies HFC Reclamation Project Champaign 2020 Plan v4 (September 30, 2021)
- Hudson Technologies HFC Reclamation Project Champaign Monitoring Report (September 30, 2021)
- ACR Standard, Version 7.0 (December 2020)
- ACR Validation and Verification Standard Version 1.1 (May 2018)
- Certified Reclaimed HFC Refrigerants, Version 1.1 (September 2018) (Methodology)
- ISO 14064:2006 "Greenhouse gases – Part 3: Specification with guidance for the validation and verification of greenhouse gas assertions"

### 1.5.2 Level of Assurance

The verification was conducted to a reasonable level of assurance.

### 1.5.3 Materiality

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

As the first step in validation/verification activities, the Lead Validator/Verifier developed a Validation/Verification Plan to be followed throughout the validation and verification. The plan included the following activities:

- RCE completed a COI form April 26, 2021 to identify any potential conflict of interest with the Project or Project Developer. The COI form was approved by ACR May 5, 2021.
- RCE and Hudson held a validation/verification kickoff meeting on February 5, 2021. During the kick-off meeting RCE reviewed the validation/verification objectives and process, reviewed the schedule, and submitted an initial document request.
- RCE performed a strategic review and risk assessment of the received data and support documents to understand the scope and areas of potential risk in the GHG emissions reductions. In response to the COVID-19 pandemic, ACR approved RCE to conduct the site visit virtually. RCE assessed the risk of conducting a virtual site visit instead of an on-site as part of its risk assessment.
- RCE developed a risk-based sampling plan based upon the strategic review and risk assessment. The validation/verification plan and sampling plan were used throughout the process and were revised as needed based upon additional risk assessments.
- RCE conducted a virtual site visit to Hudson's facility in Champaign, IL on June 17, 2021, using the real-time video web meeting and screen sharing platform Microsoft Teams. During the site visit RCE observed the HFC reclamation process and site GHG management systems and data gathering, monitoring, and handling practices and interviewed key personnel. The use of this method was effective in achieving the verification objectives. RCE met with the following personnel during the virtual site visit:
  - Jon Stack - Director of Sustainability, Hudson Technologies
  - Andrew Smith - Assistant Plant Manager, Hudson Technologies
- RCE performed a risk-based desktop review of the submitted validation/verification documents. The desktop review included an assessment of the GHG calculation methods and inputs, source data completeness, GHG management and monitoring systems and eligibility documentation.
- RCE submitted requests for corrective actions, additional documentation, and clarifications as necessary to Hudson throughout the validation/verification.
- RCE's internal reviewer conducted a review of the validation/verification sampling, report, and statement.
- RCE issued a final validation/verification report, verification statement, and list of Findings.
- RCE held an exit meeting with Hudson.

### 3 VALIDATION AND VERIFICATION FINDINGS

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#### 3.1 PROJECT BOUNDARY AND ACTIVITIES

RCE reviewed the project boundary and activities and confirmed that both were appropriately identified and described in the Project Plan for the Project. Hudson receives recovered HFCs from various contractors, wholesale partners, and other direct sales to Hudson. Hudson claims the HFCs at its Champaign, IL facility. Hudson is a U.S. EPA-certified reclaimer.

Recovered refrigerants are sent through Hudson's reclamation equipment, which removes impurities, dries the gas, and bulks the material into the proper storage tanks. If the recovered refrigerant is mixed or very dirty, it is sent through distillation towers, which heats up the refrigerant to a very specific

temperature that allows the machine to separate it from the other materials. Once it is separated, it is cooled, condensed, and sent to the proper bulk storage tank. Both reclamation machine and distillation towers reclaim HFC to industry specification in order to be sold to HVAC customers for use in equipment operations and servicing/recharging to replace refrigerant that leaks or to charge newly manufactured refrigeration or air conditioning equipment. The finished product meets AHRI 70015 Standard for Specification for Fluorocarbon Refrigerants and is sold for use in HVAC and refrigeration equipment.

The Project's temporal boundary is the crediting period from February 12, 2020 to February 11, 2030.

## 3.2 GHG SOURCES SINKS, AND RESERVOIRS

Table 1 shows the GHG emission sources included in the project boundary based on the Methodology. RCE confirmed that the Project Plan appropriately identifies the offset project boundary and includes all relevant SSRs.

**Table 1. GHG Emissions Sources**

| Source            | GHG              | Description                                                                      |
|-------------------|------------------|----------------------------------------------------------------------------------|
| Baseline          | C <sub>2</sub> e | Emissions from the use of virgin HFCs in refrigeration or conditioning equipment |
| Project Emissions | N/A              | Per the Methodology, Project emissions are not considered.                       |
| Leakage           | N/A              | Per the Methodology, Leakage is not considered.                                  |

## 3.3 ELIGIBILITY

### 3.3.1 ACR Eligibility

RCE confirmed the following ACR eligibility criteria listed in the ACR Standard, Version 7.0 by reviewing the project proponent's Project Plan, Monitoring Report, and calculations as well as other supporting documentation described throughout this report (a full list of documents reviewed is in Appendix A).

- **Start Date:** The project start date is February 12, 2020
- **Crediting Period:** The crediting period is ten years as specified by the Methodology February 12, 2020– February 11, 2030
- **Minimum Project Term:** Projects with no risk of reversal subsequent to crediting have no required minimum project term.
- **Offset Title:** RCE confirmed that the project proponent has undisputed title to all offsets. The project proponent purchases HFCs from refrigerant recovery jobs, claims the HFCs, and sells them directly to end customers or through distributors. The reclaimed HFC change possession once they are sold or transferred to a distributor, wholesaler, service technician, and end user. All HFC transactions are described by Hudson's invoices. Hudson retains all legal claims to the environmental attributes and GHG benefits of its processes and the avoidance of the production of virgin HFC refrigerant. Hudson also owns the facility where the HFC are reclaimed.

- Additional: RCE confirmed that the project is additional as described in Section 3.3.1.
- Permanent: In the absence of the project, virgin HFCs would have been produced and used in HVAC or refrigeration equipment. The project will generate emission reductions that are permanent and have no risk of reversal.
- Net of Leakage: The Methodology specifies that leakage does not need to be considered as unlikely that any emissions would occur outside the project boundary.
- Independently Validated and Verified: RCE is a third-party validation and verification body that the project proponent has contracted to validate the project.
- Community & Environmental Impacts: RCE reviewed project impacts as described in Section 3.3.2 of this report.

### 3.3.2 Methodology Eligibility

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

- The Project occurs in the United States. The reclamation facility is located at 3402 N Mattis Ave. Champaign, IL 61822 with GPS coordinates 40.15603, -88.27619.
- The Project is within a sector and segment which has a low adoption rate for the relevant project activity.
- The refrigerant meets the definition of a certified reclaimed HFC refrigerant, which is an "HFC that has been reclaimed by an EPA-certified reclaimer to meet the AHRI 70015 Standard for Specifications for Fluorocarbon Refrigerants by an EPA certified reclaimer and tested by an certified refrigerant testing laboratory to meet the AHRI Standard."

## 3.4 ADDITIONALITY

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.

### 3.4.1 Regulatory Additionality Test

No existing laws or regulations mandate the Project activity or reclamation of HFCs in 2019 and 2020, there were no requirements to reclaim HFCs. Hudson is an EPA-certified reclaimer of HFCs. The EPA does not require certified reclaimers to reclaim used HFCs. Additionally, RCE reviewed federal and state requirements for facilities who manage used HFCs and found no evidence that HFCs are required to be reclaimed, therefore, the project passes the regulatory additionality test.

At the time of validation and verification, the American Innovation in Manufacturing Act (AIM) enacted in December 2020, which directs the U.S. EPA to address the environmental impact of HFCs by phasing down production and consumption, maximizing reclamation and minimizing releases from equipment, and facilitating the transition to next-generation technologies through sector-based restrictions, does not affect the Project because the rulemaking process directed by the act is still underway. ACR considers ERTs issued by the Project to be additional.

### 3.4.2 Practiced-Based Performance Standard Test

Per the Methodology, all relevant sectors and segments (Table 1 of Methodology) have a low market adoption rate for using certified reclaimed HFCs. Moreover, current industry information indicates that there are very small quantities of HFCs from MDIs that are being recovered in the United States. Therefore, the project passes the performance standard test.

## 3.5 PERMANENCE

The emissions reductions from the use of certified reclaimed HFC refrigerants can be deemed as permanent because they displace the production and use of virgin HFCs.

## 3.6 ENVIRONMENTAL AND COMMUNITY IMPACTS

The project plan includes a comprehensive summary of the project activity's net positive environmental impacts. Reclaiming HFCs avoids the production and use of virgin HFCs and their eventual leakage from HVAC or refrigerant equipment into the atmosphere. There are no negative community or environmental impacts for this project. Hudson holds all required environmental permits to construct and operate the reclaimed HFC facility. The Project Plan also identifies contributions as aligned with relevant sustainable development goals (SDGs) including Industry, Innovation, and Infrastructure; Responsible Consumption and Production; and Climate Action.

The validation team confirmed that the project activity is not expected to promote significant negative environmental impacts.

## 3.7 LOCAL STAKEHOLDER CONSULTATION

Not applicable for this Project. The Methodology does not require public consultation from stakeholders.

## 3.8 BASELINE SCENARIO

The baseline determines the emissions that would occur in the absence of the project. The project activity is the use of reclaimed HFC refrigerants to displace the use of virgin HFC refrigerants. GHG emissions are avoided because in the baseline scenario, the virgin HFC refrigerants would have been used to charge or recharge refrigeration or air conditioning equipment causing GHG emissions to be released. Instead, the reclaimed HFC refrigerants are being extracted, cleaned to virgin quality, and used, thus avoiding those emissions. The Methodology establishes the baseline scenario as the continued use of virgin HFC refrigerants. RCE confirmed that the Project Plan appropriately identifies the baseline scenario.

### 3.9 DATA MANAGEMENT SYSTEM AND MONITORING PLAN

RCE reviewed Hudson's processes for data collection and management and determined that they were sufficient to meet all ACR Methodology requirements. The validation/verification team gained an understanding of the controls put in place to account for the HFC received, reclaimed, and sold in the Project through interviews with key personnel, the virtual site visit to Hudson's reclamation facility, and the review of all documentation provided by Hudson. Hudson monitors the amount of HFC that are reclaimed and sold back into the market. Hudson's scales are calibrated quarterly. This activity is completed by Walz Scale Co. The reclaimed HFC are analyzed by Hudson's AHRI 700 certified laboratory to ensure it meets all purity requirements.

Hudson's Project Plan includes a Monitoring Plan that identifies all monitored data and parameters. RCE confirmed that the monitoring parameters and approaches conform to the methods required by the Methodology. The plan includes all relevant data parameters and appropriately identifies units of measurements, data sources, methodologies, uncertainty, monitoring frequency and procedures, and QA/QC procedures. After discussions with Hudson and reviews of project documents, RCE determined that the Monitoring Plan accurately reflects how Project data is monitored and recorded and there are no deviations relevant to the Project activity against the requirements of the Methodology. Hudson implemented the monitoring plan as stated in the Project Plan during Project activity.

### 3.10 PROJECT DATA AND GHG EMISSIONS REDUCTION ASSERTION

RCE reviewed the Project Plan and Project data and calculations to ensure that appropriate equations were used in calculating baseline emissions, project emissions, and emissions reductions.

#### 3.10.1 Baseline Emissions

Baseline emissions include the emissions that would occur without the use of certified reclaimed HFCs. They are equal to the total amount of reclaimed HFC refrigerant produced and the subsequent sale, title transfer or return to a refrigerant distributor, refrigerant wholesaler, or an end user for use in refrigeration or air conditioning equipment during the reporting period. In the absence of the project, most of the refrigerant used to recharge the system would have come from virgin HFC produced and some would come from the HFCs that would normally be reclaimed.

Baseline emissions are calculated by multiplying the amount of reclaimed HFC used to (re)charge equipment by a specified 1% year loss rate of displaced virgin HFC. Total weight of displaced HFC is then multiplied by the specified Global Warming Potential of the displaced virgin HFC.

#### 3.10.2 Project Emissions

Per the Methodology, any project related emissions from the use of reclaimed refrigerant, for example, from transport of certified reclaimed HFCs, are considered negligible and outside the project boundary. Thus, project activity emissions are zero.

### 3.10.3 Emissions Reductions

RCE verified that Hudson calculated emission reductions according to relevant Methodology equations and that the methods are included in the Project Plan.

RCE calculated emission reductions for the reporting period according to the equations defined in the Methodology and the Project Plan and found the assertion to be free of material misstatement. RCE's calculated ERTs are shown in Table 2.

**Table 2. RCE-calculated ERTs**

| Reporting Period                       | RCE ERTs<br>(MTCO <sub>2</sub> e) | Hudson ERTs<br>(MTCO <sub>2</sub> e) |
|----------------------------------------|-----------------------------------|--------------------------------------|
| February 12, 2020 to December 22, 2020 | 593,978                           | 593,326                              |

## 4 VALIDATION AND VERIFICATION RESULTS

RCE developed the List of Findings for both the validation and verification notifying Hudson of corrective action requests (CARs), additional documentation requests (ADRs), and clarification requests (CRs). Hudson appropriately responded to all items in the List of Findings. The List of Findings is provided as Appendix B.

## 5 VALIDATION AND VERIFICATION CONCLUSION

RCE conducted a risk-based validation and verification of the Hudson Campaign project that included a strategic review of the project data, documentation, and emission reduction calculations. The objective of the validation activities was to assess the project design, baseline scenario, and monitoring plan and to ensure compliance of the Project Plan to the assessment criteria defined in Section 1.5.1. The objective of the verification activities was to conduct an independent assessment of the project reporting period and ex-post GHG emission reductions resulting from the Project.

Based on the review and the historical evidence collected, RCE concludes to a reasonable level of assurance that the GHG assertion is free of material misstatement. The emission reductions resulting from HFC reclamation for the reporting period of February 12, 2020 to December 22, 2020 can be considered in conformance with the:

- ACR Standard, Version 1.0 (December 2020)
- ACR Validation and Verification Standard Version 1.1 (May 2018)
- Certified Reclaimed HFC Refrigerants, Version 1.1 (September 2018)
- ISO 14064:2006 "Greenhouse gases – Part 3: Specification with guidance for the validation and verification of greenhouse gas assertions"

Table 3 provides a summary of the emissions reductions.

**Table 3. Emissions Reductions**

| <b>Vintage</b> | <b>Baseline Emissions<br/>(MTCO<sub>2</sub>e)</b> | <b>Project Emissions<br/>(MTCO<sub>2</sub>e)</b> | <b>Emissions Reductions<br/>(MTCO<sub>2</sub>e)</b> |
|----------------|---------------------------------------------------|--------------------------------------------------|-----------------------------------------------------|
| 2020           | 593,326                                           | 0                                                | 593,326                                             |

**Lead Validator and Verifier**



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Nina Pinette

**Internal Reviewer**



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Phillip Cunningham

## 6 APPENDIX A—DOCUMENTS REVIEWED

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1. Scale Calibrations
2. 2020 EPA equipment list
3. Hudson regulatory compliance attestation
4. Hudson Campaign Project Plan
5. Hudson Campaign Monitoring Report
6. Hudson Campaign Listing Form
7. Sales documentation
8. Purchase documentation
9. AHRI 700 tests for all HFCs sold
10. Reclamation process overview
11. Hudson HVAC technician certifications
12. Hudson's listing on the EPA's website as a U.S. EPA Certified Refrigerant Reclaimer

## 7 APPENDIX B—LIST OF FINDINGS

Includes Corrective Action Requests (CAR), Additional Documentation Requests (ADR) and Clarification Requests (CR)

| Request #    | Finding                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Section of Standard or Methodology | Material Misstatement (MM) or Non-Conformance (NC) | Project Proponent Response                                  | RCE response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Additional Project Proponent Response | Additional RCE response                                                                                                                                                                                                                                             | Additional Project Proponent Response           |
|--------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|----------------------------------------------------|-------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|
| <b>CAR 1</b> | In the Monitoring Report please address the following:<br>- Remove instructions<br>- Section II. 7: Add ACR Standard version and remove the Protocol.<br>- Section V. 2: Remove italics. Provide a statement the length of time that data is stored.<br>- Section VI. 1 and 5: Please provide calculations.<br>- Section VII. 1: SCS Global is listed for the verification party.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Monitoring Report Instructions.    | C                                                  | Amended and sent via email                                  | Please address the following:<br>- Section II. 2: Reporting period the first and last date of HFC sold.<br>- Section II. 5: Start date is when the first HFC was sold to a customer. First sale was on 2/12/20.<br>- Section II. 6: Crediting period needs to be ten years, starting on 2/12/20.<br>- Section VI. 1 and 5: Emissions are based on sold weight.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Fixed                                 | Section VI.1 and Emissions and Emission Reductions value is incorrect.<br>All others corrected.                                                                                                                                                                     | Corrected<br>Closed: 9/23/21.                   |
| <b>CAR 2</b> | In the Project Plan please address the following:<br>- Section A4: Add Zip Code for Champaign, IL.<br>- Section A5: Add headings for "Description of Project Activity" and "Project Purpose and Objective."<br>- Section A6 Description of Prior Physical Condition: Describe the conditions of the project.<br>- Section A6 Achieve GHG Reductions: Describe the process that Hudson uses to reclaim and clean HFCs back to virgin quality.<br>- Section A6 Description of Project Technologies: Describe the system/equipment/technology used to process reclaimed HFCs and purify them back to virgin quality.<br>- Section B3: Add temporal boundary<br>- Section E1: All refrigerant weight does not match the weights provided in the purchase spreadsheets or the ER Cals.<br>- Section E2: Remove blank page #24<br>- Section E5: Move graphic from Section E2 to E5, but Section A6 shows ex ante emissions. Please include vintage 2020 ERs in this section.<br>- Section H1: The start date is based on the first sale of HFC.<br>- Section H2: Crediting period is not ten years. | Project Plan Instructions          | C                                                  | Amended and sent via email                                  | Please address the following:<br>- Section A3: 'Start Date' is listed as January 9, 2020. First sales of HFC was 2/12/2020.<br>- Section A7: 'Lbs reclaimed and sold' weight should be the sold weight, not the purchased weight.<br>- Section A8 Remove instructions.<br>- Section B1 and B2: Remove instructions.<br>- Section B3: Second paragraph references the timeline of the project. This timeline is based on sales not purchases. The first sold HFC is 2/12/20 and the last sold is 12/22/20.<br>- Section E1: HFC <sub>1,2,3</sub> weights are based on sold HFCs.<br>- Section E5: ERs are based on sold weights.<br>- Section E6: 'Lbs reclaimed and sold' weight should be the sold weight, not the purchased weight.<br>- Section H1: Start date and end date are based on sold HFC dates. First sales date is 2/12/20, last sales date is 12/22/20.<br>- Section H2: 'Initiation of Project Activities' is based on first sold date. 'Project Term' see H1 above. 'Crediting Period' must be ten years. | Fixed and Uploaded                    | Please address the following:<br>- Sections A, E1, E5, and E6: 410a values are incorrect and do not match what is provided in Calculation Worksheet v2. See CAR 3.<br>All others corrected.<br>Section H1 still includes January 9, 2020 as the Project start date. | Corrected Items<br>Closed: 9/23/21 and 9/30/21. |
| <b>CAR 3</b> | Value in Calculation Worksheet v2 for 410a does not match total sold value provided in 410a Sales HFC Project 2020 Champaign. The Calculation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Methodology Section 5.2            | C                                                  | One sale for 100# of 410a was removed, calculations updated | Corrected. Closed: 9/23/21.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                       |                                                                                                                                                                                                                                                                     |                                                 |

|       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |   |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                     |                                                                                                                                             |                                                                            |                  |
|-------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|--|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|------------------|
|       | Worksheet shows 677,939 lbs while the Sales Worksheet shows 677,975.<br><br>Purchased R10a weight is 677,939.081 weight is 677,975. Please remove one sale from R10a so that the sold weight is less than the purchased weight.<br><br>The Project Monitoring Report does not use the most recent version of the ACR Monitoring Report template (version 3.0).<br>Additionally, the Monitoring Report template section IX, Required Attestations does not include a regulatory compliance attestation, so please include that attestation in Section III: Project Details, 4 Regulatory Compliance or as a separate document attachment.<br><br>Please provide sales documentation for all refrigerant sold in order to verify that reclaimed refrigerant is being sold to an eligible end user. |   |  |  | Monitoring Report revised and a separate attestation letter provided.                                                                                                                                                                                                                                                                                                                                                                                           | Closed: 9/30/2021                                                                                                   |                                                                                                                                             |                                                                            |                  |
| CAR 4 | Monitoring Report Instructions.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | C |  |  | Provided to Dropbox                                                                                                                                                                                                                                                                                                                                                                                                                                             | Spreadsheet provided. Each is tied to what industry it is going to and lists customer's name.<br><br>Closed: 8/9/21 |                                                                                                                                             |                                                                            |                  |
| ADR 1 | Methodology Section 1.1.1 Table 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | C |  |  | Provided to Dropbox                                                                                                                                                                                                                                                                                                                                                                                                                                             | Sales information provided.<br><br>Closed: 8/9/21                                                                   |                                                                                                                                             |                                                                            |                  |
| ADR 2 | Methodology Section 1.3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | C |  |  | Removed this material from the project                                                                                                                                                                                                                                                                                                                                                                                                                          | Material removed.<br><br>Is there a reason why all material in R-134a from November and December has been removed?  | The last COA for R-134a was 12/1/20                                                                                                         | Closed: 9/23/21.                                                           |                  |
| ADR 3 | Methodology Section 5.2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | C |  |  | Removing R422d                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Removed from project<br><br>Closed: 8/9/21                                                                          |                                                                                                                                             |                                                                            |                  |
| ADR 4 | Methodology Section B.2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | C |  |  | Our Towers and Beasts are all single plate distillation. Basically the liquid heated, and all the impurities stay behind waste. The waste is sent to for recycling. The moisture is also filtered out for final drying using filter dryers. The noncondensables are removed by pulling vapor off the top of the liquid refrigerant so that they are below the AHR1700 standard. Once all the gas meet AHR1700 standard we would package and resell the product. | COAs provided                                                                                                       | Please provide the following:<br>-R-407C: 10/6/2020 COA 20231.<br>-R-410A: 4/28/2020 COA 20096;<br>5/21/2020 COA 20115; 7/10/2020 COA 20149 | COAs uploaded to Dropbox, COA 20231 is a typo, correct COA number for that | Closed: 9/17/21. |
| ADR 5 | VVS standard Section 1.C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | C |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                     |                                                                                                                                             |                                                                            |                  |
| ADR 6 | Methodology Section 5.2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | C |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                     |                                                                                                                                             |                                                                            |                  |

