



Project Data Report

US Nitric Acid Production Protocol v2.2

CAR811 Rentech NAP 1

Reporting Dates:

07/03/2024 – 03/04/2025

Project Site

Rentech Energy Midwest Corporation-Nitric Acid Plant 1

Prepared for:

TÜV SÜD America Inc.

750 Main St. Suite 200 Grand Junction, CO 81501

Account Holder	East Dubuque Nitrogen Fertilizers, LLC
Project ID and Name	CAR811 – Rentech NAP 1
Cooperative/Aggregate ID (if applicable)	N/A
Current Reporting Period Dates	07/03/2024 – 03/04/2025
Protocol Version	Nitric Acid Production V2.2
Claimed CRTs by Vintage	2024 RP19 – 55,208 Credits
	2025 RP19 – 29,019 Credits
Date Submitted	5/5/2025

Prepared by:

Mohammed Siddiqui, ClimeCo

May, 2025



Table of Contents

Foreword.....	3
Project Description.....	3
Project Developer and Participants.....	3
Project Eligibility Requirements.....	5
GHG Assessment Boundary.....	5
Quantifying GHG Emission Reductions Methodologies.....	5
Quantifying Baseline Emissions	6
Quantifying Project Emissions	6
Final CRT Summary	6
Environmental and Social Impacts	6
Variance Request	7
Project Documentation	7



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

East Dubuque Nitrogen Fertilizers, LLC (EDNF) produces nitrogen fertilizers for commercial sales. The purpose of this project is to reduce nitrous oxide (N₂O) emissions from the EDNF No. 1 Nitric Acid Plant (NAP) in East Dubuque, Illinois. The project involves the installation of a new (not previously installed at No. 1 NAP) catalyst in the tail gas leaving the absorption tower (a "tertiary catalyst") for which the sole purpose is the decomposition of N₂O. Abatement system is a tertiary abatement catalyst at the East Dubuque Illinois facility. The technology deploys 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. The cited scenarios do not apply to the project.

Project Developer and Participants

Current Project Participants include the Offset Project Operator, ClimeCo LLC (ClimeCo) and the Project Facility Owner/Operator, East Dubuque Nitrogen Fertilizers, LLC (EDNF).

EDNF is the exclusive owner of the project and the sole party with the right to make management and operational decision. EDNF serves as the owner and operator of the tertiary abatement catalyst system, personal property, equipment, fixtures and appurtenances comprising the Project.

Technical Consultant(s): ClimeCo, LLC.

Other Parties with Material Interest (entity name and role): CVR Energy, parent company to EDNF

Entity Signing Attestation of Title: East Dubuque Nitrogen Fertilizers, LLC

Additional Information:



Protocol Eligibility Requirements

Eligibility Rules for CAR811 are found in section 3.1 through 3.5 in the US Nitric Acid Production Protocol v2.2. Project compliance with the requirements is summarized in the table below.

No.	Rule	Requirement	Data
a	Location	U.S. and its tribal lands and territories	The project is located in East Dubuque, Illinois.
b	Project Start Date	No more than 12 months prior to project submission	Project was listed on 02/23/2011 and the project start date was 6/29/2011.
c	Project Crediting Period	Emission reductions may only be reported during the crediting period; the crediting period may be renewed one time	First Crediting Period: 6/29/2011 to 6/28/2021 Second (Current) Crediting Period: 6/29/2021 to 6/28/2031
d	Additionality	Meet performance standards, exceed regulatory requirements	There are currently no regulatory requirements for the abatement of N ₂ O 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 N ₂ O Abatement catalyst, including catalytic decomposition or NSCR Legal Standard Test: We have confirmed that there are currently no laws requiring the abatement of N ₂ O at the plant. In addition, EDNF monitors any change in regulations that may affect eligibility. TUV SÜD reviewed EDNF'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 CAR811 RP19. The quantification of ERs has been performed in accordance with section 5 of the Nitric Acid Production Protocol v2.2.

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; 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.

The historical maximum annual average output of nitric acid (HNO₃,MAX), scaled for the length of each campaign, were used to determine the baseline emissions. To determine HNO₃,MAX, five consecutive years of historic data were used to calculate five values, each representing average HNO₃ production levels during a one year period at the process unit where the project is located. Average HNO₃ production was calculated by averaging daily HNO₃ production data over a 12 month period, excluding days when the nitric acid plant was not operating.

Project nitrous oxide 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 an adipic acid project are quantified by comparing actual project emissions to the calculated baseline emissions.



Quantifying Baseline Emissions

Allowable Operating Conditions:

Oxidation temperature range: 843.89 – 911.11 Degrees C

Oxidation pressure range: 6.76 – 8.62 Bar

Maximum ammonia-to-air ratio input into the AOR: 10.75%

☒ 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: 2024	Vintage: 2025
HNO ₃ ,MAX, scaled: 24,391 tHNO ₃	HNO ₃ ,MAX, scaled: 12,820 tHNO ₃
Baseline Emissions: 59758 tCO ₂ e	Baseline Emissions: 31,410 tCO ₂ e

Quantifying Project Emissions

Vintage: 2024	Vintage: 2025
Emissions from the N ₂ O in the tail gas during the reporting period: 4,549 tCO ₂	Emissions from the N ₂ O in the tail gas during the reporting period: 2391 tCO ₂
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: 0 tCO ₂
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: 0 tCO ₂
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: 0 tCO ₂
Project Emissions: 4549 tCO ₂ e	Project Emissions: 2391 tCO ₂ e

Final CRT Summary

Vintage: 2024	Vintage: 2025
Baseline Emissions: 59,757 tCO ₂ e	Baseline Emissions: 31,410 tCO ₂ e
Project Emissions: 4,549 tCO ₂ e	Project Emissions: 2,391 tCO ₂ e
Total GHG Emission Reductions/Removals: 55,208 tCO ₂ e	Total GHG Emission Reductions/Removals: 29,019 tCO ₂ e

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: NA

Protocol Section and Rule/Requirement: NA

Description of how the project did not meet the above requirements: NA

Date Reserve Issued Determination: NA

Variance Conditions: NA

Project Documentation

Document	File Name
Project Diagram	EDNF CAR811 NAP1 PFD.pdf
Attestation of Title	Attestation_Title_NAP1_RP19.pdf
Attestation of Voluntary Implementation	Attestation_Voluntary_Implementation_NAP1_RP19.pdf
Attestation of Regulatory Compliance	Attestation_Regulatory_Compliance_NAP1_RP19.pdf
Monitoring Plan	EDNF NAP1 CAR811 Monitoring Plan_v2.9.pdf
Project Contributions to the U.N. Sustainable Development Goals Report Tool (if applicable)	2025-SDG-REPORTING-TOOL-CAR811.pdf
Project Data Report (this document)	U.S.-Nitric-Acid-Production-Project-Data-Report-RP19.docx
Variance Request (if applicable)	