



Verification Report for

Terra Verdigris #2
Claremore, OK, USA

Sixth Reporting Period

Climate Action Reserve Project CAR766

Nitric Acid Production
Project Protocol, Version 1.0

8 November 2014

Report Prepared for

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Summary

Terra Nitrogen, Limited Partnership (“TNLP”) is the project developer for the “Terra Verdigris #2” Project located in Claremore, OK. In this sixth reporting period, TNLP reported on its nitrous oxide emission reduction results during nitric acid production campaigns 11, 12, and 13 that commenced on October 26, 2012, and ended on August 4, 2013. NSF International (NSF) was engaged to verify the nitrous oxide emissions reductions achieved during these campaigns in accordance with the requirements of the Climate Action Reserve Nitric Acid Production Project Protocol, Version 1.0. TNLP reduced emissions into the atmosphere by 526,066 metric tons of carbon dioxide-equivalent in this reporting period. TNLP’s nitric acid production operations were described by the NAICS code 325311 (“nitrogenous fertilizer manufacturing”). For this project, TNLP engaged the services of ClimeCo America Corporation, a carbon emissions mitigation consultancy. ClimeCo consultants assisted TNLP with the preparation of project monitoring reports.

1. Introduction

1.1 Objective

The objective of this verification audit was to determine, with reasonable assurance, that TNLP had quantified, monitored, and fairly reported to the Climate Action Reserve its emission reductions from the abatement of nitrous oxide emissions during nitric acid production, and to confirm the project’s eligibility.

1.2 Scope

The scope of the engagement included verification of the quantification, monitoring and reporting of greenhouse gas emission reductions from the project. It also included verification of the project’s eligibility and the recalculation of project emissions of nitrous oxide measured in the nitric acid plant stack.

1.3 Criteria

NSF verified the reported project emission reductions against criteria in the Climate Action Reserve Nitric Acid Production Project Protocol, Version 1.0 (December 2, 2009), including the Errata and Clarifications issued by the Climate Action Reserve on March 17, 2011 (hereafter, the “Protocol”). The project also was verified against applicable requirements of the Climate Action Reserve’s Program Manual (October 26, 2011). The verification methodology conformed to requirements in the Climate Action Reserve’s Verification Program Manual (December 20, 2010), and ISO 14064:2006 Part 3, *Greenhouse gases – Specification with guidance for the validation and verification of greenhouse gas assertions*.

Project Verification Report

1.4 Materiality

In accordance with the Climate Action Reserve Verification Program Manual, the threshold for materiality of emission reduction assertions was based upon annualized rates of issuance of Climate Reserve Tonnes (CRTs). As the project claimed more than 100,000 metric tons of emission reductions during the reporting period, the emission reduction assertion was considered fairly stated if it varied by no more than 1% from a complete statement of the project's emission reductions. Thresholds of materiality defined by the Verification Program Manual allowed verifiers of emission reduction reports to consider as immaterial discrepancies of 1% or less.

1.5 Level of Assurance

This engagement was performed at the reasonable level of assurance.

2. Verification Approach

2.1 Team Appointment and COI Review

This verification was performed by John Shideler, Lead Verifier. The verification was internally reviewed by Janette Lutz, Lead Verifier. Conflict of Interest inquiries were completed for NSF and for the verification team and a finding of low COI risk was confirmed by the Climate Action Reserve.

2.2 Document Review

The verification team conducted a document review to inform the planning process in advance of performing verification activities. Documents and records reviewed were provided by TNLP, the project developer; and by ClimeCo, the project developer's consultant. Documents reviewed included previous project verification reports; project documentation submitted to the Climate Action Reserve; the project Monitoring Plan; spreadsheets providing logged hourly raw operating data and calculations of emission reductions; CEMS, gas flow meter, and stack gas analyzer calibration and verification records; regulatory compliance information from the US EPA Enforcement & Compliance History Online (ECHO) report and confirmation of regulatory compliance status provided by company officials; and manufacturer's information related to monitoring equipment.

2.3 Planning

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

Project Verification Report

2.4 Verification Activities

For this sixth reporting period NSF conducted a site visit to TNLP's nitric acid plant #2 in Claremore, OK, on October 21, 2013. The site visit was preceded by a kick-off teleconference with the project developer consultant, ClimeCo, on October 17, 2013. Verification activities were conducted both on site and off site, and included:

- Confirmation of the project start date and plant location.
- Verification of the ownership of the emission reduction credits earned by this project.
- Verification that the project monitored legal and regulatory changes and that the project continued to meet the legal requirement test for continuing eligibility under applicable laws and regulations.
- Verification that the project campaigns were operated in material compliance with applicable environmental and safety laws.
- Demonstration by the project developer that none of the exclusions to eligibility applied to the nitric acid production campaigns conducted during this reporting period.
- Review of project compliance with monitoring requirements and that any identified variances have been approved by the Climate Action Reserve.
- Verification that applicable sources, sinks and reservoirs were included in the project assessment boundary.
- Verification that the project developer correctly calculated permitted operating ranges for temperature and pressure in accordance with protocol requirements.
- Assessment of the control environment, information management systems and monitoring plans of TNLP.
- Sampling of records maintained by TNLP in accordance with Protocol requirements.
- Verification of the project's emission reduction calculations.

3. Verification Findings

3.1 Project Description

Terra Nitrogen Limited Partnership has implemented a project to abate the emissions of nitrous oxide (N₂O) at its #2 nitric acid plant. To achieve this TNLP has installed a secondary abatement catalyst immediately below the ammonia oxidation catalyst in the ammonia oxidation reactor (AOR). In the sixth reporting period of the "Terra Verdigris #2" project, TNLP abated 526,066 metric tons of nitrous oxide (N₂O) that would have been emitted into the atmosphere absent the application of secondary catalytic reduction technology.

Project Verification Report

3.2 Eligibility

Location. TNLP planned its nitric acid production project to abate N₂O emissions at its Verdigris #2 production plant in Claremore, OK. This facility meets the protocol requirement for location in the United States.

Project Definition. TNLP installed a secondary abatement catalyst in the AOR of its Verdigris #2 plant. This plant had not had nonselective secondary catalytic reduction (NSCR) technology installed prior to the beginning of the project, including at any point within 24 months prior to December 2, 2009. In the sixth reporting period TNLP operated three production campaigns from October 2012 to August 2013 that spanned a period of time that did not exceed 12 months.

Project Start Date. The start date of the project, defined by the Protocol as the date on which production commences after the first installation of a secondary catalyst, was October 22, 2008. This start date was verified by reviewing a downtime event summary record for the #2 nitric acid plant which showed installation of the N₂O secondary catalyst on October 21 and resumption of operation on October 22 (total downtime 27.88 hours). The project met eligibility requirements because it was submitted for listing on February 9, 2010, a date within 12 months after the adoption on December 2, 2009, of the Nitric Acid Production Protocol; and the project start date was no more than 24 months prior to the adoption of the Nitric Acid Production Protocol.

Crediting Period. The crediting period for TNLP's nitric acid abatement project extends to October 21, 2018. This sixth reporting period is within the crediting period for the project.

3.3 Additionality

Legal Requirement Test. During NSF's site visit in October 2013 the verification team interviewed the corporate EHS manager for CF Industries (parent company of the project developer) concerning his monitoring of legal and regulatory developments. In accordance with their procedure, CF Industries tracked changes to regulations affecting nitric acid production via trade association newsletters, through corporate compliance audits of the Verdigris plant, and communications with fertilizer trade association officials. In May 2014 NSF reviewed "[Air] Permits in Active Review" on the website of the Oklahoma Department of Environmental Quality. The permit contained the suffix "PSD" indicating a reference to Part C of Title I of the Clean Air Act. After further inquiry, this permit modification was found to be related to Verdigris's ammonia plant #1 and had no impact on Verdigris's plant #2. On the basis of this information, and NSF's review of the Attestation of Voluntary Implementation signed by TNLP on April 21, 2014, for this reporting period, NSF has concluded that there were no legal requirements that mandated the abatement of N₂O at the project site, that the project met the Protocol's monitoring requirement for voluntary implementation, and that the project continued to pass the legal requirement test.

Performance Standard Test. NSF has concluded that TNLP met the Performance Standard Test because it installed a secondary N₂O abatement catalyst in the ammonia oxidation reactor (AOR) of its nitric acid plant Verdigris #2 in Claremore, OK. The Verdigris area #2 had not been restarted after having been out of operation for a period of 24 months or longer. Verdigris area #2 was not a newly constructed plant after the effective date of the protocol, it had not been

Project Verification Report

relocated and it did not have non-selective catalytic reduction technology installed at any point within 24 months prior to the effective date of the protocol. The N₂O abatement technology was installed at a single nitric acid plant at the Verdigris facility. From the review of evidence collected at the site visit in October 2013, NSF has concluded that TNLP met the Performance Standard Test.

3.4 Regulatory Compliance

Regulatory Compliance. NSF reviewed the Attestation of Regulatory Compliance completed by TNLP for the sixth reporting period dated April 21, 2014. The period for material compliance with laws and regulations was from October 26, 2012, the date the eleventh nitric acid production campaign began, to August 4, 2013, the date the thirteenth nitric acid production campaign ended. NSF received written confirmation from Verdigris plant officials that there had been no changes to the plant's Title V, NPDES, or RCRA regulatory permits as these affect nitric acid production at the Verdigris #2 plant since NSF's last site visit on August 9, 2012. The plant confirmed that it had not submitted to any regulatory authority any request for modification of any environmental permit that bears upon operations at the #2 nitric acid plant during the sixth reporting period. The plant also confirmed that it had not received any Notice of Violation of any environmental permit related to the #2 nitric acid plant, and had not received any Notices of Violation from Federal, State or local authorities relating to occupational health or safety regulations, relating to nitric acid production during the sixth reporting period that would affect the plant's "good standing" status. NSF reviewed the US EPA's ECHO database for confirming information, and made further inquiries to Verdigris plant personnel about the reasons why the plant was listed in "significant violation" for the past 12 calendar quarters. Verdigris plant personnel explained that this was due to the decision of their corporate parent, CF Industries, to enter into a consent agreement with US EPA for NO_x violations that had occurred at a sister plant in Iowa. The consent agreement covered all CF Industries' plants, and the status of compliance violation in the ECHO database was due to events not related to Verdigris operations or its specific compliance history. NSF reviewed the consent decree and found that it imposed stricter NO_x emission limits on the Verdigris #2 nitric acid plant beginning from June 30, 2013. NSF checked an applicable compliance report and CEMS records for evidence of exceedences during the period from June 30, 2013 through the end of the reporting period on August 4, 2013, and found no exceedences of the new NO_x limits. From this information NSF concluded that the project was in material compliance with applicable environmental and safety requirements during the three production campaigns of the sixth reporting period.

3.5 Ownership

Project Developer and Ownership. TNLP, the project developer, is the owner of the emission reduction credits. For this reporting period TNLP attested to its ownership of the greenhouse gas emission reduction credits through a signed Attestation of Title dated April 21, 2014, which NSF reviewed. On October 21, 2013, NSF interviewed CF Industries corporate EHS director who confirmed the wholly owned subsidiary relationship of TNLP to CF Industries, the owner of the Verdigris plant that includes nitric acid plant #2. NSF also reviewed information maintained by the Oklahoma Department of Environmental Quality about its air permittees, which showed that active permit applications (Permit No. 2011-006-CM-2 and Permit No. 2011-006-CM-5 PSD) at the Verdigris plant in Claremore were in the name of "Terra Nitrogen LTD Partnership." From

Project Verification Report

this evidence NSF has concluded that TNLP was the legal owner of the greenhouse gas emission reduction credits during this reporting period.

3.6 Project Boundaries and Emission Sources

Sources, Sinks and Reservoirs. NSF has verified that for this project reporting period, the relevant sources, sinks and reservoirs (SSRs) were identified. Sources included the area #2 nitric acid plant's AOR from the inlet of the ammonia burner to the waste gas stack, and the production of nitric acid. Nitrous oxide (N₂O) is a by-product of nitric acid production. Secondary catalytic abatement reduces N₂O immediately after it is formed in the ammonia oxidation step of nitric acid production. The project measured the amount of N₂O released to the environment through the AOR stack and subtracted that from the baseline condition of uncontrolled N₂O emissions.

3.7 Project Management System

Management System. NSF reviewed relevant aspects of the Verdigris plant's management system on October 21, 2014. NSF found a mature management system and competent personnel. Safety training was required for access inside the plant and procedures were in place for plant operation and environmental management. NSF included the following management systems elements in its evaluation:

- Definition and maintenance of an appropriate control environment by TNLP
- Training and competence of project managers and operating/data management personnel
- Identification and management of legal requirements related to nitric acid production
- Identification and maintenance of records required by the project
- Selection, installation, maintenance, calibration and monitoring of Continuous Emissions Monitoring, stack gas analyzer, and flow metering equipment
- Quantification methods and calculations of project emissions; and
- Checking and corrective action mechanisms.

NSF requested supplementary information in writing from TNLP personnel for the verification of this reporting period. From the evidence consulted, NSF has concluded that TNLP's management system met the requirements described in the Climate Action Reserve's Verification Program Manual.

Project Documentation and Reserve Tracking System. NSF verified that the required documents for the project had been completed and submitted to the Reserve. These included the Project Submittal form, uploaded at the beginning of the project; signed attestations of title, of regulatory compliance, and voluntary implementation for this reporting period; a project diagram, and an assertion of Climate Reserve Tonnes earned during campaigns 11, 12 and 13.

Project Verification Report

3.8 Performance against Project Protocol/Methodology

The project was implemented in conformity with the Climate Action Reserve Nitric Acid Production Project Protocol Version 1.0 and the applicable Errata and Clarifications document.

Monitoring and Operations Plan. A revised version 3.0 of TNLP's "Monitoring Plan, Nitrous Oxide Abatement Project Verdigris Area #2," which NSF reviewed, was signed on 19 September 2012. The plan addressed monitoring, operations and reporting of relevant parameters included in Table 6.1 of the Protocol, including the frequency of data acquisition, the frequency of instrument field check and calibration activities, and the roles of individuals performing each specific monitoring activity. It also defined record keeping requirements and described the procedure TNLP used to determine that the project at all times met the Legal Requirement Test. NSF concluded that the monitoring plan covered all aspects of monitoring and reporting contained in the Protocol.

Baseline Scenario. In accordance with the Protocol, the baseline emission rate had been established by measuring N₂O emissions during a complete production campaign prior to the installation of the secondary catalyst for the abatement project. The baseline emission factor developed during this pre-project monitoring was verified during TNLP's first reporting period. NSF reviewed the baseline emission factor to ensure that it was consistent with the emissions factor verified in the first reporting period.

Use of CEMS. TNLP used a Continuous Emissions Monitoring System to directly measure N₂O concentration and flow rate in the stack gas of the AOR. An ABB Uras26 non-dispersive infrared sensor installed in the stack pipe analyzed gas concentration. A Rosemount 485 Annubar Primary flow meter probe measured flow in conjunction with a differential pressure transducer. Concentration and flow data were monitored continuously but logged in hourly increments along with stack temperature and pressure and the air to ammonia ratio and ammonia flow. Data acquired from these instruments was logged by a Data Handling and Acquisition System (DAHS).

Initial Certification of CEMS. TNLP installed its CEMS in 2008 prior to the publication of the Nitric Acid Production Protocol. At the time it installed and operated the CEMS in accordance with European Norm EN 14181. Once the NAPP was published it asked the Climate Action Reserve for a variance to allow it to demonstrate conformity with the system installation and certification requirements of EN 14181 rather than section 60.13 of CFR Part 60 and Performance Specification 2 of Appendix B of 40 CFR Part 60 and section 6 of Appendix A of 40 CFR Part 75. The Reserve approved the request and compliance with the variance conditions were verified at the conclusion of the first project reporting period. From evidence reviewed, NSF has concluded that the Project met the initial installation and certification requirements as these were modified by the Reserve's variance dated September 14, 2010.

QA/QC and Frequency of Testing. NSF verified that Quality Assurance/Quality Control procedures were implemented in accordance with Clean Air Act requirements of the U.S. Environmental Protection Agency, specifically those included in the Acid Rain Program regulations published at 40 CFR Part 75, Appendix B, as required by the Protocol. QA/QC procedures included daily,

Project Verification Report

quarterly and annual assessments and scheduled preventive maintenance for the CEMS and its components.

Daily Testing. NSF verified that TNLP had performed daily tests of the N₂O analyzer to ensure the accuracy of the CEMS recorded data. Minimum pressures of the certified calibration gases were monitored to ensure accurate daily test results. Data to the CEMS were deemed valid as long as the daily calibration tests resulted in variation of no greater than 5% from the N₂O analyzer span. Variations greater than 2.5% and less than 5% over a two-day period triggered automatic recalibration of the analyzer. Variations greater than 5% were considered calibration failures and generated an alarm from the DAHS which prompted immediate corrective action by plant personnel. These incidents were logged by the DAHS software.

Quarterly Testing. NSF verified that TNLP had performed the following QA/QC on a quarterly basis: linearity checks to determine the accuracy of the gas composition analyzer, flow meter pressure transmitter calibration and leak testing. Linearity tests were performed at low, mid and high levels of concentration as required by 40 CFR Part 75 Appendix B. To verify the continuing accuracy of the gas analyzer, NSF reviewed records that demonstrated that TNLP had performed linearity checks on October 31, 2012, January 13, 2013, April 9, 2013, and July 25, 2013. NSF reviewed quarterly calibration records for the flow meter pressure transmitter which took place on November 30, 2012, March 11, 2013, May 10, 2013, and August 1, 2013. In all cases, as-found records showed drift that did not exceed five percent from previous calibration results. On the same dates, leak tests were performed on the differential pressure transmitter line tubing. No leaks were detected. NSF concluded from these records that the Protocol's monitoring requirements (as updated by the Errata and Clarifications document published on March 17, 2011) were met. Flow-to-load ratio or gross heat rate evaluation was not performed because the nitric acid plant did not also produce electricity or steam.

Relative Accuracy Test Audit. NSF verified that CEMS data had been validated through the performance of Relative Accuracy Test Audits (RATAs) which were conducted on August 24, 2012, and on May 1, 2013, by an independent third party in accordance with the requirements of 40 CFR Part 60 Appendix A, Reference Methods 1, 2, 3A, 4 and 7E, Appendix B, Performance Specifications 2 and 3, and CFR Part 63 Appendix A, Reference Method 320. Flow RATAs were performed at a single load level consistent with the steady-state operation of the nitric acid plant. In August 2012 the stack flow relative accuracy was found to be 2.651%, which was well below the 7.5% maximum allowed for facilities opting for annual RATAs. The variation found for stack gas concentration of N₂O was 4.588%, which was also well below the 7.5% maximum threshold for facilities choosing an annual RATA. A subsequent RATA was performed on May 1, 2013, after the installation of a new flow meter. In this RATA the stack flow relative accuracy was found to be 2.055% and the relative accuracy of the stack gas concentration of N₂O was 3.715%. The annual frequency was selected in accordance with a provision in Part 75 ("Reduced RATA Frequencies") that allowed annual, rather than semiannual, RATAs when relative accuracies equal to or less than 7.5% deviation had been achieved. Flow-to-load ratio or gross heat rate evaluation was not performed because the nitric acid plant did not also produce electricity or steam. From a review of the RATA report, NSF has concluded that TNLP's RATA met all Protocol and applicable Part 60 and Part 75 requirements.

Project Verification Report

Data Management. NSF verified that the project logged operational data on a continual basis and exported data on an hourly basis for monitoring purposes. Data logged included stack flow, temperature and pressure, N₂O concentration, and stack flow corrected to 0°C. Data were recorded in English measurement units for operating room monitoring and converted for project reporting purposes to metric units. In August 2012 NSF reviewed the conversion algorithms and determined that accurate equations had been programmed into the DAHS for proper conversion of English measurement units to metric units. For the sixth reporting period, operational data were checked for values outside permitted operating conditions. NSF verified that the nitric acid plant had not operated outside these limits for more than 50% of the duration of the reporting period.

Consistency With Past Reporting Periods. NSF compared the emission reductions claimed during the sixth reporting period to those claimed during the third through the fifth reporting periods, and found comparable rates of CRT generation per ton of nitric acid produced. The following table relates emission reductions in the three reporting periods to respective rates of nitric acid production:

Reporting Period	Campaign Dates	CRTs Credited	Nitric Acid Produced (mt)	Ratio CRTs/HNO ₃
3		257,910	117,676	2.19
4		585,447	237,963	2.46
5		587,639	251,884	2.33
Campaign 9 (RP 5)	2012-01-24 to 2012-06-12	329,582	132,938	2.48
Campaign 10 (RP 5)	2012-06-13 to 2012-10-25	258,057	118,946	2.17
6		526,066	263,984	1.99
Campaign 11 (RP 6)	10/26/2012 to 1/30/2013	186,432	88,688	2.10
Campaign 12 (RP 6)	2/4/2013 to 6/11/2013	245,174	124,434	1.97
Campaign 13 (RP 6)	6/11/2013 to 8/4/2013	94,460	50,862	1.86

NSF also compared the rates of production of nitric acid per operating hour in each of the three campaigns of the sixth reporting period. The results were 39.0, 40.0, and 41.8 respectively for campaigns 11, 12, and 13. From this evidence NSF concluded that the reported emission reductions were consistent with those achieved in previous reporting periods.

Missing Data Substitution. TNLP substituted for missing data during the sixth reporting period during campaigns 11 and 12 in accordance with the missing data procedures of 40 CFR Part 75. During campaign 11, 6 hours of data were provided by substitution. During campaign 12, 9 hours of data were provided by substitution. During campaign 13, no hours were provided by substitution.

Project Verification Report

3.9 Calculation of GHG Emission Reductions

NSF separately calculated project emission reductions from monitored information and confirmed that TNLP's claimed emission reductions did not vary by a material amount from those calculated by NSF. The verification team reviewed data downloaded from the CEMS and performed check calculations in the spreadsheet on values such as mean concentration of stack gas and the mean stack gas volume flow. The verification team checked the raw logged data to verify that the AOR did not exceed permitted operating conditions during more than 50% of the time during the reporting period, and verified that average operating values obtained during each campaign remained within historical ranges.

NSF confirmed that TNLP had performed the required statistical analysis steps specified in the Errata and Clarifications document (March 17, 2011) to compare the average values of permitted operating conditions (stack gas flow, N_2O concentration, temperature, pressure and maximum ammonia to air ratio) with the average values obtained during the baseline sampling period. NSF found that the results obtained for campaigns 11, 12 and 13 were within the permitted operating conditions. Equation 5.3 of the protocol incorporated a mean baseline nitrous oxide concentration rate of $3,147 \text{ mgN}_2\text{O}/\text{m}^3$ based on the results of the baseline sampling period. This compared to a mean N_2O concentration rate of 863.4 during campaign 11, a mean N_2O concentration rate of 1,023.25 during campaign 12, and a mean N_2O concentration rate of 1,170.74 for campaign 13. $\text{HNO}_{3,\text{MAX}}$ was selected from the maximum production value in the historical sampling period. $\text{HNO}_{3,\text{MAX},\text{SCALED}}$ was determined by multiplying the average hourly production rate of $\text{HNO}_{3,\text{MAX}}$ by the number of operating hours in the campaign. The result of that calculation was compared to the amount of HNO_3 production in the campaign, and the lower of the two values (specifically, $\text{HNO}_{3\text{n}}$ or $\text{HNO}_{3\text{max_scaled}}$) was retained for the variable $\text{HNO}_{3\text{ER}}$. In campaign 11 the value used for calculating emission reductions was $\text{HNO}_{3\text{n}}$. In campaigns 12 and 13 the values used for calculating emission reductions was $\text{HNO}_{3\text{max_scaled}}$.

NSF reviewed the inputs to Equation 5.4 which calculated project emissions as the product of stack gas flow volume multiplied by the N_2O concentration and the operating hours. The input numbers for this equation matched operating records provided by TNLP. An emissions factor for each campaign was calculated in accordance with Equation 5.5 as a ratio of product emissions to nitric acid produced.

3.10 Corrective Action Requests

NSF issued clarification requests and made recommendations to project management during the verification process. All issues were resolved. Details on the clarification requests and the recommendations made are provided to the project developer and to the Reserve in a List of Findings, a private document.

3.11 Approved Variances or Deviations

No variances were requested or deviations approved for the project during the sixth reporting period.

Project Verification Report

4. Verification Results

4.1 Verification Team Recommendation

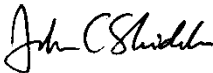
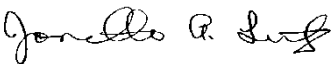
Based on the verification activities described above, the verification team has concluded that the TNLP's CAR766 project, "Terra Verdigris #2", sixth reporting period, has achieved the following emission reductions:

Emission Reductions During This Sixth Reporting Period	Metric tons CO ₂ -e
Secondary abatement emission reductions <i>ER, Campaign 11, Vintage 2012</i>	131,947
Secondary abatement emission reductions <i>ER, Campaign 11, Vintage 2013</i>	54,485
Secondary abatement emission reductions <i>ER, Campaign 12, Vintage 2013</i>	245,174
Secondary abatement emission reductions <i>ER, Campaign 13, Vintage 2013</i>	94,460
Total secondary abatement emission reductions	526,066

4.2 Verification Audit Summary

Project Developer	Terra Nitrogen, Limited Partnership, 4608 Highway 49 East Claremore, OK 39194 (USA)
Project Location	Terra Nitrogen, Limited Partnership, 4608 Highway 49 East, area #2 Claremore, OK 39194 (USA)
Project Type	Nitric Acid N ₂ O – Secondary Catalyst
Project Period	October 26, 2012 – August 4, 2013
Protocol/Methodology	Climate Action Reserve, Nitric Acid Production Project Protocol, v. 1
Emissions/Removals Verified	Vintage 2012: 131,947 metric tons CO ₂ -e Vintage 2013: 394,119 metric tons CO ₂ -e
Verification Conclusion	Based upon the verification activities described above, NSF has concluded that Terra Nitrogen, Limited Partnership's 2012 vintage emission reductions of 131,947 metric tons CO ₂ -e and its 2013 vintage emission reductions of 394,119 metric tons CO ₂ -e reported to the Climate Action Reserve for the period October 26, 2012 – August 4, 2013 are, in all material respects, fairly stated.

Project Verification Report

Lead Verifier	 John C. Shideler, 8 November, 2014
Independent Reviewer	 Janette Lutz, November 30, 2014
<i>This verification statement is valid when signed and dated by an NSF independent reviewer.</i>	