



Project Data Report

US Nitric Acid Production Protocol v3.0

CAR 1335 Coffeyville NAP2 – RP11

Project Site

Coffeyville Resources Nitrogen Fertilizer, LLC

Coffeyville, KS

Prepared for:

Agri-Waste Technology (AWT)

501 N Salem St Ste 203, Apex, NC 27502

Account Holder	ClimeCo Corp MCK NAP2, LLC
Project ID and Name	CAR1335 Coffeyville NAP2
Cooperative/Aggregate ID (if applicable)	N/A
Current Reporting Period Dates	02/25/2025 – 10/04/2025
Protocol Version	Nitric Acid Production V3.0
Claimed CRTs by Vintage	2025-RP11 ---- 128,333 credits
Date Submitted	11/04/2025

Prepared by:

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Foreword

The contents of this report have been prepared for review by the verification body listed on the cover page in compliance with the Climate Action Reserve (The Reserve) project documentation requirements detailed in section 3.3.10 of the Reserve Program Manual v9.2. for verification purposes. Information in this report is not to be shared with any outside party until after the conclusion of the verification process, at which point this document will be made publicly available by The Reserve. Any questions should be directed to the ClimeCo representative designated on the cover page.

Project Description

Coffeyville Resources Nitrogen Fertilizers (CRNF) produces nitrogen fertilizers for commercial sale. Various raw material streams are delivered to CRNF from the adjacent CRRM refinery and the Messer air separation unit which are converted into Syngas in the petroleum coke gasification unit. The resulting Syngas is further processed, as per industry standards, in several steps to produce anhydrous ammonia and urea ammonium nitrate (UAN). Nitric acid production is an intermediate step in the production of UAN. Source emissions associated with plant operations include the discharge from two Nitric Acid Tail Gas Stacks. The project consists of the installation of a tertiary abatement catalyst on the Girdler High Pressure NAP2 at the Coffeyville Kansas facility. The technology will deploy a Shell/CRI tertiary catalyst system downstream of the ammonia oxidation reactor, decomposing the nitrous oxide that would have otherwise been vented to the atmosphere.

Project Developer and Participants

Current Project Participants include the Offset Project Operator, ClimeCo LLC (ClimeCo) and the Project Facility Owner/Operator, Coffeyville Resources Nitrogen Fertilizer, LLC (CRNF).

CRNF serves as the owner and operator of the tertiary abatement catalyst system, personal property, equipment, fixtures and appurtenances comprising the Project (collectively, "the Project Equipment".) Additionally, CRNF owns and manages the nitric acid production operation and the property. ClimeCo is the sole owner of all Intellectual Property in respect of the project, and coordinates monitoring and reporting.

ClimeCo MACK NAP2 LLC is a wholly owned subsidiary of ClimeCo LLC.

Technical Consultant(s): ClimeCo LLC

Other Parties with Material Interest (entity name and role):

Entity Signing Attestation of Title: ClimeCo Corp MCK NAP2, LLC.

Additional Information:



Protocol Eligibility Requirements

Eligibility Rules for CAR1335 are found in section 3.1 through 3.5 in the US Nitric Acid Production Protocol v3.0. Project compliance with the requirements are summarized in the table below.

	Rule	Requirement	Data
a	Location	U.S. and its tribal lands and territories	The project is located in Coffeyville, Kansas, USA.
b	Project Start Date	No more than 12 months prior to project submission	The project was submitted on 04/02/2019, project start date was 10/27/2019
c	Project Crediting Period	Emission reductions may only be reported during the crediting period; the crediting period may be renewed one time	The emissions reductions claimed within the current reporting period (RP11, 02/25/2025 – 10/04/2025) have been achieved during the project's first crediting period (10/26/2019 – 10/26/2029).
d	Additionality	Meet performance standards, exceed regulatory requirements	There are currently no regulatory requirements for the abatement of N₂O resultant from the nitric acid production process. The technology installed within the scope of the project meets and exceeds industry standard practices. Performance Standard Test: Tertiary N₂O Abatement catalyst, including catalytic decomposition or NSCR Legal Standard Test: We have confirmed that there are currently no laws requiring the abatement of N₂O at the plant. In addition, CRNF monitors any change in regulations that may affect eligibility. AWT reviewed CRNF's renewed Title V Permit which expires on December 20, 2026. ClimeCo has accurately completed the Attestation of Voluntary Implementation form and uploaded it to the Reserve.
e	Regulatory Compliance	Compliance with all applicable laws	A survey of all regulatory violations incurred by the Site within the reporting period dates has been conducted as part of verification activity and submitted for the verifier's review. There are no regulatory violations for this reporting period that have been caused by project activity.



GHG Assessment Boundary

SSR	Source Description	Gas	Baseline (B) or Project (P)
1 – Nitric Acid Production	Nitric acid process unit (burner inlet to stack)	N ₂ O from reaction byproduct	B, P
4 - Ammonia Used to Operate SCR De-NOX Unit (included if ammonia is an input to the N ₂ O destruction facility)	GHG emissions from production of ammonia used in tertiary abatement for N ₂ O destruction	CO ₂ , CH ₄ , N ₂ O	B, P
5 - Hydrocarbon Input	Hydrocarbon used as reducing agent and/or reheating the tail gas	CO ₂ , CH ₄	P
7 - External Energy to Reheat Tail Gas	May be used to reheat the tail gas before entering the tertiary catalyst or NSCR	CO ₂ , CH ₄ , N ₂ O	P

Quantifying GHG Emission Reductions Methodologies

This section discusses the quantification methodologies used in generating the Emission Reduction (ER) Assertions for CAR1335 RP11. The quantification of ERs has been performed in accordance with section 5 of the Nitric Acid Production Protocol v3.0.

Baseline emissions for a tertiary catalyst project include the N₂O data collected during project operations in the tail gas before it enters the tertiary abatement technology. Emissions are calculated based on the equations provided within the Protocol.

Inputs include volume of flow rate into the destruction facility during the reporting period; N₂O concentration at the inlet of the destruction facility; N₂O concentration at the outlet of the destruction facility; operating hours; global warming potential of N₂O; amount of nitric acid produced during the period; maximum annual nitric acid production; and a default baseline emission factor for new production in excess of the baseline.

To determine HNO₃MAX, five consecutive campaigns of historic data were used to calculate five values, each representing average HNO₃ production levels during a one campaign period at the process unit where the project is located. Average HNO₃ production was calculated by averaging daily HNO₃ production data over a campaign, excluding days when the nitric acid plant was not operating.



Project emissions include the N₂O generated from the ammonia oxidation reaction at the primary catalyst gauze (main emissions source), emissions resulting from the operation of the tertiary abatement facility, emissions resulting from the use of hydrocarbons as a reducing agent or to reheat tail gas and emissions resulting from the external energy used to reheat tail gas during the reporting period.

GHG emission reductions from a tertiary nitric acid project are quantified by comparing actual project emissions to actual baseline emissions.

Quantifying Baseline Emissions

Allowable Operating Conditions:

Oxidation temperature range: 857°C – 997°C

Oxidation pressure range: 4.90 Bar – 9.17 Bar

Maximum ammonia-to-air ratio input into the AOR: 9.92%

☒ Option (a): The best available historical data for the operating range of temperature and pressure, and maximum ammonia-to-air ratio from the previous five campaigns.

Vintage: 2025	Vintage:
HNO ₃ ,MAX, scaled: 83,927 tHNO ₃	HNO ₃ ,MAX, scaled:
Baseline Emissions: 170,554 tCO ₂ e	Baseline Emissions:

Quantifying Project Emissions

Vintage: 2025	Vintage:
Emissions from the N ₂ O in the tail gas during the reporting period: 42,221 tCO ₂	Emissions from the N ₂ O in the tail gas during the reporting period:
Emissions from the ammonia input used to operate the tertiary catalyst facility during the reporting period: 0 tCO ₂	Emissions from the ammonia input used to operate the tertiary catalyst facility during the reporting period:
Emissions from the use of hydrocarbons as a reducing agent or to reheat tail gas during the reporting period: 0 tCO ₂	Emissions from the use of hydrocarbons as a reducing agent or to reheat tail gas during the reporting period:
Emissions from the external energy used to reheat the tail gas during the reporting period: 0 tCO ₂	Emissions from the external energy used to reheat the tail gas during the reporting period:
Project Emissions: 42,221 tCO ₂ e	Project Emissions:



Final CRT Summary

Vintage: 2025	Vintage:
Baseline Emissions: 170,554 tCO ₂ e	Baseline Emissions:
Project Emissions: 42,221 tCO ₂ e	Project Emissions:
Total GHG Emission Reductions/Removals: 128,333 tCO ₂ e	Total GHG Emission Reductions/Removals:

Environmental and Social Impacts

The Project's Environmental and Social Impacts are discussed in detail in the Environmental and Social Safeguards Assessment Form submitted to the Registry pursuant to CAR Program Manual Requirement 3.3.10.3.

Variance Request

Date of Variance Request: 10/23/2025

Protocol Section and Rule/Requirement: Section 5.1.2

The allowable ranges at the NAP shall be determined based on one of the following sources: (a) The best available historical data for the operating range of temperature and pressure, and maximum ammonia-to-air ratio from the previous five campaigns. (b) The best available historical data from less than five campaigns. This option is allowable only if limited historical data are available (e.g., an upgraded or relocated NAP that has not been operating for at least five campaigns). (c) Specified range of temperature and pressure found in the operating manual for the existing equipment, and maximum ammonia-to-air ratio as specified by the ammonia oxidation catalyst manufacturer or the operating manual for the NAP equipment if guidance from the ammonia oxidation catalyst manufacturer is not available. This option is only allowable if no historical data are available. For NAPs that were upgraded or otherwise modified to increase production within 24 months prior to the project start date, AOC must be based on one of the options above using data collected after the commencement of production following completion of the upgrade, or the operating manuals for the upgraded plant. For NAPs that were upgraded or otherwise modified to increase production at any time during the project crediting period, AOC must be based on option (c) above.

Description of how the project did not meet the above requirements: Previously determined AOCs were not representative of low-production periods.

Date Reserve Issued Determination: 11/26/2025



Variance Conditions: ClimeCo Corp MCK NAP2, LLC has requested a variance for Coffeyville to revise the project's minimum oxidation pressure from 6.21 bar to 4.90 bar to better account for when the air compressor is operating at minimum speed. The Reserve grants this variance pursuant to the following conditions:

- The verifier confirms that the project remains below the HNO_3 MAX value.

This variance is expressly limited to Coffeyville as specified above for the period for the duration of the project's lifespan. ClimeCo Corp MCK NAP2, LLC must comply with all other requirements of the protocol. Further, this variance does not set precedent for future reporting periods, projects, or Reserve decisions. It is expected this issue will be resolved by the next reporting period. It is unlikely the Reserve will grant a similar variance for future reporting periods, unless the Reserve determines the project missed the requirement again due to extraordinary circumstances.

Project Documentation

Document	File Name
Project Diagram	Coffeyville PFD.pptx
Attestation of Title	Attestation-Title-CRNF-RP11.pdf
Attestation of Voluntary Implementation	Attestation-Voluntary-Implementation_CRNF-RP11.pdf
Attestation of Regulatory Compliance	Attestation-Regulatory-Compliance_CRNF-RP11.pdf
Project Contributions to the U.N. Sustainable Development Goals Report Tool (if applicable)	2025-SDG-REPORTING-TOOL-CAR1335.pdf
Project Data Report (this document)	RP11_CAR1335 Project Data Report.docx
Variance Request (if applicable)	Request-Project-Variance- October 2025