# FINAL
# JI DETERMINATION REPORT

## -PUBLIC VERSION-

## FERTIBERIA S.A.

## FERTIBERIA PUERTOLLANO II $N_2O$ ABATEMENT PROJECT IN SPAIN

**Report No: 8000376234 - 09/428**

**Date: 2010-03-01**

TÜV NORD CERT GmbH
JI/CDM Certification Program
Langemarckstraße, 20
45141 Essen, Germany
Phone: +49-201-825-3335
Fax: +49-201-825-3290
www.tuev-nord.de
www.global-warming.de

| Date of first issue: 2010-01-12 | Project No.: 8000376234 - 09/428 |
|---|---|
| Project type:<br>☒ JI Track 1<br>☐ JI Track 2 | Organisational unit:<br>TÜV NORD JI/CDM Certification Program |
| Client:<br>FERTIBERIA S.A. | Client ref.:<br>Francisca Galindo Paniagua |
| Summary: | ☒ positive determination opinion ☐ negative determination opinion |

Fertiberia has commissioned the TÜV NORD JI/CDM Certification Program (CP) as a Third Party to determinate the project:

"FERTIBERIA PUERTOLLANO II N2O ABATEMENT PROJECT IN SPAIN"

with regard to the relevant requirements of the host country Spain and of the UNFCCC for JI project activities, as well as criteria for consistent project operations, monitoring and reporting. UNFCCC criteria refer to the Kyoto Protocol Article 6 criteria and the Guidelines for the implementation of Article 6 of the Kyoto Protocol as agreed in the Marrakech Accords. The project applies to the UNFCCC Methodology: „"Catalytic reduction of $N_2O$ inside the ammonia burner of nitric acid plants", Version 03.4. The review of the project design documentation and additional documents related to baseline and monitoring methodology have provided TÜV NORD JI/CDM CP with sufficient evidence to determinate the fulfilment of the stated criteria.

In detail the conclusions can be summarised as follows:

- The project is in line with all relevant host country criteria (Spain) and all relevant UNFCCC requirements for JI.

- The project additionality is sufficiently justified in the PDD, the monitoring plan is transparent and adequate.

-The calculation of the project emission reductions is carried out in a transparent and conservative manner, so that the calculated emission reductions of 176,747 $tCO_2e$ (between 2009 and 2012) are most likely to be achieved within the crediting period.

The conclusions of this report show, that the project, as it was described in the project documentation, is in line with all criteria applicable for the determination PDD.

Since the LoAs will be issued after registration of the project at the DFP, CAR A5 can not be closed during the time of determination.

| Report No.: 09/428 | Subject Group: Climate Protection | |
|---|---|---|
| Report title: Fertiberia Puertollano II N2O abatement project in Spain | | |
| Work carried out by: Mr. Rainer Winter<br>Mr. Ulrich Walter<br>Mr. Emilio Martin | | |
| Technical review by: | Final approval by: | |
| Mr. Eric Krupp<br>Mr. Stefan Winter, trainee | Mr. Eric Krupp | |
| Date of this revision: 2010-03-01 | Rev. No.: 2 | Number of pages: 93 |

**Indexing terms**

JI – Track 1

Determination PDD

☒ No distribution without permission from the client or responsible organisational unit

☐ Limited distribution

☐ Unrestricted distribution

## Abbreviations

| | |
|---|---|
| **AMS** | Automated Monitoring System |
| **BAT** | Best available technology |
| **BAU** | Business as usual |
| **CA** | Corrective Action |
| **CAR** | Corrective Action Request |
| **CDM** | Clean Development Mechanism |
| **$CH_4$** | Methane |
| **CL** | Clarification Request |
| **$CO_2$** | Carbon dioxide |
| **$CO_{2e}$** | Carbon dioxide equivalent |
| **CP** | Certification Program |
| **DFP** | Designated Focal Point |
| **DNA** | Designated National Authority |
| **DVM** | Determination and Verification Manual /Draft) |
| **EB** | CDM Executive Board |
| **EIA** | Environmental Impact Assessment |
| **ERU** | Emission Reduction Unit |
| **ETS** | European Union Emissions Trading Scheme |
| **FAR** | Forward Action Request |
| **GHG** | Greenhouse gas(es) |
| **IPCC** | Intergovernmental Panel on Climate Change |
| **JI** | Joint Implementation |
| **JISC** | Joint Implementation Supervisory Committee |
| **$N_2O$** | Nitrous Oxide |
| **NCV** | Net Calorific Value of Fuel |
| **PDD** | Project Design Document |
| **QC/QA** | Quality control/Quality assurance |
| **UNFCCC** | United Nations Framework Convention on Climate Change |
| **VVM** | Validation and Verification Manual |

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# 1 OBJECTIVE / SCOPE

FERTIBERIA S.A. has commissioned the TÜV NORD JI/CDM Certification Program (CP) to carry out the determination of the project:

*"Fertiberia Puertollano II $N_2O$ abatement project in Spain"*

with regard to the relevant requirements for JI project activities.

The purpose of a determination is to have an independent third party assess of the project design. In particular, the project's baseline, the monitoring plan (MP), and the project's compliance with relevant host country and UNFCCC criteria are determinated in order to confirm that the project design as documented is sound and reasonable and meets the stated requirements and identified criteria. Determination is seen as necessary to provide assurance to stakeholders of the quality of the project and its intended generation of emission reduction units (ERUs).

UNFCCC criteria refer to the Kyoto Protocol Article 6 criteria and the Guidelines for the implementation of Article 6 of the Kyoto Protocol as agreed in the Marrakech Accords with regard to Track 1 JI project activities.

# 2 GHG PROJECT DESCRIPTION

## 2.1 Project Characteristics

Essential data of the project is presented in the following Table 2-1.

**Table 2-1:** Project Characteristics

| Item | Data | | |
|---|---|---|---|
| Project title | "Fertiberia Puertollano II $N_2O$ abatement project " | | |
| Project size | ☐ Large Scale | ☒ Small Scale | |
| Project Scope *(according to UNFCCC sectoral scope numbers for JI)* | ☐ | 1 | Energy Industries (renewable- /non-renewable sources) |
| | ☐ | 2 | Energy distribution |
| | ☐ | 3 | Energy demand |
| | ☐ | 4 | Manufacturing industries |
| | ☒ | 5 | Chemical industry |
| | ☐ | 6 | Construction |
| | ☐ | 7 | Transport |
| | ☐ | 8 | Mining/Mineral production |
| | ☐ | 9 | Metal production |
| | ☐ | 10 | Fugitive emissions from fuels (solid, oil and gas) |
| | ☐ | 11 | Fugitive emissions from production and consumption of halocarbons and hexafluoride |

| Item | Data | | |
|---|---|---|---|
| | ☐ | 12 | Solvents use |
| | ☐ | 13 | Waste handling and disposal |
| | ☐ | 14 | Land-use, land-use change and forestry |
| | ☐ | 15 | Agriculture |
| Applied Methodology | *AM0034* | | |
| Track | *1* | | |
| Crediting period | ☐ Renewable Crediting Period (7 y)<br>☒ Fixed Crediting Period (10 y)<br>2009-11-15 – 2012-12-31 (If $N_2O$ is not included in the ETS after 2012, the period will extended to regular 10 Years until 2019) | | |
| Start of crediting period[1] | 2009-11-15 | | |

## 2.2 Involved Parties and Project Participants

The following parties to the Kyoto Protocol and project participants are involved in this project activity (Table 2-2).

**Table 2-2:** Project Parties and project participants

| Characteristic | Party | Project Participant |
|---|---|---|
| Host party | Spain | Fertiberia S.A. |
| Other involved party/ies | Germany | N.serve Environmental Services GmbH |
| Other involved party/ies | United Kingdom | Johnson Matthey Plc |

## 2.3 Project Location

The details of the project location are given in table 2-3:

**Table 2-3:** Project Location

| No. | Project Location |
|---|---|
| Host Country | Spain |
| Region | Castilla-La Mancha |
| Project location address | Complejo Industrial 13500-PUERTOLLANO (Ciudad Real) |
| Plant Coordinates | 38'39'57 88'' N<br>04'03'35 97'' W |

[1] As per the published PDD (version 2)

## 2.4 Technical Project Description

The project involves the installation of a secondary $N_2O$ reduction catalyst of the nitric acid production plant Puertollano II. The emission reductions are a result of the catalytic decomposition of nitrous oxide. Nitrous oxide which is formed as by-product of the nitric acid production will be removed by the catalyst installed below the standard precious metal gauze pack in the ammonia burner. The nitrous oxide would otherwise be emitted within the tail gas of the nitric acid plant to the atmosphere.

The key parameters of the project are given in table 2-4:

**Table 2-4:** Technical data of the project

| Parameter | Unit | Value |
|---|---|---|
| Ammonia Oxidation Reactor | | |
| Manufacturer | - | Davy Power Gas |
| Diameter | mm | 3500 |
| Start of commercial production | - | 1972 |
| Operating conditions as per specifications (trip point values) | | |
| - Temperature (min/max): | ℃ | 880-915 |
| - Pressure (min/max): | Bar (process) | 5,3 (max) |
| - Ammonia to Air ratio (max) | Vol.-% | 10,25 |
| Ammonia Oxidation Catalyst | | |
| Manufacturer | - | |
| Composition: | - | Pt-Rh-Pa gauze pack |
| Absorber | | |
| Design capacity per day | t/d (100 %) | 325 (384 permitted) |
| Annual operation (design) | days | 350 - 360 |
| Secondary Catalyst | | |
| Manufacturer | - | YARA |
| Type | - | YARA 58 Y 1 |
| Design efficiency $N_2O$ reduction | % | 80 |
| Design efficiency $NO_x$ reduction | % | n.a. |
| $DeNO_X$-Catalyst | | |
| Manufacturer | - | CRI |
| Type | - | S-96, 0,8 TL |
| Performance | ppmv $NO_X$ | ≤ 170 |
| $N_2O$ Analyzer (stack) | | |
| Manufacturer | - | (The $N_2O$ Analyser is ordered. Installation will be done before start of the project) |
| Type | - | |
| Measurement Principle | - | |
| Stack volume flow rate measurement | | |
| Manufacturer | - | (The volumeter is ordered. Installation will be done before start of the project) |
| Type | - | |
| Measurement Principle | - | |

# 3 METHODOLOGY AND DETERMINATION PDD SEQUENCE

## 3.1 Determination PDD Steps

The determination of the project consisted of the following steps:

- Contract review
- Appointment of team members and technical reviewers
- Publication of the project design document (PDD)
- A desk review of the PDD[/PDD/] submitted by the client and additional supporting documents
- Determination planning
- On-Site assessment
- Background investigation and follow-up interviews with personnel of the project developer and its contractors
- Draft determination reporting
- Resolution of corrective actions (if any)
- Final determination reporting
- Technical review
- Final approval of the determination.

The sequence of the determination is given in the table 3.1 below:

**Table 3.1:** Determination PDD sequence

| Topic | Time |
|---|---|
| Assignment of determination | 2009-10-16 |
| Submission of PDD for global stakeholder commenting process | 2009-10-29 |
| On-site visit | 2009-10-28 to 2009-10-29 |
| Draft reporting finalised | 2009-12-01 |
| Final reporting (version 1) finalised | 2010-01-12 |
| Technical review on final reporting finalised | 2009-12-11 |

## 3.2 Contract review

To assure that

- the project falls within the scopes for which accreditation is held,
- the necessary competences to carry out the verification can be provided,
- Impartiality issues are clear and in line with the JI accreditation requirements

a contract review was carried out before the contract was signed.

## 3.3 Appointment of team members and technical reviewers

On the basis of a competence analysis and individual availabilities a determination team, consistent of one team leader and 3 additional team members, were appointed. Furthermore also the personnel for the technical review and the final approval were determined.

The list of involved personnel, the tasks assigned and the qualification status are summarized in the table 3-2 below.

**Table 3-2:** Involved Personnel

| | Name | Company | Function [1] | Qualification Status [2] | Scheme competence | Technical competence [4] | Host country Competence | Team Leading competence |
|---|---|---|---|---|---|---|---|---|
| ☒ Mr. ☐ Ms. | R. Winter | TÜV NORD CERT, Germany | TL | SA | ☒ | Q | ☐ | ☒ |
| ☒ Mr. ☐ Ms. | U. Walter | TÜV NORD CERT, Germany | TM | TE | ☐ | | ☐ | ☐ |
| ☒ Mr. ☐ Ms. | E. Martin | TÜV NORD CERT, Germany | TM | TE | ☐ | | ☒ | ☐ |
| ☒ Mr. ☐ Ms. | E. Krupp | TÜV NORD CERT, Germany | TR[3], FA | SA | ☒ | | ☐ | ☒ |
| ☒ Mr. ☐ Ms. | S. Winter | TÜV NORD CERT, Germany | TR[3] | TE | ☐ | | ☐ | ☐ |

[1] TL: Team Leader; TM: Team Member, TR: Technical review; FA: Final approval

[2] GHG Auditor Status: A: Assessor; E: Expert; SA: Senior Assessor; T: Trainee; TE: Technical Expert

[3] No team member

[4] As per S01-MU03 or S01-VA070 A2 (such as A, B, C...)

## 3.4 Consideration of Public Stakeholder Comments

The draft PDD, as received from the project participants, was made publicly available on TÜV NORD Website www.global-warming.de during a 30 days period from 2009-10-29 to 2009-11-28.

In case comments were received, they are taken into account during the determination process. The comments and the discussion of the same are documented in annex 5 of this report.

## 3.5 Determination PDD Protocol

In order to ensure consideration of all relevant assessment criteria, a determination protocol is used. The protocol shows, in a transparent manner, criteria and requirements, means of determination and the results from pre-determination of the identified criteria. The determination protocol reflects the generic JI – Track 1 requirements projects have to meet as well as project specific issues as applicable. The determination protocol serves the following purposes:

- It organises, details and clarifies the requirements that a JI project is expected to meet;
- It ensures a transparent determination PDD process where the independent entity will document how a particular requirement has been verified and the result of the determination.

The determination protocol as described in Figure 1.

| ***Determination Protocol Table A-1: Requirement checklist*** | | | | |
|---|---|---|---|---|
| ***Checklist Item*** | ***Determination PDD Team Comment*** | ***Reference*** | ***Draft Conclusion*** | ***Final Conclusion*** |
| *The checklist items in Table A-1 are linked to the various requirements the project should meet. The checklist is organised in various sections. Each section is then further sub-divided as per the requirements of the topic and the individual project activity.* | *The section is used to elaborate and discuss the checklist item in detail. It includes the assessment of the determination team and how the assessment was carried out.* | *Gives reference to the information source on which the assessment is based on* | *Assessment based on evidence provided if the criterion is fulfilled (OK), or a CAR, CL or FAR (see below) is raised. The assessment refers to the draft determination stage.* | *In case a corrective action or a clarification the final assessment at the final determination stage is given.* |

**Figure 1:** Determination protocol tables

The completed determination protocol is enclosed in Annex 1 to this report.

## 3.6 Review of Documents

The published PDD (version 1) and supporting background documents related to the project design and baseline were reviewed.

Furthermore, the determination team used additional documentation by third parties like host party legislation, technical reports referring to the project design or to the basic conditions and technical data.

## 3.7 Follow-up Interviews

The determination team has carried out interviews in order to assess the information included in the project documentation and to gain additional information regarding the compliance of the project with the relevant criteria applicable for JI.

During determination the determination team has performed interviews to confirm the provided information and to resolve issues identified in the document review. The main topics of the interviews are summarized in table 3-3.

**Table 3-3:** Interviewed persons and interview topics

| **Interviewed Persons / Entities** | **Interview topics** |
|---|---|
| Project proponent representatives (Fertiberia)<br>Project consultant (N.Serve) | - Chronological description of the project activity with documents of key steps of the implementation.<br>- Implementation status |

| Interviewed Persons / Entities | Interview topics |
|---|---|
| | - Technical details of the project realization, project feasibility, designing, operational life time, monitoring of the project<br>- Host Government Approval<br>- Approval procedures and status<br>- Monitoring and measurement equipment and system.<br>- Financial aspects<br>- Crediting period<br>- Project activity starting date<br>- ERU allocation / ownership<br>- Baseline assumptions<br>- Additionality<br>- Monitoring<br>- Roles & responsibilities of the project participants w.r.t. project management, monitoring and reporting<br>- National Legislation<br>- Editorial issues of the PDD<br>- Plant characteristics |

A comprehensive list of all interviewed persons is part of section 7 'References'.

## 3.8 Project comparison

The determination team has compared the proposed JI project activity with similar projects or technology that have similar or comparable characteristics and with similar projects in order to achieve additional information esp. regarding:

- Project technology
- Additionality issues
- Reasons for reviews, requests for reviews and rejections within the JI registration process.

## 3.9 Resolution of Clarification and Corrective Action Requests

### 3.9.1 Definition

A **Corrective Action Request (CAR)** will be established where:

- mistakes have been made in assumptions, application of the methodology or the project documentation which will have a direct influence the project results,

- the requirements deemed relevant for determination of the project with certain characteristics have not been met or
- there is a risk that the project would not be registered by the UNFCCC or that emission reductions would not be able to be verified and certified.

A **Clarification Request (CL)** will be issued where information is insufficient, unclear or not transparent enough to establish whether a requirement is met.

A **Forward Action Request (FAR)** will be issued when certain issues related to project implementation should be reviewed during the first determination ERU.

### 3.9.2 Draft Determination PDD

After reviewing all relevant documents and taken all other relevant information into account, the determination team issues all findings in the course of a draft determination report and hands this report over to the project proponent in order to respond on the issues raised and to revise the project documentation accordingly.

### 3.9.3 Final Determination PDD

The final determination starts after issuance of the proposed corrective action (CA) of the CARs, CLs and FARs by the project proponent. The project proponent has to reply on those and the requests are "closed out" by the determination team in case the response is assessed as sufficient. In case of raised FARs, in which action from the project personnel is requested, the project proponent has to respond on this, identifying the necessary actions to ensure that the topics raised in this finding are likely to be resolved at the latest during the first verification. The determination team has to assess whether the proposed action is adequate or not.

In case the findings from CARs and CLs cannot be resolved by the project proponent or the proposed action related to the FARs raised cannot be assessed as adequate, no positive determination opinion can be issued by the determination team.

The CAR(s) / CL(s) / FAR(s) are documented in chapter 4.

## 3.10 Technical review

Before submission of the final determination report a technical review of the whole determination procedure is carried out. The technical reviewer is a competent GHG auditor being appointed for the scope this project falls under. The technical reviewer is not considered to be part of the verification team and thus not involved in the decision making process up to the technical review.

As a result of the technical review process the determination opinion and the topic specific assessments as prepared by the determination team leader may be confirmed or revised. Furthermore reporting improvements might be achieved.

## 3.11 Final approval

After successful technical review of the final report an overall (esp. procedural) assessment of the complete determination will be carried out by a senior assessor located in the accredited premises of TÜV NORD.

Only after this step the request for registration can be started (in case of a positive determination opinion).

# 4 DETERMINATION FINDINGS

In the following table the findings from the desk review of the published PDD, visits, interviews and supporting documents are summarised**:**

**Table 4-1:** Summary of CARs, CLs and FARs issued

| Determination topic [1)] | No. of CAR | No. of CL | No. of FAR |
|---|---|---|---|
| General description of project activity (A)<br>- Project boundaries<br>- Participation requirements<br>- Technology to be employed<br>- Contribution to sustainable development | 4 | 1 | - |
| Project baseline (B)<br>- Baseline Methodology<br>- Baseline scenario determination<br>- Additionality determination<br>- Calculation of GHG emission reductions<br>Project emissions<br>Baseline emissions<br>- Leakage | 3 | 2 | - |
| Duration of the Project / Crediting Period (C) | 1 | - | - |
| Monitoring Methodology (D)<br>- Monitoring of<br>Project emissions<br>Baseline emissions<br>Leakage<br>Sustainable development indicators / environmental impacts<br>Project management planning | 1 | 4 | 1 |
| Estimation of greenhouse gas emission reductions (E) | 1 | 0 | - |
| Environmental impacts (F) | - | - | - |
| Stakeholder Comments (G) | - | - | - |
| **SUM** | **10** | **7** | **1** |

- The letters in brackets refer to the determination protocol

The following tables include all raised CARs, CLs and FARs. For an in depth evaluation of all determination items it should be referred to the determination protocols (see Annex 1).

The findings of determination process are summarized in the tables below.

| **Finding:** | **A1** | | |
|---|---|---|---|
| **Classification** | ☒ CAR | ☐ CL | ☐ FAR |
| **Description of finding**<br>*Describe the finding in unambiguous style; address the context (e.g. section)* | The ER values for the year 2019 needs to be corrected. | | |
| **Corrective Action #1**<br>*This section shall be filled by the PP. It shall address the corrective action taken in details.* | *An amendment has been made to the tables in the PDD, which now reflect the correct value of the year 2019 by calculating the emissions for 10.5 months instead of 11.5 months for 2019.* | | |
| **DOE Assessment #1**<br>*The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.* | OK.<br>The relevant tables of the PDD are corrected. | | |
| **Conclusion**<br>*Tick the appropriate checkbox* | ☐ To be checked during the first periodic verification<br>☒ Appropriate action was taken<br>☒ Project documentation was corrected correspondingly<br>☐ Additional action should be taken<br>☒ The project complies with the requirements | | |

| **Finding:** | **A2** | | |
|---|---|---|---|
| **Classification** | ☒ CAR | ☐ CL | ☐ FAR |
| **Description of finding**<br>*Describe the finding in unambiguous style; address the context (e.g. section)* | The calculation of historic emission factors (prior to project implementation) includes minor mistakes. | | |
| **Corrective Action #1**<br>*This section shall be filled by the PP. It shall address the corrective action taken in details.* | *The minor mistakes have been corrected in the PDD, which lead to a correction of the pre-project emissions factor of 5.15 to 5.26kgN2O/tHNO3* | | |
| **DOE Assessment #1**<br>*The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.* | OK.<br>The revised EXCEL-sheet was provided by the PP and checked to be correct and consistent by the DOE. | | |

| Finding: | A2 |
|---|---|
| **Conclusion**<br>*Tick the appropriate checkbox* | ☐ To be checked during the first periodic verification<br>☒ Appropriate action was taken<br>☒ Project documentation was corrected correspondingly<br>☐ Additional action should be taken<br>☒ The project complies with the requirements |

| Finding: | A3 | | |
|---|---|---|---|
| **Classification** | ☒ CAR | ☐ CL | ☐ FAR |
| **Description of finding**<br>*Describe the finding in unambiguous style; address the context (e.g. section)* | The section A.4.1.4. needs further elaboration w.r.t. address, longitude, latitude and figure 2. | | |
| **Corrective Action #1**<br>*This section shall be filled by the PP. It shall address the corrective action taken in details.* | *An additional graphic of the location (figure 2) of the plant as well as the address, longitude and latitude have been included in the PDD.* | | |
| **DOE Assessment #1**<br>*The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.* | OK.<br>The section A.4.1.4. was completed with all relevant data. | | |
| **Conclusion**<br>*Tick the appropriate checkbox* | ☐ To be checked during the first periodic verification<br>☒ Appropriate action was taken<br>☒ Project documentation was corrected correspondingly<br>☐ Additional action should be taken<br>☒ The project complies with the requirements | | |

| Finding: | A4 | | |
|---|---|---|---|
| **Classification** | ☐ CAR | ☒ CL | ☐ FAR |
| **Description of finding**<br>*Describe the finding in unambiguous style; address the context (e.g. section)* | The calculation of plant emission from ppm to kg $N_2O$/t $HNO_3$ should be clarified in A.4.3. | | |
| **Corrective Action #1**<br>*This section shall be filled by the PP. It shall address the corrective action taken in details.* | *Has been amended in the PDD.* | | |
| **DOE Assessment #1**<br>*The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.* | OK.<br>The PDD was revised accordingly. | | |

| Finding: | A4 |
|---|---|
| **Conclusion**<br>*Tick the appropriate checkbox* | ☐ To be checked during the first periodic verification<br>☒ Appropriate action was taken<br>☒ Project documentation was corrected correspondingly<br>☐ Additional action should be taken<br>☒ The project complies with the requirements |

| Finding: | A5 | | |
|---|---|---|---|
| **Classification** | ☒ CAR | ☐ CL | ☐ FAR |
| **Description of finding**<br>*Describe the finding in unambiguous style; address the context (e.g. section)* | No letters of approval have been provided so far. | | |
| **Corrective Action #1**<br>*This section shall be filled by the PP. It shall address the corrective action taken in details.* | *The Spanish Ministry asked for the final determination report before issuing the LoA for the project. The LoA will be presented to the AIE during the first verification.* | | |
| **DOE Assessment #1**<br>*The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.* | The pending letters of approval will be provided only on the basis of the successful conclusion of this determination. Thus this CAR will automatically be closed if the host country issues the LoA. A corresponding update of this report is considered to be not required. | | |
| **Conclusion**<br>*Tick the appropriate checkbox* | ☐ To be checked during the first periodic verification<br>☒ Appropriate action was taken<br>☐ Project documentation was corrected correspondingly<br>☐ Additional action should be taken<br>☒ The project complies with the requirements | | |

| Finding: | B1 | | |
|---|---|---|---|
| **Classification** | ☐ CAR | ☒ CL | ☐ FAR |
| **Description of finding**<br>*Describe the finding in unambiguous style; address the context (e.g. section)* | The calculation from mg/m³ to ppm of $NO_x$ should be clarified in B.2. | | |
| **Corrective Action #1**<br>*This section shall be filled by the PP. It shall address the corrective action taken in details.* | *Has been amended in the PDD.* | | |
| **DOE Assessment #1**<br>*The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.* | OK.<br>The respective clarification was given in B.2.. | | |

| Finding: | B1 |
|---|---|
| **Conclusion**<br>*Tick the appropriate checkbox* | ☐ To be checked during the first periodic verification<br>☒ Appropriate action was taken<br>☒ Project documentation was corrected correspondingly<br>☐ Additional action should be taken<br>☒ The project complies with the requirements |

| Finding: | B2 | | |
|---|---|---|---|
| **Classification** | ☐ CAR | ☒ CL | ☐ FAR |
| **Description of finding**<br>*Describe the finding in unambiguous style; address the context (e.g. section)* | The illustration in chapter B.1. should also reflect the local regulation. | | |
| **Corrective Action #1**<br>*This section shall be filled by the PP. It shall address the corrective action taken in details.* | *The illustration of B.1. has been amended and now not only reflects the international, European and national regulatory level but also the regional level of the Comunidad Autónoma Castilla-LA Mancha.* | | |
| **DOE Assessment #1**<br>*The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.* | OK.<br>The illustration was amended and reflects the regional level of regulations. | | |
| **Conclusion**<br>*Tick the appropriate checkbox* | ☐ To be checked during the first periodic verification<br>☒ Appropriate action was taken<br>☒ Project documentation was corrected correspondingly<br>☐ Additional action should be taken<br>☒ The project complies with the requirements | | |

| Finding: | B3 | | |
|---|---|---|---|
| **Classification** | ☒ CAR | ☐ CL | ☐ FAR |
| **Description of finding**<br>*Describe the finding in unambiguous style; address the context (e.g. section)* | The deviations from the applicability criteria of AM 0034 listed in the Table in Chapter B.1. under c, e and f shall not apply. | | |
| **Corrective Action #1**<br>*This section shall be filled by the PP. It shall address the corrective action taken in details.* | *Has been amended in the PDD. c, e and f of the table in chapter B.1 stay unchanged.* | | |

| Finding: | B3 |
|---|---|
| **DOE Assessment #1**<br>*The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.* | OK.<br>It was clarified by the PP, that the applicability criteria:<br>(c) no effect on HNO3 production<br>(d) no increased NOX emissions<br>(e) no other GHG emissions<br>(f) continuous N2O measurement possible shall be applied to the project activity. |
| **Conclusion**<br>*Tick the appropriate checkbox* | ☐ To be checked during the first periodic verification<br>☒ Appropriate action was taken<br>☒ Project documentation was corrected correspondingly<br>☐ Additional action should be taken<br>☒ The project complies with the requirements |

| Finding: | B4 | | |
|---|---|---|---|
| **Classification** | ☒ CAR | ☐ CL | ☐ FAR |
| **Description of finding**<br>*Describe the finding in unambiguous style; address the context (e.g. section)* | The list of possible baseline scenarios should also include<br>• Recycling of $N_2O$ as a feedstock for the plant;<br>• The use of $N_2O$ for external purposes. | | |
| **Corrective Action #1**<br>*This section shall be filled by the PP. It shall address the corrective action taken in details.* | *The missing scenarios were included in the PDD* | | |
| **DOE Assessment #1**<br>*The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.* | OK.<br>The scenarios $N_20$-recycling as feedstock and use for external purposes are discussed appropriate and later eliminated from further assessment. | | |
| **Conclusion**<br>*Tick the appropriate checkbox* | ☐ To be checked during the first periodic verification<br>☒ Appropriate action was taken<br>☒ Project documentation was corrected correspondingly<br>☐ Additional action should be taken<br>☒ The project complies with the requirements | | |

| Finding: | B5 | | |
|---|---|---|---|
| **Classification** | ☒ CAR | ☐ CL | ☐ FAR |
| **Description of finding**<br>*Describe the finding in unambiguous style; address the context (e.g. section)* | The financial assessment (cost sheet) is pending. | | |
| **Corrective Action #1**<br>*This section shall be filled by the PP. It shall address the corrective action taken in details.* | *The financial assessment was provided by the PP on 2009-11-19.* | | |

| Finding: | B5 |
|---|---|
| **DOE Assessment #1**<br>*The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.* | OK.<br>The PP provided an investment-sheet with all relevant types of costs occurred in the project activity[/INV/]. The main types of costs are:<br>• Costs for catalyst/leasing or investment<br>• Monitoring equipment (AMS) which is in compliance with the monitoring standards listed in the methodology<br>• Costs for maintenance of the AMS regarding QAL 2 and QAL 3, AST<br>• Additional costs for determination and following verifications<br>The different cost items were checked by means of cross-checking the evidences provided by the PP (Inspection of available documents which are stated as confidential during on site visit) as well as acquired through background investigation (public regulation, local tax laws, etc.). |
| **Conclusion**<br>*Tick the appropriate checkbox* | ☐ To be checked during the first periodic verification<br>☒ Appropriate action was taken<br>☒ Project documentation was corrected correspondingly<br>☐ Additional action should be taken<br>☒ The project complies with the requirements |

| Finding: | C1 | | |
|---|---|---|---|
| **Classification** | ☒ CAR | ☐ CL | ☐ FAR |
| **Description of finding**<br>*Describe the finding in unambiguous style; address the context (e.g. section)* | The project starting date and the starting date of the crediting period shall be defined accurately. | | |
| **Corrective Action #1**<br>*This section shall be filled by the PP. It shall address the corrective action taken in details.* | *An amendment has been made to the PDD and the project starting date is now accurately defined throughout the document. The crediting period will begin with the installation of the secondary catalyst and the start up of the plant on the 9th of November 2009.* | | |
| **DOE Assessment #1**<br>*The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.* | OK.<br>The starting date of the project and the crediting period are defined as the date the catalyst was installed. This is in compliance with the JI-glossary of terms. | | |
| **Conclusion**<br>*Tick the appropriate checkbox* | ☐ To be checked during the first periodic verification<br>☒ Appropriate action was taken<br>☒ Project documentation was corrected correspondingly<br>☐ Additional action should be taken<br>☒ The project complies with the requirements | | |

| Finding: | D1 | | |
|---|---|---|---|
| **Classification** | ☒ CAR | ☐ CL | ☐ FAR |
| **Description of finding**<br>*Describe the finding in unambiguous style; address the context (e.g. section)* | In the context of the benchmark approach (without baseline related data treatment for $VSG_n$ and $NCSG_n$) the formula for $PE_n$ as presented on page 40 of the PDD is not deemed to deliver correct mass flow values. | | |
| **Corrective Action #1**<br>*This section shall be filled by the PP. It shall address the corrective action taken in details.* | *The formula under D.1.2.2. on page 40 takes the average values for VSG and for NCSG and then multiplies them with the operating hours of the verification period.*<br>*The formula is part of the methodology AM0034 (page 10 version 3.4, formula (4)) and thus officially approved by the CDM EB. We do not see any need to deviate from the methodology since an efficient conservativeness is secured by following the approach of the CDM EB.*<br>*Furthermore, using another formula would not lead to highly different results since VSG values stay constant in most nitric acid plants.* | | |
| **DOE Assessment #1**<br>*The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.* | OK.<br>The determination team follows the justification of the PP. According to the methodology AM0034, the formula shall be used for calculation of PE against a regulatory limit. This corresponds to the situation in the project, where a benchmark will be set by the DFP for. The application of the formula will lead to conservative results | | |
| **Conclusion**<br>*Tick the appropriate checkbox* | ☐ To be checked during the first periodic verification<br>☒ Appropriate action was taken<br>☒ Project documentation was corrected correspondingly<br>☐ Additional action should be taken<br>☒ The project complies with the requirements | | |

| Finding: | D2 | | |
|---|---|---|---|
| **Classification** | ☐ CAR | ☐ CL | ☒ FAR |
| **Description of finding**<br>*Describe the finding in unambiguous style; address the context (e.g. section)* | The AMS needs to be checked in detail during the first verification. | | |
| **Corrective Action #1**<br>*This section shall be filled by the PP. It shall address the corrective action taken in details.* | *The AMS will be checked during the first verification* | | |
| **DOE Assessment #1**<br>*The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.* | OK.<br>The verifier has to check the appropriateness of the AMS in the context of the project activity. | | |

| Finding: | D2 |
|---|---|
| **Conclusion**<br>*Tick the appropriate checkbox* | ☒ To be checked during the first periodic verification<br>☐ Appropriate action was taken<br>☐ Project documentation was corrected correspondingly<br>☐ Additional action should be taken<br>☒ The project complies with the requirements |

| Finding: | D3 | | |
|---|---|---|---|
| **Classification** | ☐ CAR | ☒ CL | ☐ FAR |
| **Description of finding**<br>*Describe the finding in unambiguous style; address the context (e.g. section)* | It should be clarified, how operation hours, in which the plant was only partly operational, shall be dealt with. Furthermore explanation is required on which basis the corresponding status signal is set: what parameters and threshold values are to be used. | | |
| **Corrective Action #1**<br>*This section shall be filled by the PP. It shall address the corrective action taken in details.* | *The PDD has been amended respectively. A clarification has been added to the operating hours (P.4). under table D.1.1.:*<br>*Only the data (NCSG etc.) of hours in which the plant was fully operational will be taken into account for calculating emissions reductions. Hours (and all respective data) in which the plant was only partly operating will be eliminated.*<br>*For further explanation of status signal see D4.* | | |
| **DOE Assessment #1**<br>*The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.* | OK.<br>The PP explained, that:<br>• the status signal in case of being in operation (ammonia valve open) will be defined as: 1.<br>• the signal in case of not being in operation (ammonia valve closed) is 0.<br>If the signal is lower than 1, the operational hour will be eliminated from the calculation. | | |
| **Conclusion**<br>*Tick the appropriate checkbox* | ☐ To be checked during the first periodic verification<br>☒ Appropriate action was taken<br>☒ Project documentation was corrected correspondingly<br>☐ Additional action should be taken<br>☒ The project complies with the requirements | | |

| Finding: | D4 | | |
|---|---|---|---|
| **Classification** | ☐ CAR | ☒ CL | ☐ FAR |
| **Description of finding**<br>*Describe the finding in unambiguous style; address the context (e.g. section)* | It should be clarified, how plant shutdowns are registered in the process control system of the plant and how these data are exported for emission data calculation. | | |

| Finding: | D4 |
|---|---|
| **Corrective Action #1**<br>*This section shall be filled by the PP. It shall address the corrective action taken in details.* | *The following amendment has been made to the PDD: In table D.1.1.1. under P.4 a detailed explanation has been added:*<br>*Signal: status of ammonia valve (closed/open)*<br>*Comment. Exported status signal in case of being in operation (ammonia valve open): 1; exported signal in case of not being in operation (ammonia valve closed): 0. The hourly mean value indicates whether the plant was in operation during the whole hour (mean value = 1) or not (mean value <1).* |
| **DOE Assessment #1**<br>*The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.* | OK.<br>The PP explained that the status of the ammonia valve (open/close) at the entry of the burner will be registrated and used to indicate and evaluate the operational status of the plant. |
| **Conclusion**<br>*Tick the appropriate checkbox* | ☐ To be checked during the first periodic verification<br>☒ Appropriate action was taken<br>☒ Project documentation was corrected correspondingly<br>☐ Additional action should be taken<br>☒ The project complies with the requirements |

| Finding: | D5 | | |
|---|---|---|---|
| **Classification** | ☐ CAR | ☒ CL | ☐ FAR |
| **Description of finding**<br>*Describe the finding in unambiguous style; address the context (e.g. section)* | It should be made clearer that the application is based on the 2.5 kg $N_2O$/t $HNO_3$ benchmark approach only. | | |
| **Corrective Action #1**<br>*This section shall be filled by the PP. It shall address the corrective action taken in details.* | *The respective section A.5 has been amended. It is now clearly stated that the project proponents apply for the project activity based on the benchmark of* 2.5 kg $N_2O$/t$HNO_3$. | | |
| **DOE Assessment #1**<br>*The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.* | OK.<br>The PP explained clearly in the PDD, that a benchmark will be applied to calculate the emissions reductions from a specific Verification Period | | |
| **Conclusion**<br>*Tick the appropriate checkbox* | ☐ To be checked during the first periodic verification<br>☒ Appropriate action was taken<br>☒ Project documentation was corrected correspondingly<br>☐ Additional action should be taken<br>☒ The project complies with the requirements | | |

| Finding: | D6 | | |
|---|---|---|---|
| **Classification** | ☐ CAR | ☒ CL | ☐ FAR |

| Finding: | D6 |
|---|---|
| **Description of finding**<br>*Describe the finding in unambiguous style; address the context (e.g. section)* | The application of a specific uncertainty limit of the AMS should be clarified in Chapter D2. The consequence of non compliance should be clarified. |
| **Corrective Action #1**<br>*This section shall be filled by the PP. It shall address the corrective action taken in details.* | *There is no regulation on N2O emissions level and measurement uncertainty limit under EN14181. Thus, the variability of the measured values obtained with the AMS will be evaluated by the independent qualified "testing house or laboratory which has to be accredited to EN ISO/IEC 17025.* |
| **DOE Assessment #1**<br>*The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.* | OK.<br>The QAL 2 test will include the determination of the variability of the AMS according to international standards and limits which are eligible for $NO_x$-measurements. |
| **Conclusion**<br>*Tick the appropriate checkbox* | ☐ To be checked during the first periodic verification<br>☒ Appropriate action was taken<br>☒ Project documentation was corrected correspondingly<br>☐ Additional action should be taken<br>☒ The project complies with the requirements |

| Finding: | E1 | | |
|---|---|---|---|
| **Classification** | ☒ CAR | ☐ CL | ☐ FAR |
| **Description of finding**<br>*Describe the finding in unambiguous style; address the context (e.g. section)* | The ex-ante ER-calculation for the year 2019 needs to be revised. | | |
| **Corrective Action #1**<br>*This section shall be filled by the PP. It shall address the corrective action taken in details.* | *Has been amended in the PDD (see also A1 of this report).* | | |
| **DOE Assessment #1**<br>*The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.* | Table 6 was revised accordingly. | | |
| **Conclusion**<br>*Tick the appropriate checkbox* | ☐ To be checked during the first periodic verification<br>☒ Appropriate action was taken<br>☒ Project documentation was corrected correspondingly<br>☐ Additional action should be taken<br>☒ The project complies with the requirements | | |

# 5 DETERMINATION ASSESSMENT SUMMARY

The following paragraphs include the summary of the final determination assessments after all CARs and CRs are closed out. For details of the assessments pl. refer to the discussion of the determination findings in chapter 4 and the determination protocol (Annex 1).

## 5.1 General Description of the Project Activity

### 5.1.1 Participation

**LOA**

No Letter of Approval (LoA) has been provided so far. A corresponding CAR has been raised. As the LoA will only be issued upon a positive determination opinion, this CAR will automatically be closed upon issuance of host country.

**Project Participants**

The project participants are listed in section A.3 of the PDD and this information is consistent with the contact details provided in annex 1 of the PDD.

No entities other than those intended to be approved or authorised to be project participants indicated in these sections of the PDD.

For an in depth evaluation of these topics, please refer to section A.1 of the table A-1 of annex 1.

### 5.1.2 Contribution to Sustainable Development

The contribution of the project activity to sustainable development of the host country has not been confirmed, because the LoA is still pending. The LoA which will be provided by the host country after submission of the Final Determination Report will include a clear statement regarding the sustainability of the project.

For an in depth evaluation of these topics, please refer to section A.2 and B.2 of the PDD.

### 5.1.3 PDD Editorial Aspects

The PDD is in line with the guidelines for users of the JI PDD form (version 04), issued on the UNFCCC JI website. The latest JI PDD form (version 01) was used.

For an in depth evaluation of these topics, please refer to section A.2 of the table A-1 (annex 1).

### 5.1.4 Technology to be employed

The description of the project as contained in the PDD is complete and accurate and it provides the reader with a clear understanding of the nature of the project activity.

The technology and know-how used in the project activity is assessed to be environmentally safe and sound.

For an in depth evaluation of these topics, please refer to section A.3 of the table A-1 (annex 1) and chapter 2 of this determination report.

### 5.1.5 Type of Project

The project qualifies as a Small Scale JI Track 1 Project, scope 5: "Chemical Industry". The host country Spain fulfils the requirements for Track 1 participation. National guidelines and procedures for approving JI projects are implemented /dfp/, /B-5/, /B-9/.

## 5.2 Project Baseline, Additionality and Monitoring Plan

### 5.2.1 Application of the Methodology

The project applies in principle to the approved baseline and monitoring methodology AM0034 methodology: "Catalytic reduction of $N_2O$ inside the ammonia burner of nitric acid plants", version 03.4. /B-2/. Since the methodology is applied in the context of a JI Track 1 projects, some eligible deviations were made and properly described in the PDD. The Baseline Emission factor will not be determinated by assessment of a historical baseline campaign because the DFP involves a benchmark factor, which will be applied for the calculation of the emission reduction. This leads to an adjustment of the abovementioned methodology due to these specific project conditions.

Beyond this, the proposed project activity meets all the other possible requirements or stipulations mentioned in all sections of the selected methodology.

Furthermore the project activity is not expected to result in significant emissions, related both to project and leakage, other than those listed in the methodology.

In summary it is assessed that the project applies a valid version of an approved methodology and the methodology is applicable to the project.

For an in depth evaluation of these topics, please refer to section B.1 of the table A-1 (annex 1).

### 5.2.2 Project Boundary

The PDD correctly describes the project boundary including the physical delineation of the project activity (all parts of the Puertollano II Nitric Acid Plant from the ammonia burner to the stack) and the description of the emission sources and GHGs that are included in the project boundary for the purpose of calculating project and baseline emissions for this project activity.

No emission sources which are impacted by the project activity but not addressed by the approved methodology have been identified during determination.

For an in depth evaluation of these topics, please refer to section B.2 of the table A-1 (annex 1).

### 5.2.3 Baseline Identification

The PDD provides a transparent and verifiable description of the identified most plausible baseline scenario, including a description of the technology that would be employed and/or the activities that would take place in the absence of the proposed project activity.

The procedure to identify the most plausible reference scenario derived from the methodology (para II of the methodology) has been applied correctly and is transparently and sufficiently documented in the PDD.

The identification of possible alternatives of the project activity was carried out appropriately. Furthermore the PP has shown that all relevant policies and circumstances have been identified and correctly considered in the PDD in accordance with the guidance by the DFP.

In summary it can be assessed that the identified baseline scenario reasonably represents what would occur in the absence of the proposed project activity and the approved methodology used is applicable to the identified baseline scenario.

For an in depth evaluation of these topics, please refer to the section B.3 (annex 1) as well as table A-2 of the Annex 2.

### 5.2.4 Calculation of GHG Emission Reductions

The PDD applies steps and equations to calculate project emissions, baseline emissions, leakage and emission reductions as per the requirements of the methodology.

For the calculation of the GHG emission reductions, the correct equations have been used reflecting the methodological choices. Furthermore all equations are applied correctly.

According to AM0034 leakage calculation is not required.

Emission reduction is calculated and estimated by the difference between baseline emissions and project emissions.

**Baseline Emissions:**

The baseline methodology takes into account

- a anticipated benchmark of 2.5 kg $N_2O$/t $HNO_3$ (100%) throughout the project activity, which was introduced in the PIN to the Spanish DFP by the PP and
- a plant specific regulatory limit of 1.000 ppmv $N_2O$ which is about 6 kg $N_2O$/t $HNO_3$ (100%), introduced by the Comunidad Autónoma de Castilla-La Mancha.

The baseline emission factor considers both limit values and is determinated as follows:

| Year: | 2009 | 2010 | 2011 | 2012 | |
|---|---|---|---|---|---|
| Value: | 2.5 | 2.5 | 2.5 | 2.5 | kg $N_2O$/t $HNO_3$ (100%). |

Since the approval from the DFP regarding the benchmark value is still outstanding, the determination team will check all provided info with subject to the confirmation of the value of 2.5 kg $N_2O$/t $HNO_3$.

**Project Emissions:**

Taking into account an 80 % efficiency of the secondary $N_2O$ abatement catalyst and an Emission Factor of 5.26 kg $N_2O$/t $HNO_3$ (according to historical data of the plant/HIST/) average project emissions factor results to 1.05 kg $N_2O$/t $HNO_3$.

For an in depth evaluation of these topics, please refer to sections B5-B6 of the table A-1 of the annex 1.

### 5.2.5 Additionality Determination

**Prior consideration of the JI project activity**

The start of the project was 2009-11-15. At this date, the plant restarted with an AMS in the stack and a full batch of secondary catalyst which was installed during a regular in October. This date is fixed as the starting date of the project. The project

developer N.serve was deeply involved in the preparation of the project and in the communication with the DFP regarding the registration of the project, so a prior consideration of the JI is obvious.

Hence, the determination team can confirm that the project complies with the requirements regarding prior consideration of JI.

**Application of Methodology / Methodological Tools**

The discussion of additionality in the PDD was justified and conducted according to the step-by-step-approach of the Methodological CDM Tool "Combined Tool to identify the baseline scenario and demonstrate additionality" (Version 02.2)". According to the EB, this tool is applicable for project activities using approved methodologies where all identified alternative baseline scenarios are under the control of project participants (no leakage occurs) "B-10". Since this is the case in the Fertiberia project, it is appropriate to apply the Combined Tool to the project.

**Alternatives**

The PDD contains a complete list of all realistic alternatives to the project scenario. The list contains inter alia the project activity not undertaken as a JI project activity and the continuation of the status quo.

**Investment Analysis**
The PP provided an investment-sheet with all relevant types of costs occurred in the project activity/INV/.

The main types of costs are:

- Costs for catalyst/leasing or investment
- Monitoring equipment (AMS) which is in compliance with the monitoring standards listed in the methodology
- Costs for maintenance of the AMS regarding QAL 2 and QAL 3, AST
- Additional costs for determination and following verifications

The determination team has conducted a thorough assessment of the parameters and assumptions used in this calculation. The conclusion is that all relevant financial indicators and parameters are determined accurately. This was checked by means of cross-checking the evidences provided by the PP (Inspection of available documents, which are stated as confidential during on site visit) as well as acquired through background investigation (public regulation, local tax laws, etc.); besides, expertise in relevant accounting practices has been consulted.

It can be confirmed, that none of the $N_2O$ destruction technology options are expected to generate any significant financial or economic benefits other than JI related income. Therefore, the "Business As Usual" scenario, which corresponds to the current plant operation, is considered not to face any significant investment barriers.

**Barrier Analysis**

The PP has justified the additionality on the basis of

a) Investment barriers

b) Technological barriers

c) Other barriers

Though all barriers are justified to a certain extent, none of the barriers was assessed by the determination team to be a decisive barrier which would have prevented the project from realization.

For an in depth evaluation of these topics, please refer to sections B4 of the table A-1 of the annex 1.

**Summary**

The procedure to justify the additionality of the project activity derived from the methodology or required methodological tools has been applied correctly and is transparently documented in the PDD.

The determination team is convinced that the JI was seriously considered during the Management Decision for the project.

Considering all statements above, the determination team arrived at the conclusion that the project activity is **additional** because the project is not financially viable without JI revenues, whereas none of the other presented barriers could be considered as a decisive barrier for the project implementation.

### 5.2.6 Monitoring Methodology

The data measurement, storage, assessment and processing was discussed with the plant operator Fertiberia and N.serve, who will process the monitoring data and it can be confirmed, that the monitoring plan is in major in compliance with the methodology AM0034, considering the changes as given in section B1 of the PDD

For an in depth evaluation of these topics, please refer to section B6 of the table A-1 (annex 1).

### 5.2.7 Monitoring Plan

The monitoring plan covers all monitoring parameters as stipulated in the applied monitoring procedure of the methodology /B-2/. The monitoring plan can be implemented and the determination team arrived at the conclusion that all monitoring arrangements are feasible within the project design.

For an in depth evaluation of these topics, please refer to section B6 of the table A-1 (annex 1).

### 5.2.8 Project Management Planning

The project management planning is appropriate for the purpose of the projects monitoring.

For an in depth evaluation of these topics, please refer to section B.7 of the table A-1 (annex 1).

### 5.2.9 Crediting Period

The project starting date is 2009-11-15 and the duration of the crediting period extends from 2009-11-15 to 2012-12-31, which is deemed realistic and appropriate. The full extension of the crediting period can only be applied to the project activity, if the JI regulations are applicable and no further regulation (esp. EU-ETS involvement) is in place after end of 2012. If $N_2O$ is not included in the ETS after 2012, the period will extend to regular 10 Years until 2019.

For an in depth evaluation of these topics, please refer to section C of the table A-1 of the annex 1.

### 5.2.10 Environmental Impacts

The project reduces the $N_2O$-Emissions of the Fertiberia plant using a specific catalytic oxidisation process. No additional emissions will occur, no additional usage of resources is necessary.
On the basis of document review and the on-site visit the determination team is convinced that negative environmental impacts due to the project are unlikely to occur.

For an in depth evaluation of these topics, please refer to section D of the table A-1 of the annex 1.

### 5.2.11 Comments by Stakeholders

The global stakeholder consultation for the project was carried out on the TÜV NORD website www.global-warming.de for 30 days, in line with the applicable requirements.

As the JI project does not have any relevance for local air, water or soil emissions, a local stakeholder consultation is not considered as necessary.

For an in depth evaluation of these topics, please refer to section E of the table A-1 (annex 1).

### 5.2.12 Issues for verification

- It must be proven at each verification, that the plant's average emission levels for the past year did not exceed regulatory limits.
- The suitability of the AMS to fulfil the requirements of the QAL 1 needs to be proved by an independent laboratory with EN ISO/IEC 17025. This includes the determination of the uncertainty on the basis of applicable international standards.

# 6 DETERMINATION OPINION

Fertiberia has commissioned the TÜV NORD JI/CDM Certification Program (CP) as a Third Party to determinate the project:

"FERTIBERIA PUERTOLLANO II $N_2O$ ABATEMENT PROJECT IN SPAIN"

with regard to the relevant requirements of the host country Spain and of the UNFCCC for JI project activities, as well as criteria for consistent project operations, monitoring and reporting. UNFCCC criteria refer to the Kyoto Protocol Article 6 criteria and the Guidelines for the implementation of Article 6 of the Kyoto Protocol as agreed in the Marrakech Accords.

The project applies to the UNFCCC Methodology: „"Catalytic reduction of $N_2O$ inside the ammonia burner of nitric acid plants", Version 03.4.

The review of the project design documentation and additional documents related to baseline and monitoring methodology have provided TÜV NORD JI/CDM CP with sufficient evidence to determinate the fulfilment of the stated criteria.

In detail the conclusions can be summarised as follows:

- The project is in line with all relevant host country criteria (Spain) and all relevant UNFCCC requirements for JI.
- The project additionality is sufficiently justified in the PDD, the monitoring plan is transparent and adequate.
- The calculation of the project emission reductions is carried out in a transparent and conservative manner, so that the calculated emission reductions of 176,747 $tCO_2e$ (between 2009 and 2012) are most likely to be achieved within the crediting period.

The conclusions of this report show, that the project, as it was described in the project documentation, is in line with all criteria applicable for the determination PDD

Since the LoAs will be issued after registration of the project at the DFP, CAR A5 can not be closed during the time of determination.

Essen, 2010-01-12

Mr Rainer Winter,

TÜV NORD JI/CDM CP

Determination Team Leader

Essen, 2010-01-12

Mr Eric Krupp

TÜV NORD JI/CDM CP

Final Approval

# 7 REFERENCES

**Table 7-1**: Documents provided by the project participant

| | Document |
|---|---|
| /**9001C1**/ | ISO 9001:2000 Certificate, valid until 2010-05-05, issued by AENOR at 2007-05-05 (English translation). |
| /**9001C2**/ | ISO 9001:2000 Certificate, valid until 2010-05-05, issued by AENOR at 2007-05-05. |
| /**14001C1**/ | ISO 14001:2000 Certificate, valid until 2014-12-14, issued by AENOR at 2007-12-14 (English translation). |
| /**14001C2**/ | ISO 14001:2000 Certificate, valid until 2014-12-14, issued by AENOR at 2007-12-14. |
| /**AAI**/ | 1. Autorización Ambiental Integrada (Integrated Environmental Authorisation), Expedient-Nr: AAI-CR-020, issued on 2008-11-11 by Dirección General de Evaluación Ambiental, Consejería de Industria, Energía y Medio Ambiente.<br>2. Cumplimiento de las condiciones impuestas en la resolución de 10 de noviembre de 2008 (Compliance of the conditions indicated in the Resolution of 10th November 2008, as above). This document clarifies that the compliance with regard to the $N_2O$ emission limits (300ppm) as per the Integrated Environmental Authorisation has been postponed till 31st December 2012. Until this date, a limit of 1,000 ppmv is valid. |
| /**AAI2**/ | Cumplimiento de las Condiciones Impuesta en la Resolutión de 10 de Noviembre de 2008<br>(Additional decree of the local authorities, that $N_2O$ emission limits (300 ppmv) stated in /AAI/ will be valid from 2012-12-31 on.) |
| /**AG**/ | Approving guidelines from the Spanish DFT regarding JI-projects aimed at reduction of $N_2O$ emissions in nitric acid plants in Spain dated 2010-02-16.. |
| /**BREF**/ | European IPPC Bureau publication „Integrated Pollution Prevention and Control; Reference Document on Best Available Techniques for the Manufacture of Large Volume Inorganic Chemicals – Ammonia, Acids and Fertilizers (August 2007) |
| /**CAP**/ | Nitric Acid Plant design capacity description. Manual Davy Powergas, Jul 1977 |

| | Document |
|---|---|
| /**CAT**/ | Technical information about YARA $N_2O$-Catalyst |
| /**CE**/ | Autorización de "Puesta en marcha" (Start-up Permission), dated on 1972-05-30 |
| /**COR**/ | Product data sheet for mass flow and density sensor for MICROFLOW $HNO_3$-massflow. |
| /**CON1**/ | Confidential contract between Fertiberia and Johnson Matthew Plc regarding delivery of the YARA $N_2O$ catalyst (Hand notes). |
| /**CON2**/ | Confidential contract between Fertiberia and Dr. Frödisch Matthew regarding delivery of the AMS and gases (Hand notes). |
| /**DENOX**/ | Design data of $DeNO_x$-Catalyst |
| /**DIA**/ | Plant layout and plant process diagrams |
| /**EB27**/ | EXECUTIVE BOARD OF THE CLEAN DEVELOPMENT MECHANISM: TWENTY-SEVENTH MEETING, Report |
| /**INV**/ | Table sheet with relevant costs and incomes |
| /**FS**/ | Nitric Acid Process Flow Sheet |
| /**HD**/ | Historical Data:<br>$N_2O$ emissions for Puertollano II-Nitric Acid Plant, 2003-2009. |
| /**MAN**/ | Manual de Operación de la Planta de Ácido Nítrico (Operation Manual for the Nitric Acid Plant ) |
| /**MAILDFP**/ | Mail of the Spanish DFP regarding amendments of the PDD in cours of the registration process. |
| /**MMADOC**/ | Confirmation of the DFP of the implementation of a project benchmark as baseline reference dated 2009-11-11 |
| /**PER**/ | Licencia de Apertura (Plant operation permission), issued by the City Council of Puertollano on 13th May 1976 |
| /**PDD**/ | PDD: Fertiberia Puertollano II $N_2O$ abatement project in Spain, Version: 20th October 2009 (Version #1.0)<br>• Initial version, subject of determination of the AIE |
| /**PDDREV**/ | PDD: Fertiberia Puertollano II $N_2O$ abatement project in Spain, |

| | Document |
|---|---|
| | Version: 12th January 2010 (Version #1.3)<br>• Final version, considering all findings of and comments from the AIE/MAILDFP/ |
| /**PDDDFP**/ | PDD: Fertiberia Puertollano II $N_2O$ abatement project in Spain, Version: 25th February 2010 (Version #1.5)<br>• Final version, including revisions initiated by the Spanish DFP on the basis of the LoA process. |
| /**STACK**/ | Gas measurements of the stack from 2006 till 2009 |
| /**TRIP**/ | Table of process variables of plant (Quality document) |
| /**TRIP1**/ | Table of control and operation values of plant (Quality document) |
| /**MAINT**/ | Procedures of maintenance of AMS (Quality document) |
| /**HIST**/ | Historical data of $N_2O$-Emission |
| /**EXCEL**/ | Simple cost analysis for Puertollano II |

**Table 7-2:** Background investigation and assessment documents

| Reference | Document |
|---|---|
| /**B-1**/ | Combined Tool to identify the baseline scenario and demonstrate additionality" (Version 02.2) |
| /**B-2**/ | Approved baseline and monitoring methodology AM0034: "Catalytic reduction of $N_2O$ inside the ammonia burner of nitric acid plants", version 3.4 |
| /**B-3**/ | European Standard DIN EN 14181: "Stationary source emissions – Quality assurance of automated measuring systems |
| /**B-4**/ | Joint Implementation Project Design Document Form, Version 01 - in effect as of: 15 June 2006 |
| /**B-5**/ | Spanish Royal Decree 1031/2007, which develops the participation framework in the flexible mechanisms of the Kyoto Protocol |
| /**B-6**/ | Reference Document on Best Available Techniques for the Manufacture of Large Volume Inorganic Chemicals - Ammonia, Acids and Fertilisers |

| Reference | Document |
|---|---|
| /**B-7**/ | Guidelines for Users of the Joint Implementation Project Design Document Form, Version 04 |
| /**B-8**/ | Approved baseline methodology AM0028: "Catalytic $N_2O$ destruction in the tail gas of Nitric Acid or Caprolactam Production Plants", Version 04.2 |
| /**B-9**/ | Aprobación de proyectos de AC en España (JI Approval and Authorisation Guidance in Spain) |
| /**B-10**/ | CDM-EB-27: Executive Board of the Clean Development Mechanism, Twenty-Seventh Meeting |
| /**B-11**/ | Real Decreto Legislativo 1/2008, de 11 de enero, por el que se aprueba el texto refundido de la Ley de Evaluación de Impacto Ambiental de proyectos |
| /**B-12**/ | Joint Implementation Supervisory Committee, Eighteenth meeting Report. Annex 3: PROVISIONS FOR JOINT IMPLEMENTATION SMALL-SCALE PROJECTS (Version 03) |
| | |

**Table 7-3:** Websites used

| Reference | Link | Organisation |
|---|---|---|
| /**bref**/ | http://eippcb.jrc.ec.europa.eu/reference/ | Website of the European Commission, Joint Research Centre, Institute for Prospective Technological Studies (Provision of BAT-Reference documents) |
| /**dfp**/ | http://www.mma.es | Ministerio de Medio Ambiente, Medio Rural y Marino Oficina Española de Cambio Climático (OECC) |
| /**dehst**/ | http://www.dehst.de | German Emissions Trading Authority (DEHSt) at the Federal Environment Agency |
| /**ipcc**/ | http://eippcb.jrc.ec.europa.eu/pages/FActivities.htm | IPCC publications |
| /**cdm**/ | http://cdm.unfccc.int/Reference/tools/index.html | Web page of the UNFCCC |
| /**prtr**/ | http://www.prtr-es.es/informes/facilitylevel. | Spanish PRTR-Register |

| Reference | Link | Organisation |
|---|---|---|
| | aspx | |
| /eu/ | http://ec.europa.eu/environment/climat/emission/implementation_en.htm | EC legal database |
| /efma/ | www.efma.org | Web page of the European Fertilizer Manufacturers Association |
| /ji/ | http://ji.unfccc.int | UNFCCC JI-website with relevant JI related documents/guidance |

**Table 7-4:** List of interviewed persons

| Reference | MoI[1] | | Name | Organisation / Function |
|---|---|---|---|---|
| /IM01/ | V | ☒ Mr. ☐ Ms | José de la Cruz Carmona | Fertiberia, Technical manager |
| /IM01/ | V | ☒ Mr. ☐ Ms | Luis Romero Mota | Fertiberia, Quality General Manager and Head of the Technical Department. |
| /IM01/ | V | ☒ Mr. ☐ Ms | Esteban José Morales Ramírez | Fertiberia, Head of Electrical Instrumentation Department |
| /IM01/ | V | ☐ Mr. ☒ Ms | Francisca Galindo Paniagua | Fertiberia, Technical Director |
| /IM01/ | V | ☐ Mr. ☒ Ms | Beatriz Calso Monroy | Fertiberia, Project Leader |
| /IM01/ | V | ☒ Mr. ☐ Ms | Fernando Domínguez Coronel | Fertiberia, Head of Product Controlling and Coordinator of Environmental Control |
| /IM01/ | V | ☒ Mr. ☐ Ms | Angel Arenas Mosqueda | Fertiberia, Head of Production |
| /IM01/ | V | ☐ Mr. ☒ Ms | Sarah Debor | N.Serve, Project Leader |
| /IM01/ | V | ☒ Mr. ☐ Ms | Christopher Brandt | N.Serve, Head of Project |

| Reference | MoI[1] | | Name | Organisation / Function |
|---|---|---|---|---|
| | | | | Management, Legal Counsel |

[1)] Means of Interview: (**T**elephone, **E**-Mail, **V**isit)

# ANNEX

| | |
|---|---|
| **A1:** | Determination Protocol |
| **A2:** | Assessment of Baseline Information |
| **A3:** | Assessment of Financial Parameters |
| **A4:** | Assessment of Barrier Analysis |
| **A5:** | Outcome of the GSCP |
| **A6:** | Application of non approved Methodologies Requirement Checklist |

# ANNEX 1: DETERMINATION PROTOCOL

**Table A-1:** Requirements Checklist

| **Checklist Item**<br>(incl. guidance for the determination team) | **Determination Team Comments**<br>(Means and results of assessment) | **Ref.** | **Draft Concl.** | **Final Concl.** |
|---|---|---|---|---|
| ***A. General Description of Project Activity*** | | | | |
| **A.1. Approval**<br>*The written approval of the parties involved is a mandatory requirement* | | | | |
| A.1.1. Which Parties and project Participants are involved in the project? | Parties involved are Spain (as a Host Party), Germany, and United Kingdom.<br>The Project Participant of the Host Country Spain is Fertiberia S.A..<br>The Project Participant of Germany is N.serve Environmental Services GmbH (Germany).<br>The Project Participant of United Kingdom is Johnson Matthey Plc | /PDD/ | | OK |
| A.1.2. Are the parties involved eligible for JI Track 1? | By means of checking the UNFCCC website and the website of the DFP, it was confirmed that all parties are eligible under JI track 1. | /ji/<br>/dfp/ | | OK |

| **Checklist Item**<br>(incl. guidance for the determination team) | **Determination Team Comments**<br>(Means and results of assessment) | **Ref.** | **Draft Concl.** | **Final Concl.** |
|---|---|---|---|---|
| | | /B-5/<br>/B-9/<br>/dehst/<br>/unfccc/ | | |
| A.1.3. Has the project provided written approvals of all parties involved? | The pending letters of approval will be provided only on the basis of the successful conclusion of this determination. Thus the CAR A5 will automatically be closed if the host country issues the LoA. A corresponding update of this report is considered to be not required. | /PDD/ | CAR A5 | OK |
| A.1.4. Are the approvals issued from organisations listed as DFPs on the UNFCCC JI website? | Please refer to the comment under A.1.3. | | CAR A5 | OK |
| A.1.5. Do the written approvals confirm that the corresponding party is a Party to the Kyoto Protocol? | Please refer to the comment under A.1.3. | | CAR A5 | OK |
| A.1.6. Do the written approvals refer to the precise project title in the PDD submitted for registration? | Please refer to the comment under A.1.3. | | CAR A5 | OK |
| A.1.7. Is the information regarding the project participants listed in section A3 and in Annex 1 of the PDD internally consistent to each other? | Yes, the information regarding the name of the organisation given in Annex 1 is in line with A.3 | /PDD/ | | OK |

| Checklist Item<br>(incl. guidance for the determination team) | Determination Team Comments<br>(Means and results of assessment) | Ref. | Draft Concl. | Final Concl. |
|---|---|---|---|---|
| A.1.8. Are all project participants listed in the PDD approved at least by one Party involved? | Please refer to the comment under A.1.3. | | CAR A5 | OK |
| A.1.9. Are any other project participants approved but not listed in the PDD? | Please refer to the comment under A.1.3. | | CAR A5 | OK |
| **A.2. PDD editorial aspects**<br>*The PDD used as a basis for determination shall be prepared in accordance with the latest template and guidance from the JISC available on the UNFCCC JI website.* | | | | |
| A.2.1. Has the latest version of the applicable PDD form been applied? | The latest version of the PDD form, Version 1, has been used for preparation the PDD. | /PDD/ /B-4/ /ji/ | | OK |
| A.2.2. Has the PDD been duly filled in accordance with the latest guidance(s)? | The PDD is in line with the Guidelines for Users of the Joint Implementation Project Design Document Form, Version 04, issued on the UNFCCC website.<br>The PDD has in general been filled in accordance with the structure and guidance given in the guidelines, but minor editorial issues have been discussed with the PPs during the site visit. The following findings have been raised and issued as **CARs**, **CLs** and **FARs** as listed in the sections below. | /PDD/ /B-7/ /ji/ | | OK |

| Checklist Item<br>(incl. guidance for the determination team) | Determination Team Comments<br>(Means and results of assessment) | Ref. | Draft Concl. | Final Concl. |
|---|---|---|---|---|
| | The section A.4.1.4. needs further elaboration w.r.t. address, longitude, latitude and figure 2. | /PDD/ | ~~CAR A3~~ | OK |
| | The illustration in chapter B.1. should also reflect the local regulation. | /PDD/ | ~~CL B 2~~ | OK |
| **A.3. Technology to be employed**<br>*Determination of project technology focuses on the project engineering, choice of technology and competence/ maintenance needs. The DOE should ensure that environmentally safe and sound technology and know-how is used.* | | | | |
| A.3.1. Does the PDD contain a clear, accurate and complete project description? | Within the project, $N_2O$ emissions from the production of nitric acid at Fertiberia Puertollano II nitric acid plant will be reduced by installation of a secondary abatement catalyst.<br>The project description was provided in various parts of the PDD, esp. in the chapters A.2 and A.4.. The project activity description is assessed as clear, accurate, complete and sufficient; the PDD is in line with provided evidences and physical implementation of the project activity.<br>The details including the technical specification of the state of the art catalyst technology for the abatement of $N_2O$ have been provided in the PDD in a detailed and appropriate manner. During the on-site visit the determination team has inspected the facilities of the $HNO_3$-production site and it | /PDD/<br>/NAPFS/ | | OK |

| Checklist Item<br>(incl. guidance for the determination team) | Determination Team Comments<br>(Means and results of assessment) | Ref. | Draft Concl. | Final Concl. |
|---|---|---|---|---|
| | could be verified that the physical implementation of the project activity is in line with the information provided in the PDD.<br><br>The applicability of the type of abatement catalyst under appropriate plant conditions is suitable to decompose $N_2O$ and the installed AMS fulfils the requirement of the methodology regarding the monitoring of the project emissions. | | | |
| A.3.2. Is this description in accordance with the real situation or (in case of greenfield projects) is it most likely that the project will be implemented acc. to the project description? | The situation on site was inspected by the determination team and found to be in line with the PDD and other project documentation documents. | /PDD/ | | OK |
| A.3.3. In case the project involves alteration of the existing installation or process, is a clear description available regarding the differences between the project and the pre-project situation? | Within the project, $N_2O$ emissions from the production of nitric acid at Fertiberia Puertollano II nitric acid plant will be reduced by installation of a secondary $N_2O$ abatement catalyst. The $N_2O$ abatement catalyst was already installed just before site visit and restart of the plant in the ammonia burner. Previous to this, no $N_2O$ abatement-technology was used so that the pre-project situation does not include any $N_2O$ abatement measures. | /PDD/ | | OK |

| Checklist Item<br>(incl. guidance for the determination team) | Determination Team Comments<br>(Means and results of assessment) | Ref. | Draft Concl. | Final Concl. |
|---|---|---|---|---|
| A.3.4. Does the project design engineering reflect current good practices? | Yes. The project involves the installation of a secondary catalyst in the ammonia burner of the nitric acid production process to abate nitrous oxide. Since<br>• this or similar type of catalyst is installed in several nitric acid plants which are involved in CDM and JI-projects and<br>• catalytic $N_2O$ decomposition in the oxidation reactor is referenced in the BAT Reference Documents of the European Commission for Manufacture of Large Volume Inorganic Chemicals,<br>this project reflects current good practices. | /PDD/<br>/B-6/ | | OK |
| A.3.5. Does the project use state of the art technology or would the technology result in a significantly better performance than any commonly used technologies in the host country? | The employed technology is defined as the best available technology acc. to the BREF-Documents of the EU. | /PDD/<br>/B-6/ | | OK |

| Checklist Item<br>(incl. guidance for the determination team) | Determination Team Comments<br>(Means and results of assessment) | Ref. | Draft Concl. | Final Concl. |
|---|---|---|---|---|
| **A.4. Small scale project activity**<br>*It is assessed whether the project qualifies as small-scale JI project activity* | | | | |
| A.4.1. Does the project qualify as a small scale project activity as defined by the JISC | The project activity is a small scale project since the estimated emission reduction of 176,747 $tCO_2e$ per year (between 2009 and 2012) does not exceed the limit of 60,000 $tCO_2e$ annually. | /PDD/<br>/B-12/ | | OK |
| A.4.2. Does the project apply one of the approved small scale categories and any methodology and tool referred therein? | No. The project applies to the methodology AM0034 which does not differentiates between small and large scale projects and is applicable to the project activity. | /PDD/<br>/B-2/ | | OK |
| A.4.3. Is the small scale project activity not a debundled component of a larger project activity? | NA | | | - |
| ***B. Project Baseline, Additionality and Monitoring Plan*** | | | | |
| **B.1. Application of the Methodology** | | | | |
| B.1.1. What kind of methodology has been used? | Name: Approved baseline and monitoring methodology AM0034: "Catalytic reduction of $N_2O$ inside the ammonia burner of nitric acid plants", Version: 3.4 | /PDD/<br>/B-1/<br>/B-2/ | | OK |

| **Checklist Item**<br>(incl. guidance for the determination team) | **Determination Team Comments**<br>(Means and results of assessment) | **Ref.** | **Draft Concl.** | **Final Concl.** |
|---|---|---|---|---|
| | Type:<br>☒ CDM Approved Methodology – latest version with project specific amendments<br>☐ National Methodology<br>☐ CDM Approved Methodology – older version<br>☐ Combination of Approved Methodologies<br>☐ Project specific Methodology | | | |
| B.1.2. Is the applied CDM methodology identical with the version available on UNFCCC website or -in case of a country or project-specific methodology- is the methodology approved by the Host Country? | The proposed project activity uses the Methodology AM0034, but some aspects will not be applied or applied in a modified manner.<br>**Aspect:**<br>Baseline campaign, Baseline emissions<br><u>Requirement of the methodology:</u><br>BE established based on distinct baseline campaign.<br><u>Adjustment in JI project specific context:</u><br>Benchmark factors are used for determining reference case emissions.<br><u>Assessment of the determination team:</u><br>The Spanish DFP is being proposed and is to be agreed a benchmark of kg 2.5 $N_2O$/t $HNO_3$ which will replace an Emission Factor generated in a Baseline Campaign. The determination team follows the reasoning of the PP. | /PDD/<br>/B-2/<br>/MMA DOC/<br>/AG | | OK |

| **Checklist Item**<br>(incl. guidance for the determination team) | **Determination Team Comments**<br>(Means and results of assessment) | **Ref.** | **Draft Concl.** | **Final Concl.** |
|---|---|---|---|---|
| | **Aspect:**<br>Crediting period starting date<br>Requirement of the methodology:<br>Crediting Period starts at a date specified in the PDD which is later than registration.<br>Adjustment in JI project specific context:<br>Crediting Period starts with catalyst and AMS installation, which may have already taken place before the Final Determination of the project.<br>Assessment of the determination team:<br>The installation of the catalyst was done during a routine shut-down of the plant, which needs to be scheduled before finalisation of the project determination. The AMS was set up on 15th of November 2009. This was communicated to the Spanish DFP, which will make a final decision after submission of the project application. The determination team will follow the decision of the DFP. The determination team follows the reasoning of the PP.<br>**Aspect:**<br>Permitted range of operational parameters<br>Requirement of the methodology:<br>Establishing a permitted range of operational parameters to avoid manipulation of baseline emissions. | | | |

| **Checklist Item**<br>(incl. guidance for the determination team) | **Determination Team Comments**<br>(Means and results of assessment) | **Ref.** | **Draft Concl.** | **Final Concl.** |
|---|---|---|---|---|
| | Adjustment in JI project specific context:<br>No permitted range of operational parameters is established<br>Assessment of the determination team:<br>Since a benchmark for baseline emissions will be implemented, there is no chance for increasing the emission reductions by manipulating the operation conditions. The determination team follows the reasoning of the PP.<br>**Aspect:**<br>Statistical analysis of baseline emissions data<br>Requirement of the methodology:<br>Statistical analysis of data collected in the baseline campaign<br>Adjustment in JI project specific context:<br>No step is undertaken<br>Assessment of the determination team:<br>Since a benchmark for baseline emissions will be implemented, no baseline data for statistical analysis are available. The determination team follows the reasoning of the PP.<br>**Aspect:**<br>Cap of baseline campaign length<br>Requirement of the methodology: | | | |

| **Checklist Item**<br>(incl. guidance for the determination team) | **Determination Team Comments**<br>(Means and results of assessment) | **Ref.** | **Draft Concl.** | **Final Concl.** |
|---|---|---|---|---|
| | Maximum allowable nitric acid production in baseline campaign.<br>Adjustment in JI project specific context:<br>No baseline campaign was carried out.<br>Assessment of the determination team:<br>Since a benchmark for baseline emissions will be implemented, a baseline campaign was not conducted. The determination team follows the reasoning of the PP.<br>**Aspect:**<br>Cap on ERUs entitled emission reductions<br>Requirement of the methodology:<br>Limiting the ERUs to the maximum annual design capacity.<br>Adjustment in JI project specific context:<br>The cap on ERUs entitled emissions reductions is not needed.<br>Assessment of the determination team:<br>Since all emissions of Spain as a Annex 1 member state are included in the national inventory, the increase of emissions caused by plant enlargements needs to be compensated and will not lead to more emissions in Spain. The determination team follows the reasoning of the PP.<br>**Aspect:** | | | |

| **Checklist Item**<br>(incl. guidance for the determination team) | **Determination Team Comments**<br>(Means and results of assessment) | **Ref.** | **Draft Concl.** | **Final Concl.** |
|---|---|---|---|---|
| | Deduction of AMS uncertainty from baseline emission factor.<br><u>Requirement of the methodology:</u><br>Combined uncertainty for all parts of the AMS is deducted from $EF_{BL}$.<br><u>Adjustment in JI project specific context:</u><br>Uncertainty is not taken into account.<br><u>Assessment of the determination team:</u><br>Uncertainty will not taken into account, because<br>• No baseline campaign was conducted.<br>• The implementation of a benchmark significant lower then historical emissions will lead to conservative calculations of emission reductions.<br>The determination team follows the reasoning of the PP.<br>**Aspect:**<br>Recalculation of $EF_{BL}$-value in case of shorter project campaign.<br><u>Requirement of the methodology:</u><br>In case a project campaign is shorter than the baseline campaign, $EF_{BL}$ is re-calculated for that campaign.<br><u>Adjustment in JI project specific context:</u><br>$EF_{BL}$ is not being applied. | | | |

| **Checklist Item**<br>(incl. guidance for the determination team) | **Determination Team Comments**<br>(Means and results of assessment) | **Ref.** | **Draft Concl.** | **Final Concl.** |
|---|---|---|---|---|
| | Assessment of the determination team:<br>Uncertainty will not taken into account, because<br>No baseline campaign was conducted and no $EF_{BL}$ was calculated. The determination team follows the reasoning of the PP.<br>**Aspect:**<br>Monitoring Periods based on campaigns.<br>Requirement of the methodology:<br>Verifications can only be undertaken for full campaigns, not merely for parts of campaigns.<br>Adjustment in JI project specific context:<br>This restriction does not apply.<br>Assessment of the determination team:<br>Project campaigns are not be related to baseline campaigns. Because of that, emission reductions can also be determined for parts of campaigns. The determination team follows the reasoning of the PP.<br>**Aspect:**<br>Moving Average Emissions Factor ($EF_{ma,n}$).<br>Requirement of the methodology:<br>Project emissions are compared to the average emission factor of all previous project campaigns (of the first 10 | | | |

| **Checklist Item**<br>(incl. guidance for the determination team) | **Determination Team Comments**<br>(Means and results of assessment) | **Ref.** | **Draft Concl.** | **Final Concl.** |
|---|---|---|---|---|
| | campaigns only).<br>Adjustment in JI project specific context:<br>This step is not being applied.<br>Assessment of the determination team:<br>Since a benchmark for baseline emissions will be implemented, no moving average for monitoring of catalyst efficiency is necessary. The determination team follows the reasoning of the PP.<br>**Aspect:**<br>Minimum project emissions factor after 10th campaign ($EF_{min}$)<br>Requirement of the methodology:<br>No project emissions factor after the 10th project campaign may be higher than the lowest recorded during these campaigns.<br>Adjustment in JI project specific context:<br>This restriction does not apply.<br>Assessment of the determination team:<br>Since a benchmark for baseline emissions will be implemented, the project emission factor should not be capped taking into account a loss of efficiency of the $N_2O$ abatement catalyst. The determination team follows the reasoning of the PP. | | | |

| **Checklist Item**<br>(incl. guidance for the determination team) | **Determination Team Comments**<br>(Means and results of assessment) | **Ref.** | **Draft Concl.** | **Final Concl.** |
|---|---|---|---|---|
| | **Aspect:**<br>AMS downtime during baseline campaign.<br><u>Requirement of the methodology:</u><br>AM0034 requires either using 4.5 $kgN_20/t\ HNO_3$ as a default factor or the last measured value whichever is lower.<br><u>Adjustment in JI project specific context:</u><br>This restriction does not apply.<br><u>Assessment of the determination team:</u><br>Since no baseline campaign was carried out, no AMS was operated before start of project activity. The determination team follows the reasoning of the PP.<br>**Aspect:**<br>AMS downtime and implausible values during project activity.<br><u>Requirement of the methodology:</u><br>In case of downtime, malfunction of the AMS or implausible values, the average hourly value will be calculated from the remaining data available for that hour. Only in the case where the remaining data constitutes less than 50% of the hourly data, will all the data from that hour be eliminated.<br><u>Adjustment in JI project specific context:</u><br>This restriction does not apply. | | | |

| **Checklist Item**<br>(incl. guidance for the determination team) | **Determination Team Comments**<br>(Means and results of assessment) | **Ref.** | **Draft Concl.** | **Final Concl.** |
|---|---|---|---|---|
| | Assessment of the determination team:<br>The implementation of a benchmark which is significant lower then historical emissions will lead to sufficiently conservative calculations of ERUs. The determination team follows the reasoning of the PP.<br>**Aspect:**<br>Recording and storage interval for the parameters NCSG, VSG, TSG and PSG.<br>Requirement of the methodology:<br>AM0034 requires a recording frequency of 2 seconds for these parameters.<br>Adjustment in JI project specific context:<br>A recording frequency of 5 seconds will be applied.<br>Assessment of the determination team:<br>Due to the stable operating conditions in the plant and very low variations of $N_2O$ emission values, an interval of 5 seconds is sufficient in order to establish high-quality hourly mean values. A higher frequency of recorded values is not necessary. The determination team follows the reasoning of the PP.<br>**Aspect:**<br>Parameters gauze supplier and composition.<br>Requirement of the methodology: | | | |

| **Checklist Item**<br>(incl. guidance for the determination team) | **Determination Team Comments**<br>(Means and results of assessment) | **Ref.** | **Draft Concl.** | **Final Concl.** |
|---|---|---|---|---|
| | AM0034 requires the monitoring of the parameters "gauze supplier" and "gauze composition".<br>Adjustment in JI project specific context:<br>Parameters "gauze supplier" and "gauze composition" do not need to be monitored<br>Assessment of the determination team:<br>Since a baseline benchmark will be implemented, a manipulation using different gauze suppliers and gauze compositions is not possible. The determination team follows the reasoning of the PP.<br>**Aspect:**<br>TRIP point values<br>Requirement of the methodology:<br>Trip point values shall be monitored<br>Adjustment in JI project specific context:<br>Parameters $OT_h$; $OP_h$; *AFR; AIFR will not be monitored.* The status of the ammonia inlet valve is monitored in order to show whether the plant is in operation or not<br>Assessment of the determination team:<br>The determination team checked on site, that a non tolerable drift of different trip points will automatically lead to the closing of the ammonia inlet valve and a shut down of the plant. An additional monitoring of trip-points is not | | | |

| Checklist Item (incl. guidance for the determination team) | Determination Team Comments (Means and results of assessment) | Ref. | Draft Concl. | Final Concl. |
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| | necessary. | | | |
| B.1.3. Are all applicability criteria in the methodology, the applied tools or any other methodology component referred to therein fulfilled? | Following applicability criteria of the methodology will not be applied in the project activity:<br>(a) limitation to existing production capacity<br>The determination team follows the argumentation of the PP, that there is no risk of shifting capacities from Annex I countries to non-Annex I countries. Therefore, these criteria should not be applicated to the project activity.<br>The determination team does not agree to exclude the criteria:<br>(c) no effect on $HNO_3$ production<br>(d) no increased $NO_X$ emissions<br>(e) no other GHG emissions<br>(f) continuous $N_2O$ measurement possible shall be applied to the project activity.<br>This leads to a CAR B3, which was closed successfully. | /PDD/<br>/B-2/<br>/B-5/ | ~~CAR B-3~~ | OK |
| B.1.4. Is the project in accordance to every other stipulation or requirement mentioned in all sections of the methodology? | Yes, the project meets all stipulations of the methodology. | /PDD/<br>/B-2/ | | OK |
| **B.2. Project Boundaries**<br>*Project Boundaries are the limits and borders defining the GHG emission reduction project* | | | | |
| B.2.1. Are the project's spatial boundaries | The project boundary includes the nitric acid plant from the | /PDD/ | | OK |

| Checklist Item<br>(incl. guidance for the determination team) | Determination Team Comments<br>(Means and results of assessment) | Ref. | Draft Concl. | Final Concl. |
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| (geographical) clearly defined? | inlets to the ammonia burner to the outlet of the stack. All $NO_X$ and $N_2O$ abatement-devices and the AMS in the stack are included. According to the methodology, only the emissions of $N_2O$ as tail gas emission have to be considered in the project boundary.<br>This is -according to the methodology- clearly described in words and a visualisation of the physical project. | | | |
| B.2.2. Are all sources and GHGs included in the project boundary as required in the applied methodology? | The methodology only considers $N_2O$ as the main emission source in tail gas after the destruction facility. All other gases/sources are –in correspondence with the methodology- not included in the project boundary. | /PDD/<br>/B-2/ | | OK |
| B.2.3. In case the methodology allows choosing whether a source and/or gas is to be included, is the choice sufficiently explained and justified? | See B.2.2 | /PDD/<br>/B-2/ | | OK |

| Checklist Item<br>(incl. guidance for the determination team) | Determination Team Comments<br>(Means and results of assessment) | Ref. | Draft Concl. | Final Concl. |
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| **B.3. Baseline Identification**<br>*The choice of the baseline scenario will be determinated with focus on whether the baseline is a likely scenario, and whether the methodology to define the baseline scenario has been followed in a complete and transparent manner.* | | | | |
| B.3.1. What has been identified as the baseline scenario? | The baseline scenario includes the installation of a $N_2O$-abatement-technology (catalyst) to reduce the $N_2O$-emissions according to the legal requirements below 1000 ppmv until 2012-12-31. Considerably less (in comparison to the project activity) of catalyst material would be needed to achieve compliance with the local decree (modified status quo). | /PDD/<br>/AAI/ | | OK |
| B.3.2. What possible baseline scenarios have been considered? | Following alternative to the project activity has been identified:<br>• Status quo: The continuation of the current situation, without installing any $N_2O$ abatement technology in the plant until 31st December 2012.<br>• Modified Status quo:<br>  • The continuation of the current situation with adjustments to the process so that $N_2O$ emissions stay below 1000 ppmv at any time during one campaign.<br>  • Installation of Non-Selective Catalytic Reduction (NSCR) De-$NO_X$ system | /PDD/ | | OK |

| **Checklist Item**<br>(incl. guidance for the determination team) | **Determination Team Comments**<br>(Means and results of assessment) | **Ref.** | **Draft Concl.** | **Final Concl.** |
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| | • Installation of an $N_2O$ destruction or abatement technology instead of the project activity (i.e. taking $N_2O$ abatement measures without participating in the JI):<br>• Tertiary measure for $N_2O$ destruction<br>• Primary or secondary measures for maximum $N_2O$ destruction or abatement<br>• Switch to alternative production method not involving ammonia oxidation process;<br>• Alternative use of $N_2O$ such as:<br>  • Recycling of $N_2O$ as a feedstock for the plant;<br>  • The use of $N_2O$ for external purposes | | | |
| B.3.3. In case alternatives have to be considered, are all scenarios supplemental to those provided in the methodology reasonable in the context of the project activity? | No additional scenarios have been considered. | | | |
| B.3.4. Is the list of alternatives complete? | No, several reference scenarios listed in the methodology have not been investigated. To clarify this, CAR B4 was raised. | /PDD/<br>/B-8/ | ~~CAR B4~~ | OK |
| B.3.5. Has the baseline scenario been determined according to the methodology? | According to the Methodology AM0034, the baseline scenario was identified using procedure for identification of the baseline scenario described in the approved methodology AM0028 "Catalytic $N_2O$ destruction in the tail gas of nitric acid Plants". | /PDD/<br>/B-2/<br>/B-8/ | | OK |

| Checklist Item<br>(incl. guidance for the determination team) | Determination Team Comments<br>(Means and results of assessment) | Ref. | Draft Concl. | Final Concl. |
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| B.3.6. Has the baseline scenario been determined using conservative assumptions where possible? | Yes, e.g. the baseline emissions have been calculated applying the regulatory values/baseline value as presented in B.2. | /PDD/ | | OK |
| B.3.7. Does the baseline scenario sufficiently take into account relevant national and/or sectoral policies, macro-economic trends and political aspirations? | Yes, as explained above, the legal requirements have been taken into account. | /PDD/<br>/AAI/<br>/AAI2/ | | OK |
| B.3.8. Is the baseline scenario determination compatible with the available data and are all literature and sources clearly referenced? | The baseline scenario determination is compatible with the available data and literature sources are clearly referenced. The PDD provides references to all relevant governmental decisions. | /PDD/ | | OK |
| **B.4. Additionality Determination**<br>*The assessment of additionality will be determinated with focus on whether the project itself is not a likely baseline scenario.* | | | | |
| **B.4.1. Methodology** | | | | |
| B.4.1.1. Did the additionality justification follow the requirements of the applied methodology and/or methodological tools? | The additionality has been proved according to the methodology, which includes a scheme for the assessment of the reference scenario and additionality of the project activity. | /PDD/<br>/B-1/<br>/B-2/ | | OK |

| Checklist Item<br>(incl. guidance for the determination team) | Determination Team Comments<br>(Means and results of assessment) | Ref. | Draft Concl. | Final Concl. |
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| | The PP used the "Combined tool to identify the baseline scenario and demonstrate additionality", which is consistent to the "Additionality Tool" referenced in the methodology AM0034. | /B-8/<br>/EB27/ | | |
| **B.4.2. Consideration of JI before project start** | | | | |
| B.4.2.1. Is the project starting date reported in accordance with the glossary of JI terms?? | Since this a Track 1-project, a full compliance with the JI-rules is not required and a project starting date is not indicated in the PDD.<br>The start of the crediting period was 15th November 2009. At this date the plant started to operate with a fully operational secondary catalyst in the ammonia burner and with an AMS which is in compliance with the terms of the methodology<br>Note:<br>The initial PDD (Version 1.2) states 09th November 2009 as starting date of the crediting period. At this date, the plant starts operation with a new installed $N_2O$-abatement catalyst but without AMS. During the process of registration of the project, the DFP asks for shifting of the starting date to the later day of installation of the AMS and the date of starting the crediting period was changed from 09th November 2009 to 15th November 2009. | /PDD/<br>/PDDDFP/<br>/MAILDFP/ | | OK |
| B.4.2.2. In case the project start date is before | Yes, the PDD explained, and proved in the PDD, that the | /PDD/ | | OK |

| Checklist Item<br>(incl. guidance for the determination team) | Determination Team Comments<br>(Means and results of assessment) | Ref. | Draft Concl. | Final Concl. |
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| commencing of determination, was the incentive from JI seriously considered and are details given in the PDD? | catalyst has to be installed during a regular shutdown of the plant. This was scheduled just before the on-site visit and prior to the determination of the project. The AMS was set up on 15th of November after on-site visit. The next regular shut down is planned at end of 2010. If this date would be used for installing of the catalyst respectively the project start, the PP will lose one year of the project activity. | | | |
| B.4.2.3. How and when was the decision to proceed with the project? | The Spanish DFP stated that they do not have any fundamental objections to retroactive crediting from the start of the project activity. This was the incentive for the PP to proceed with the project. | /PDD/<br>/MMA DOC/<br>/AG/ | | OK |
| B.4.2.4. Is the project start date consistent with the available evidences? | No, the starting was not clearly defined in the PDD. Thus, CAR C1 was raised. | /PDD/ | ~~CAR C1~~ | OK |
| B.4.2.5. Was the decision to proceed with the project taken by a person entity which has the authority to do so? | Yes, the decision to proceed with the project has been taken by the decision board of Fertiberia | /PDD/ | | OK |
| B.4.2.6. How was the JI involved in the decision be making process? | JI was considered in the early stage of the project. For this reason, Fertiberia contracted N.serve to develop the JI-project activity. | /PDD/ | | OK |
| B.4.2.7. Can the JI involvement in the decision assessed as serious? | Yes (see above) | /PDD/ | | OK |

| Checklist Item<br>(incl. guidance for the determination team) | Determination Team Comments<br>(Means and results of assessment) | Ref. | Draft Concl. | Final Concl. |
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| **B.4.3. Identification of alternatives Step 1**<br>(in case of SSC projects pl. skip steps 1 and 2) | | | | |
| B.4.3.1. Have all realistic alternatives been identified to the project? | No, several scenarios like the<br>• installation of a non selective catalytic reductions<br>• implementation of a primary, secondary or tertiary $N_2O$ destruction technology<br>have not been taken into consideration. To correct this, CAR B4 was raised. | /PDD/ | ~~CAR B4~~ | OK |
| B.4.3.2. Contains the list of alternatives at least the status-quo situation and the project not undertaken as a JI project? | Yes, the mentioned alternatives, i.e. status-quo and the project activity not undertaken as a JI project are included in the list of alternatives. | /PDD/ | | OK |
| B.4.3.3. Do all identified alternatives comply with applicable regulation? | Yes, the alternatives are complying with the legal obligations, which limit the $N_2O$-emissions of the plant. | /PDD/ | | OK |
| **B.4.4. Investment analysis Step 2**<br>*In case the investment analysis as per step 2 is chosen to justify the additionality Annex 2 "Assessment of Financial Parameters" has to be used to provide additional details of the calculation parameters..* | | | | |
| B.4.4.1. Is an appropriate analysis method chosen for the project (simple cost analysis, investment comparison analysis or | The PDD should take into account the Methodological Tool: Combined Tool to identify the baseline scenario and demonstrate additionality" (Version 02.2), which allows the | /PDD/<br>/CON1/ | ~~CL B5~~ | OK |

| Checklist Item<br>(incl. guidance for the determination team) | Determination Team Comments<br>(Means and results of assessment) | Ref. | Draft Concl. | Final Concl. |
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| benchmark analysis)? | simple costs analysis as an appropriate method for investment analysis.<br>The relevant (confidential) documents regarding project costs are inspected during on-site visit. Since they are not integrated in a financial calculation sheet, a corresponding CL B6 was raised. | /CON2/ | | |
| B.4.4.2. Is a clear, viewable and unprotected Excel spreadsheet available for the investment calculation? | No, see B.4.4.1. | | ~~CL B5~~ | OK |
| B.4.4.3. Does the period chosen for the investment analysis reflect the technical lifetime of the project activity or in case a shorter period is chosen, is the fair value of the project activity's assets at the end of the investment analysis period (as a cash inflow) included? | No, see B.4.4.1. | | ~~CL B5~~ | OK |
| B.4.4.4. Is the fair value calculated in accordance with local accounting regulations (where available) or international best practice? | N/A | - | - | - |
| B.4.4.5. Is the book value as well as the expectation of the potential profit or loss included in the fair value calculation? | N/A | - | - | - |
| B.4.4.6. Are depreciation and other non-cash related items added back to net profits for the purpose to calculate the financial indicator? | N/A | - | - | - |

| Checklist Item (incl. guidance for the determination team) | Determination Team Comments (Means and results of assessment) | Ref. | Draft Concl. | Final Concl. |
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| B.4.4.7. Is taxation excluded in the investment analysis or is the benchmark intended for post tax comparisons? | N/A | - | - | - |
| B.4.4.8. Were the input values used in the investment analysis valid and applicable at the time of the investment decision? | N/A | - | - | - |
| **Investment comparison** | | | | |
| B.4.4.9. In case of project IRR: Are the costs of financing expenditures (loan repayments and interests) excluded from the calculation of project IRR? | N/A | - | - | - |
| B.4.4.10. In case of equity IRR: Is the part of the investment costs, which is financed by equity considered as net cash outflow and is the part financed by debt excluded in net cash outflow? | N/A | - | - | - |
| B.4.4.11. Is the type of benchmark chosen appropriate for the type of IRR calculated (e.g. local commercial lending rates or weighted average costs of capital for project IRR; required/expected returns on equity for equity IRR)? | N/A | - | - | - |
| B.4.4.12. Is the benchmark value suitable for the | N/A | - | - | - |

| Checklist Item (incl. guidance for the determination team) | Determination Team Comments (Means and results of assessment) | Ref. | Draft Concl. | Final Concl. |
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| project activity? | | | | |
| B.4.4.13. Is it ensured that the project cannot be developed by other developers than the PP? | N/A | - | - | - |
| B.4.4.14. Was the benchmark consistently used in the past for similar projects with similar risks? | N/A | - | - | - |
| B.4.4.15. Was sensitivity analysis appropriately done by the project participants? | N/A | - | - | - |
| B.4.5. **Barrier analysis Step 3 or SSC additionality assessment** | | | | |
| B.4.5.1. Are there any barriers given whose issues have a clear and definable impact on the profitability of the project? | Revenues from the sale of ERUs are the only income that would be generated by the project activity. This implies that without the registration of the project as a JI activity, the project will not take place. | /PDD/ | - | OK |
| B.4.5.2. How is it justified and evidenced that the barriers given in the PDD are real? | The PP explained that the plant is in compliance with all governmental obligations and the plant would run under status quo conditions without implementation of the project activity. The costs, which are related with the implementation of the project activity (installation of the $N_2O$-catalyst) can only be compensated by registration as a JI project. | /PDD/ | - | OK |
| B.4.5.3. How is it justified that one or a set of real barriers prevent(s) the implementation of the project activity? | Since there is no revenue gained through the reduction of $N_2O$-emissions, the costs associated with the realisation of the project are a real barrier for the implementation of the project. | /PDD/ | - | OK |

| Checklist Item<br>(incl. guidance for the determination team) | Determination Team Comments<br>(Means and results of assessment) | Ref. | Draft Concl. | Final Concl. |
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| **B.4.6. Common practice analysis Step 4**<br>(in case of SSC projects skip this step) | | | | |
| B.4.6.1. Is the defined region for the common practice analysis appropriate for the technology/industry type? | The company Fertiberia starts two similar projects in Spain, reducing the $N_2O$-emission with secondary abatement catalysts in 2009/2010. The chosen technology has been implemented in several other project activities (France, Germany, Sweden) which are comparable/similar to the Fertiberia Puertollano project.<br>This project type is already diffused in the region resp. industrial sector. | /PDD/ | - | OK |
| B.4.6.2. To what extent similar projects have been undertaken in the relevant region? | Other similar projects which are included in a JI or CDM activity are already successfully validated/determinated or verified. | /PDD/ | - | OK |
| B.4.6.3. In case similar projects are identified, are there any key differences between the proposed project and existing or ongoing projects and what kind of differences is observed? | There are only small operational deviations in the commercially production of $HNO_3$. The respective abatement technology is quite the same and completely described in the BREF documents of the EU regarding the best available technologies for $HNO_3$-production and $N_2O$ emission reduction | /PDD/<br>/BREF | - | OK |

| Checklist Item<br>(incl. guidance for the determination team) | Determination Team Comments<br>(Means and results of assessment) | Ref. | Draft Concl. | Final Concl. |
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| **B.5. Calculation of GHG Emission Reductions**<br>*It is assessed whether the calculations of project emissions, baseline emissions, leakage emissions are stated according to the methodology and whether the argumentation for the choice of default factors and values – where applicable – is justified. Furthermore calculation of emission reductions shall be assessed.* | | | | |
| B.5.1. Are the emission reductions real, measurable and give long-term benefits related to the mitigation of climate change? | The emission reductions are real, measurable and give long-term benefits related to the mitigation of climate change. | /PDD/ | | OK |
| B.5.2. Are the equations applied correctly according to the applied approved methodology? | Yes, formulas applied are in accordance with the methodology.<br>As mentioned above, the baseline emission factor will be determined by the DFP for the duration of the project activity, so there is no need for application of the equitation according to the methodology. Nevertheless, the PP calculated historical emission factors to prove the compliance with applicable regulations.<br>The formulae to calculate the estimated emission reductions are presented in the section D.1.2.2. of the PDD in a clear and transparent manner.<br>According to the methodology, no leakage should be taken | /PDD/<br>/B-1/<br>/B-2/<br>/B-8/ | ~~CAR A1~~<br>~~CAR A2~~<br>~~CL A4~~<br>~~CL B1~~<br>~~CAR D1~~<br>~~CL D3~~<br>~~CAR D4~~ | OK |

| **Checklist Item**<br>(incl. guidance for the determination team) | **Determination Team Comments**<br>(Means and results of assessment) | **Ref.** | **Draft Concl.** | **Final Concl.** |
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| | into account.<br>However, following CARs and CL were raised:<br><u>CAR A1</u><br>The ER values for the year 2019 needs to be corrected.<br><u>CAR A2</u><br>The calculation of historic emission factors (prior to project implementation) includes minor mistakes.<br><u>CL A4</u><br>The calculation of plant emission from ppm to kg $N_2O$/t $HNO_3$ should be clarified in A.4.3.<br><u>CL B1</u><br>The calculation from mg/m³ to ppm of $NO_x$ should be clarified in B.2.<br><u>CAR D1</u><br>In the context of the benchmark approach (without baseline related data treatment for $VSG_n$ and $NCSG_n$) the formula for $PE_n$ as presented on page 40 of the PDD is not deemed to deliver correct mass flow values.<br><u>CL D3</u><br>In the context of the benchmark approach (without baseline related data treatment for $VSG_n$ and $NCSG_n$) the formula for | | | |

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| | $PE_n$ as presented on page 40 of the PDD is not deemed to deliver correct mass flow values.<br><u>CL D4</u><br>It should be clarified, how plant shutdowns are registered in the process control system of the plant and how these data are exported for emission data calculation. | | | |
| B.5.3. In case the methodology allows for different methodological choices, are the equations applied properly justified and have they been used reflecting the other methodological choices (i.e. baseline identification)? | The project specific methodology AM0034 allows calculating the emission reductions against a historical baseline-emission factor or a regulatory limit. The implementation of a benchmark value –the current situation in this project- corresponds basically to a calculation against a regulatory limit so that it can be confirmed, that the equitations applied properly justified and in line with the methodology. | | | OK |
| B.5.4. Have conservative assumptions been used when calculating the emission reductions? | Yes. The project activity takes into account a decision of the DFP, setting the benchmark Emission Factors ($EF_{BM}$) for the calculation of the reduction of $N_2O$-Emission in future years.<br><u>These values/years are:</u><br>Year: 2009 2010 2011 2012<br>Value: 2.5 2.5 2.5 2.5 kg $N_2O$/t $HNO_3$ (100%)<br>The implementation of a benchmark factor reduces the baseline emission factor from 5.26 (historical pre-project emission factor) to 2.5 kg $N_2O$/t $HNO_3$. The calculation is deemed to be conservative.<br>Nevertheless, a CL D5 was raised to make it clearer in | /PDD/<br>/MMA DOC/<br>/AG/ | ~~CL D5~~ | OK |

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| | the PDD that the 2.5 kg $N_2O$/t $HNO_3$ approach will be applied. | | | |
| B.5.5. Are all data and parameters which remain fixed throughout the crediting period correct, applicable to the project and will lead to a conservative estimation of emission reductions? | Yes, the regulatory limits and benchmark values are fixed over the crediting period. | /PDD/ | | OK |
| B.5.6. Is the choice of the value for the data and parameters which have to be monitored reasonable? | Yes, the choice of data is<br>• in line with the methodology and<br>• checked to be reasonable. | /PDD/ | | OK |
| **B.6. Monitoring of Emission Reductions**<br>*It is assessed whether the monitoring plan is appropriate for the project activity and in line with the applied methodology.* | | | | |
| B.6.1. Are all monitoring parameters required by the applied methodology contained in the monitoring plan? | A methodology AM0034 includes a comprehensive list of parameters monitored during the crediting period. Since a benchmark value will be applied, only project emissions will be monitored:<br>• $NCSG_n$: $N_2O$ concentration in the stack gas<br>• $VSG_n$: Volume flow rate of the stack gas | /PDD/<br>/B-2/ | ~~CL D2~~ | OK |

| **Checklist Item**<br>(incl. guidance for the determination team) | **Determination Team Comments**<br>(Means and results of assessment) | **Ref.** | **Draft Concl.** | **Final Concl.** |
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| | • $OH_n$: Operation hours<br>• $NAP_n$: Nitric acid production<br>• TSG: Temperature of stack gas<br>• PSG: Pressure of stack gas<br><br>Following parameter are recorded on-site and are available for plausibility check during verification on-site:<br>• AFR: Ammonia flow rate to the AOR<br>• AIFR: Ammonia to air ratio<br>• $OT_h$: Oxidation temperature<br>• $OP_n$: Operation pressure | | | |
| B.6.2. In case different approaches can be chosen acc. to the methodology, is the selection of parameters justified and correct? | The methodology does not allow choosing between the parameters or approaches. | /B-2/ | | OK |
| B.6.3. Are the means of monitoring of all parameters contained in the monitoring plan in accordance with the requirements of the applied methodology? | Yes | /PDD/ | | OK |

| Checklist Item<br>(incl. guidance for the determination team) | Determination Team Comments<br>(Means and results of assessment) | Ref. | Draft Concl. | Final Concl. |
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| B.6.4. Are all parameters appropriately labelled? | Yes, the parameters are labelled according to the methodology. | /PDD/ | | OK |
| B.6.5. Is it likely that the monitoring arrangements described in the PDD can properly be implemented in the context of the project activity? | Yes, the determination team assessed the situation on site and came to the conclusion, that the monitoring arrangements can properly be implemented. | /PDD/ | | OK |
| B.6.6. Are the means of implementation of the monitoring plan, including QA/QC procedures sufficient to ensure that emission reductions can be reported without material misstatement? | The monitoring plan presented in section D. is comprehensive and provides QA/QC procedures to insure the appropriate reporting of emissions and emission reductions. This includes quality measures related to the AMS according to the DIN EN 14181.<br>Following CL, FAR were raised:<br><u>FAR D2:</u><br>The AMS needs to be checked in detail during the first verification.<br><u>CL D6:</u><br>The application of a specific uncertainty limit of the AMS should be clarified in Chapter D2. The consequence of non compliance should be clarified. | /PDD/ | FAR D2<br>~~CL D3~~ | OK |
| B.6.7. Will all monitored data required for verification and issuance be kept for two years after the end of the crediting period or the last issuance | Yes, all monitored raw data required for verification and issuance will be stored in a central data system of the plant and kept for two years after the project end. | /PDD/ | | OK |

| Checklist Item (incl. guidance for the determination team) | Determination Team Comments (Means and results of assessment) | Ref. | Draft Concl. | Final Concl. |
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| of CERs, for this project activity, whichever occurs later? | | | | |
| B.6.8. Does the monitoring plan provide for the collection and archiving of all relevant data necessary for determining emissions reductions during the crediting period? | Baseline emissions:<br>It was ruled by the DFP, that baseline emissions should be calculated applying a "Benchmark Emission Factor ($EF_{BM}$), or if lower, regulatory limits of local authorities.<br>Therefore, the acquisition of data of $N_2O$-emissions in order to determine the baseline emissions is not necessary.<br>Project emissions:<br>According to the methodology, the monitoring plan ensures the provision of all relevant data necessary or measurement of the GHG emissions within the project boundary.<br>Leakage:<br>According to the methodology, leakage does not occur. | /PDD/ | | OK |
| B.6.9. Are the choices of GHG indicators reasonable and conservative? | Yes, e.g. the reference value (benchmark emissions factor) that will be applied to calculate the emissions reductions from a specific verification period was determined according to a Spanish DFP decision.<br>The violation of these limits will lead to a reduction of ERUs for the relevant period. | /PDD/ | | OK |
| B.6.10. Is the measurement method clearly stated for each indicator to be monitored and also deemed appropriate? | Yes, the monitoring plan provides clear measurement methods for project emissions in section D. of the PDD. | /PDD/ | | OK |

| **Checklist Item**<br>(incl. guidance for the determination team) | **Determination Team Comments**<br>(Means and results of assessment) | **Ref.** | **Draft Concl.** | **Final Concl.** |
|---|---|---|---|---|
| B.6.11. Is the measurement equipment described and deemed appropriate? | The measurement of project emissions and process parameters is described appropriate in the PDD and in documents provided during the site visit. Several documents regarding QS/QA of the AMS where provided.<br>Since the AMS was not ordered and installed during the on site visit, a FAR D2 was raised to check the appropriateness of the device. | /PDD/<br>/9001C1/<br>/9001C2/<br>/14001 C1/<br>/14001 C2/<br>/COR/<br>/CON1/<br>/CON2/<br>/MAINT/ | FAR D2 | OK |
| B.6.12. Is the measurement accuracy addressed and deemed appropriate? Are procedures in place on how to deal with erroneous measurements? | The methodology refers to the DIN EN 14181 guideline for verification and determination of measurements uncertainty of the AMS by a standard reference method. This includes a comparison with international guidelines setting standard values for uncertainties.<br>A implausibility check is implemented in the process of data assessment to exclude erroneous measurements/ false data sets.<br>A statistical evaluation is to be applied to the project data | /PDD/ | | OK |

| **Checklist Item**<br>(incl. guidance for the determination team) | **Determination Team Comments**<br>(Means and results of assessment) | **Ref.** | **Draft Concl.** | **Final Concl.** |
|---|---|---|---|---|
| | series | | | |
| B.6.13. Is the measurement interval identified and deemed appropriate? | The AMS is working as an online- and permanent-measurement device. | /PDD/ | | OK |
| B.6.14. Are the registration, monitoring, measurement and reporting procedures defined? | The procedures are defined in section D.1.2. of the PDD to a sufficient extent.<br>The data used for the calculation of project emission and relevant plant operation parameters will be stored at a central data acquisition system of the plant and evaluated by N.serve according to the regulations of the methodology. During a visit at the office of N.serve, the determination team could check the procedure of data processing and calculation using Microsoft Excel and Access tools. N.Serve provided an established methodology to calculate emission reductions according to the methodology AM0034, verified in different JI and CDM $N_2O$-reduction projects. | /PDD/ | | OK |
| B.6.15. Are procedures identified for maintenance of monitoring equipment and installations? Are the calibration intervals being observed? | The measurement equipment (AMS) for project emissions ($N_2O$) will be maintained using a QA/QS programme which refers to the EN 14181 and through internal measures for quality assurance related to ISO 9001 and 14001. | /PDD/ | | OK |
| B.6.16. Are procedures identified for day-to-day records handling (including what records to keep, storage area of records and how to process performance documentation) | See B.6.8. | /PDD/ | | OK |

| Checklist Item<br>(incl. guidance for the determination team) | Determination Team Comments<br>(Means and results of assessment) | Ref. | Draft Concl. | Final Concl. |
|---|---|---|---|---|
| **B.7. Project Management Planning**<br>*It is checked that project implementation is properly prepared for and that critical arrangements are addressed.* | | | | |
| B.7.1. Is the authority and responsibility of overall project management clearly described? | Yes, the operational and management structure of the plant is well described and certified against ISO 9001 and 14001 requirements. An external laboratory will bee contracted for maintenance of the AMS. The determination of the data sets relevant for the project activity and calculation of emission reduction will be carried out by N.serve. | /PDD/<br>/14001-1/<br>/14001-2/<br>/9001-1/<br>/9001-2/ | | OK |
| B.7.2. Are procedures identified for training of monitoring personnel? | Specific training measures are not intended, but specific activities related to the JI-project will be carried out by experienced and qualified companies as described above. | /PDD/ | | OK |
| B.7.3. Are procedures identified for review of reported results/data? | Yes, all monitoring related data will be sent to N.serve for revision, plausibility check and calculation of the project emissions. | /PDD/ | | OK |
| B.7.4. Is the authority and responsibility of overall project management clearly described? | Yes, see above. | /PDD/ | | OK |
| B.7.5. Are procedures identified for training of monitoring personnel? | Yes, see above. | /PDD/ | | OK |
| ***C. Duration of the Project/ Crediting Period*** | | | | |

| **Checklist Item**<br>(incl. guidance for the determination team) | **Determination Team Comments**<br>(Means and results of assessment) | **Ref.** | **Draft Concl.** | **Final Concl.** |
|---|---|---|---|---|
| *It is assessed whether the temporary boundaries of the project are clearly defined.* | | | | |
| C.1. Is the project's starting date and the project duration clearly defined and evidenced? | Since this a Track 1-project, a full compliance with the JI-rules is not required and a project starting date is not indicated in the PDD (see. B.4.2.1.). The project starting date is 15th of November 2009 which is described in Section C.1. as installation of the catalyst in the ammonia burner and the AMS in the Stack. The determination team could take a view insight the open ammonia burner with new catalyst gauzes during on site visit on 28th of October 2009.<br>A CAR C1 was raised to define the project starting date accurately<br>The crediting period will start with the start of the project activity before provision of the LOA and registration of the project. This was agreed between the PP and the Spanish DFP, however, a final decision has yet to be made.<br><br>Note:<br>The initial PDD (Version 1.2) states 09th November 2009 as starting date of the crediting period. At this date, the plant starts operation with a new installed $N_2O$-abatement catalyst but without AMS. During the process of registration of the project, the DFP asks for shifting of the starting date to the later day of installation of the AMS and the date of starting | /PDD/<br>/PDDDFP/<br>/MAILDFP/ | ~~CAR C1~~ | OK |

| Checklist Item (incl. guidance for the determination team) | Determination Team Comments (Means and results of assessment) | Ref. | Draft Concl. | Final Concl. |
|---|---|---|---|---|
| | the crediting period was changed from 09th November 2009 to 15th November 2009. | | | |
| C.2. Is the project's operational lifetime clearly defined and evidenced? | The operational lifetime (efficiently of the catalyst) is estimated at 3 years and 1.5 months until December 2012. After this date it is expected, that $N_2O$ emissions from $HNO_3$ plants will be covered by the EU ETS and that the project will no longer be viable. If $N_2O$ is not included in the ETS after 2012, the period will extend to regular 10 Years until 2019. | /PDD/ | | OK |
| C.3. Is the start of the crediting period clearly defined and reasonable? | The start of crediting will be, depending on the decision of the DFP, the 15th November 2009. | /PDD/ | | OK |
| ***D. Environmental Impacts***<br><br>*Documentation on the analysis of the environmental impacts will be assessed, and if deemed significant, an EIA should be provided to the DOE.* | | | | |
| D.1. Has an analysis of the environmental impacts of the project activity been sufficiently described? | The environmental impacts are sufficiently described in the PDD under Section F.: Environmental Impacts.<br><br>Apart from the reduction of emissions of $N_2O$ in a catalytic oxidisation process, there will be no significant further impacts on the environment occur. | /PDD/ | | OK |

| Checklist Item (incl. guidance for the determination team) | | Determination Team Comments (Means and results of assessment) | Ref. | Draft Concl. | Final Concl. |
|---|---|---|---|---|---|
| D.2. | Are there any Host Party requirements for an Environmental Impact Assessment (EIA), and if yes, is an EIA approved? | According to the real decreto 1/2008, de 11 de enero, the PP need to conduct an Environmental impact assessment for the project activity, but since the only environmental impact of the project is the reduction of $N_2O$-emission of the plant, an EIA is not required. | /PDD/ /B-11/ | | OK |
| D.3. | Will the project create any adverse environmental effects? | See D.1. | - | - | - |
| D.4. | Are transboundary environmental impacts considered in the analysis? | See D.1. | - | - | - |
| D.5. | Have identified environmental impacts been addressed in the project design? | N/A | - | - | - |
| D.6. | Does the project comply with environmental legislation in the host country? | Yes, the project fully complies with environmental legislation of Spain. The plant is in compliance with the Integrated Environmental Authorisation, issued by the local authorities. | /AAI/ | | OK |
| ***E. Stakeholder Comments*** *The DOE should ensure that stakeholder comments have been invited with appropriate media and that due account has been taken of any comments received.* | | | | | |
| E.1. | Have relevant stakeholders been invited to consultation? | A global stakeholder consultation was carried out on the TÜV NORD website www.global-warming.de for 30 days as of 2009-10-29. No comments were received. The local stakeholder process has not been carried out. This | /PDD/ | | OK |

| Checklist Item (incl. guidance for the determination team) | Determination Team Comments (Means and results of assessment) | Ref. | Draft Concl. | Final Concl. |
|---|---|---|---|---|
| | is considered to be appropriate for this kind of project activities as no affected local stakeholders could be identified. | | | |
| E.2. Have appropriate media been used to invite comments by local stakeholders? | See E.1. | /PDD/ | | OK |
| E.3. If a stakeholder consultation process is required by regulations/laws in the host country, has the stakeholder consultation process been carried out in accordance with such regulations/laws? | See E.1. | /PDD/ | | OK |
| E.4. Is an appropriate summary of the stakeholder comments received provided in the PDD? | See E.1. | /PDD/ | | OK |
| E.5. Has due account been taken of any stakeholder comments received? | See E.1. | /PDD/ | | OK |

# ANNEX 2: ASSESSMENT OF BASELINE IDENTIFICATION

**Table A-2:** Assessment of Baseline Identification

| | |
|---|---|
| ☐ | Baseline alternatives are not identified |
| ☒ | Assessment of alternatives of baseline see below |

| Baseline Alternatives identified | Inline with the Metho-dology? | Eli-mina-ted | Reasons for elimination / non-elimination from list of alternatives | Evi-dence used | DOE Assessment | |
|---|---|---|---|---|---|---|
| | | | | | Appro-priate-ness of elimi-nation | Assessment of determination team (results and means of assessment) |
| ***a) Continuation of the Status Quo (Business as Usual Scenario). The continuation of the business as usual scenario, where: i) there is no $N_2O$ destruction technology installed.*** | ☒ | ☒ | **The scenario not to install any $N_2O$ abatement technology is not in compliance with the Autorización Ambiental Integrada which limits the $N_2O$ emissions to 1,000 ppmv, since spot measurements in historic campaigns exceeded the limit by 4-10%.** | **/PDD/ /AAI/** | ☒ | The determination team follows the statements for the elimination of scenario a)i), since the Autorización Ambiental Integrada, which is an official decision of the local government obliges the plant operator to reduce the emission level to the limit of 1.000 ppmv $N_2O$. |
| ***a) Continuation of the Status Quo (Business as Usual Scenario). The continuation of the business as usual scenario, where: ii) only sufficient*** | ☒ | ☐ | **The scenario which includes the option to install only just enough secondary catalyst material in the de-$N_2O$ bed to achieve compliance with the local Autorización Ambiental Integrada on $N_2O$ emissions will** | **/PDD/ /AAI/** | ☐ | The determination team follows the statement for the eligibility of scenario a)ii), since only the reduction of emissions below the limits of the governmental decree will lead to claim for Emission Reduction Units in compliance with the country specific methodology. |

| Baseline Alternatives identified | Inline with the Methodology? | Eliminated | Reasons for elimination / non-elimination from list of alternatives | Evidence used | DOE Assessment | |
|---|---|---|---|---|---|---|
| | | | | | Appropriateness of elimination | Assessment of determination team (results and means of assessment) |
| ***secondary catalyst is installed to ensure compliance with any applicable legal $N_2O$ regulations (modified status quo).*** | | | **not lead to an emission reduction beyond the 2.47kg $N_2O$/t$HNO_3$ and the project activity will not take place.** | | | |
| ***B) Alternative uses of $N_2O$, such as:***<br>***- Recycling of $N_2O$ for feedstock***<br>***- External use of $N_2O$*** | ☒ | ☒ | **The use of $N_2O$ as a feedstock for the production of nitric acid is technically feasible, but an amendment of the existing plant to generate small amounts of $HNO_3$ from the emitted $N_2O$ not a viable option.** | **/PDD/ /bref/** | ☒ | There is no commercially available technology to generate $HNO_3$ from $N_2O$ out of plant exhaust. Due to low concentrations of $N_2O$ in the exhaust of the plant, the separation and external use of $N_2O$ is not a financially attractive alternative. |
| ***c) Installation of NCSR (Non Specific Catalytic Reduction)*** | ☒ | ☒ | **The application of a Non Specific Catalytic Reduction Unit causes high investment and operation costs due to permanent demand of a reduction agent. This technology produces emissions of CO, $CO_2$ and remaining hydrocarbons.** | **/PDD/ /bref/** | ☒ | Since there is an efficient selective catalytic reduction system for $NO_X$ existing, there is no need to choose a non specific reduction unit. |
| ***d) Implementation of a primary, secondary or secondary $N_2O$ destruction technology in the absence of the registration of the*** | ☒ | ☒ | **<u>Primary catalyst:</u>**<br>**Only the already widely-tested and well-proven secondary and tertiary catalyst technologies are commercially used for the specific reduction of $N_2O$ emissions in order to minimise the influence on** | **/PDD/ /bref/** | ☒ | Currently, there is no primary technology that reaches high enough removal efficiency, as to represent a potential $N_2O$ abatement solution.<br>The secondary and tertiary abatement technologies are state-of-the art technologies and will not lead to any negative influence on the $HNO_3$-production process. |

| Baseline Alternatives identified | Inline with the Methodology? | Eliminated | Reasons for elimination / non-elimination from list of alternatives | Evidence used | DOE Assessment | |
|---|---|---|---|---|---|---|
| | | | | | Appropriateness of elimination | Assessment of determination team (results and means of assessment) |
| ***project activity as a JI project.*** | | | **the $HNO_3$-production process.** ***Implementation in the absence of the registration of the project activity. See alternative a)ii)*** | | | |

# ANNEX 3: ASSESSMENT OF FINANCIAL PARAMETERS

**Table A-3:** Assessment of Financial Parameters

| | |
|---|---|
| ☐ | No financial parameters are used for additionality justification so far |
| ☒ | Assessment of all financial parameters see below |

Not included in public version due to confidentiality issues.

# ANNEX 4: ASSESSMENT OF BARRIER ANALYSIS

**Table A-4:** Assessment of Barrier Analysis

| | |
|---|---|
| ☐ | No barrier parameters are used for additionality justification |
| ☒ | Assessment of barriers see below |

| Kind of Barrier (invest, tech, other) | Description of Barrier | Evidence used | Assessment of determination team | |
|---|---|---|---|---|
| | | | Appropriateness of information source | Explanation of final result |
| Investment | None of the $N_2O$ destruction technology options (including NSCR) are expected to generate any financial or economic benefits other than JI-related income. Their operation does not create any marketable products or by-products. However, any operator willing to install and thereafter operate such technology faces significant investment and additional operating costs | /PDD/ Check of legal frame conditions of the country | The source is appropriate to prove, that there are no financial benefits which can be generated by the reduction of $N_2O$ or other GHG emissions. | The PP could prove, that the project activity faces an investment barrier |

| | | | | |
|---|---|---|---|---|
| Techno-logical | It is unlikely that any plant operator would install such technologies on a voluntary basis without the incentive of any regulatory requirements (emissions caps) or financial benefits (such as revenues from the sale of ERUs). | /PDD/ /BREF/ | The BREF documents show clearly, that the imple-mentation of an additional $N_2O$ abatement technology in an exis-ting plant is coupled with com-prehensive construc-tion works. | The PP could prove, that the project activity faces a technological barrier |

# ANNEX 5: OUTCOME OF THE GSCP

**Table A-5:** Outcome of the Global Stakeholder Consultation Process

| | |
|---|---|
| ☒ | No comments were received during the global stakeholder consultation period |
| ☐ | Comments were received during the global stakeholder consultation period. The comments (in unedited form) and the consideration/response of the determination team are presented below: |

| Comment No.: | Comment by: | Inserted on: | Subject | Comment *) | Response determination team *) | Conclusion (incl. CARs CLs or FARs) |
|---|---|---|---|---|---|---|
| | | | | | | |

*) In case clarifications have been requested by the determination team corresponding rows shall be added

# ANNEX 6: APPLICATION OF NON APPROVED METHODOLOGIES REQUIREMENTS CHECKLIST

**Table A-6:** Non approved Methodologies Requirement Checklist

| | |
|---|---|
| ☒ | A latest version of a CDM approved methodology or a national methodology is used – no determination of the applicated methodology is necessary*. |
| ☐ | An older version of a CDM approved methodology, a combination of approved methodologies or a project specific methodology is used. The assessment see below*: |