Industrie Service

Choose certainty.
Add value.

Draft Determination Report

Yara Montoir Nitric Acid Plant

DETERMINATION OF THE JI TRACK 1 PROJECT: YARA MONTOIR N_2O ABATEMENT PROJECT

REPORT NO. 600500307

16 July 2010

DRAFT

TÜV SÜD Industrie Service GmbH

Carbon Management Service
Westendstr. 199 - 80686 Munich – GERMANY

Industrie Service

Report No.	Date of first issue	Revision No.	Revision Date	Certificate No.
600500307	30-06-2010	01	16-07-2010	-

Subject: Determination of the JI track 1 Project *Yara Montoir N_2O Abatement Project*	
Accredited TÜV SÜD Unit: TÜV SÜD Industrie Service GmbH Certification Body "climate and energy" Westendstr. 199 80686 Munich Germany	**TÜV SÜD Contract Partner:** TÜV SÜD Industrie Service GmbH Certification Body "climate and energy" Westendstr. 199 80686 Munich Germany
Project Participant of host country: YARA Montoir Nitric Acid Plant Zone Portuaire, BP 11 F-44550 Montoir-de-Bretagne	**Project Site(s):** Montoir , Region North West of France, Department: Loire-Atlantique Ammonia burner: 47°18'30.67"N, 2°7'9.02"W
Project Title: *Yara Montoir N_2O Abatement Project*	
Applied Methodology / Version: Project specific methodology	**Scope(s):** 5 **Technical Area(s):** 5.1
First PDD Version (GSP): Date of issuance: 18.06.2009 Version No.: - Starting Date of GSP 24.08.2009	**Final PDD version:** Date of issuance: 27.05.2010 Version No.: 04
Estimated Average Annual Emission Reduction: **50.387** tCO_2equ	
Assessment Team Leader: Nikolaus Kröger **Assessment Team Members:** Robert Mitterwallner Cyprian Fusi	**Veto Person:** Javier Castro **Responsible Certification Body Members:** Thomas Kleiser

DRAFT

Industrie Service

Summary of the Validation Opinion:

☒ The review of the project design documentation and the subsequent follow-up interviews have provided TÜV SÜD with sufficient evidence for the determination of the project's fulfilment of all stated criteria. In our opinion, the project meets all national guidelines and procedures of the host country France for JI track 1 (http://ji.unfccc.int/JI_Parties/PartiesList.html#France) as well as the specific requirements of the LoE of the DFP of France. Therefore, TÜV SÜD recommends the project for registration by the DFP of France if the letters of approval of all Parties involved will be available.

☐ The review of the project design documentation and the subsequent follow-up interviews have not provided TÜV SÜD with sufficient evidence for the determination of the project's fulfilment of all stated criteria. Therefore, TÜV SÜD will not recommend the project for registration by the DFP of France and will inform the project participants and the DFP of France of this decision.

DRAFT

Abbreviations

AIE	Accredited Independent Entity
AMS	Automated Measurement System
BREF	Best Available Technique Reference
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CER	Certified Emission Reduction
CR	Clarification Request
DFP	Designated Focal Point
DVM	JI Determination and Verification Manual
EF	Emission Factor
EIA / EA	Environmental Impact Assessment / Environmental Assessment
ER	Emission Reduction
ERU	Emission Reduction Unit
FAR	Forward Action Request
GHG	GreenHouse Gas(es)
GSP	Global Stakeholder Process
IPCC	Intergovernmental Panel on Climate Change
IRL	Information Reference List
IRR	Internal Rate of Return
JI	Joint Implementation
JISC	JI Supervisory Commitee
KP	Kyoto Protocol
LoA	Letter of Approval
LoE	Letter of Endorsement
MP	Monitoring Plan
NGO	Non Governmental Organisation
PDD	Project Design Document
PP	Project Participant
TÜV SÜD	TÜV SÜD Industrie Service GmbH
UNFCCC	United Nations Framework Convention on Climate Change

DRAFT

Industrie Service

Table of Contents Page

DRAFT

Annex 1: Validation Protocol

Annex 2: Information Reference List

DRAFT

Industrie Service

1 INTRODUCTION

1.1 Objective

Determination is an independent assessment by a Third Party (Accredited Independent Entity = AIE) of a proposed project activity against the defined set of criteria for registration under the Joint Implementation (JI). Determination is also part of the JI Track 1 project cycle and will finally result in a conclusion by the executing AIE whether a project activity is valid, and should therefore be submitted for registration to the Designated Focal Point (DFP) for JI project implementation in France - *Ministère de l'Écologie, de l'Énergie, du Développement Durable et de la Mer, en charge des Technologies vertes et des Négociations sur le climat*. The ultimate decision on the registration of a proposed project activity rests with the DFP in France and the Parties involved.

The project activity mentioned in this Determination Report has been submitted under the project title: "*Yara Montoir N_2O Abatement Project*".

The company - YARA Montoir Nitric acid plant - has contracted TÜV SÜD Industrie Service GmbH to conduct a determination of the above mentioned JI project in Montoir, France. The project was designed as a Track 1 project thus in the context of the Global Stakeholder Process (GSP) the project was published on the www.netinform.de website for a period of 30 days up from 24. August 2009 and is still available for public consultation at the following web link:

http://www.netinform.net/KE/Wegweiser/Guide22.aspx?ID=6282&Ebene1_ID=50&Ebene2_ID=2048&mode=5

Under JI Track 1, requirements for the final approval are set by the DFP involved, mainly the DFP of the host country and in this case it is the French DFP. The general requirements are published in http://ji.unfccc.int/JI_Parties/PartiesList.html#France, and the project specific French requirements for this project are described in the Projet Domestique Methodology: "Catalytic reduction of N_2O at nitric acid plants approved by the DFP in July 2009 (IRL-No. 3). The MEEDDM approved the methodology (IRL-No. 5) and, thus, confirms the validity of applying the methodology.

The determination serves as a conformity test of the project design and is a requirement for all JI projects. In particular the project's reference case, the monitoring plan (MP), and the project's compliance with host country criteria and general relevant UNFCCC criteria are validated in order to confirm that the project design, as documented, is sound and reasonable and meets the stated requirements and identified criteria. Determination is considered necessary to provide assurance to stakeholders of the quality of the project and its intended generation of emission reductions known as Emission Reduction Units (ERU - in the first commitment period under the Kyoto Protocol).

UNFCCC JI 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.

1.2 Scope

The scope of any assessment is defined by the underlying legislation, regulation and guidance given by relevant entities or authorities. In the case of JI project activities, the scope is set by:

- The Kyoto Protocol, in particular § 6
- Decision 2/CMP1 and Decision 3/CMP.1 (Marrakech Accords)
- Decisions of the JISC published under http://ji.unfccc.int (for general guidance)

DRAFT

- Specific guidance by the JISC published under http://ji.unfccc.int (for general guidance)
- The applied approved methodology
- The technical environment of the project (technical scope)
- Internal and national standards on monitoring and QA/QC
- Technical guideline and information on best practice
- Additional national requirements as set by the French DFP

The determination process is not meant to provide any form of consulting for the project participant (PP). However, stated requests for clarifications, corrective actions, and/or forward actions may provide input for improvement of the project design.

The first version of the PDD received by TÜV SÜD was made publicly available on the internet at TÜV SÜD's webpage as mentioned above. The applied methodology *Réduction Catalytique du N2O dans des usines d'acide nitrique* (IRL-No. 3) can be found at the webpage of the French DFP at http://www.ecologie.gouv.fr/Methodologies-de-projets.html.

The only purpose of a determination is its use during the registration process as part of the JI Track 1 project cycle. Hence, TÜV SÜD cannot be held liable by any party for decisions made or not made based on the Determination opinion, which will go beyond this purpose.

The determination scope is defined as an independent and objective review of the PDD and other relevant supporting documents. The information in these documents is reviewed against Kyoto Protocol requirements, UNFCCC rules and associated interpretations. The rules for Track 1 have to be finalised by the French DFP.

The determination of this project activity has been carried out according to the JI DVM. In this particular case a project specific determination protocol corresponding to the specific demands of the project specific methodology "*Réduction Catalytique du N2O dans des usines d'acide nitrique***"** had been developed and used.

According to the Corrective Action Requests (CARs) and Clarification Requests (CRs) addressed during the audit process in 2009 and 2010 the client decided to revise and update the PDD. The final version 04 of the PDD from 27.05.2010 serves as the basis for the final conclusions presented herewith.

In order to evaluate the PDD and corresponding documentation, it was obvious that the competence and capability of the validation team had to cover at least the following aspects:

- Knowledge of Kyoto Protocol and the Marrakech Accords
- Environmental and Social Impact Assessment
- Skills in environmental auditing (ISO 14001)
- Quality Assurance
- Technologies, processes and operation of nitric acid plants
- Reference case concepts
- Monitoring concepts
- Political, economical and technical random conditions in host country

DRAFT

Industrie Service

2 METHODOLOGY

The project assessment aims at being a risk based approach and is based on the methodology developed in the DVM, an initiative of Designated and Applicant Entities, which aims to harmonize the approach and quality of all such assessments.

In order to ensure transparency, a determination protocol was customised for the project. TÜV SÜD developed a checklist and protocol based on the templates presented by the DVM. The protocol shows, in a transparent manner, criteria (requirements), the discussion of each criterion by the assessment team and the results from validating the identified criteria. The Determination Protocol serves the following purposes:

- It organises, details and clarifies the requirements a JI project is expected to meet;
- It ensures a transparent Determination process where the validator will document how a particular requirement has been validated and the result of the Determination.

The Determination protocol for this project consists of three tables. The different columns in these tables are described in the figure below.

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

Determination Protocol Table 1: Conformity of Project Activity and PDD				
Checklist Topic / Question	***Reference***	***Comments***	***PDD in GSP***	***Final PDD***
The checklist is organised in sections following the arrangement of the applied PDD version. Each section is then further sub-divided. The lowest level constitutes a checklist question / criterion.	*Gives reference to documents where the answer to the checklist question or item is found in case the comment refers to documents other than the PDD.*	*The section is used to elaborate and discuss the checklist question and/or the conformance to the question. It is further used to explain the conclusions reached. In some cases sub-checklist are applied indicating yes/no decisions on the compliance with the stated criterion. Any* ***Request*** *has to be substantiated within this column*	*Conclusions are presented based on the assessment of the first PDD version. This is either acceptable based on evidence provided (☑), or a* ***Corrective Action Request (CAR)*** *due to non-compliance with the checklist question (See below).* ***Clarification Request (CL)*** *is used when the Determination team has identified a need for further clarification.*	*Conclusions are presented in the same manner based on the assessment of the final PDD version.*

DRAFT

Table 2 presents the summary of project proponent's response to the CARs and CLs as well as the Determination team's conclusions. This table may also include any Open Issues addressed during the Determination process.

Determination Protocol Table 2: Resolution of Corrective Action and Clarification Requests			
Clarifications and corrective action requests	***Ref. to table 1***	***Summary of project owner response***	***Determination team conclusion***
If the conclusions from Table 1 are either a Corrective Action Request or a Clarification Request, these should be listed in this section.	*Reference to the checklist question number in Table 1 where the Corrective Action Request or Clarification Request is explained.*	*The responses given by the client or other project participants during the communications with the Determination team should be summarised in this section.*	*This section should summarise the Determination team's responses and final conclusions. The conclusions should also be included in Table 1, under "Final PDD".*

In case of any unsatisfactory response from the project proponent to any of the CARs, CLs or Open Issues, the unresolved issues will be presented in table 3.

Determination Protocol Table 3: Unresolved Corrective Action and Clarification Requests		
Clarifications and corrective action requests	***Id. of CAR/CL 1***	***Explanation of the Conclusion for Denial***
If the final conclusions from Table 2 results in a denial the referenced request should be listed in this section.	*Identifier of the Request.*	*This section should present a detailed explanation, why the project is finally considered not to be in compliance with a criterion.*

2.1 Appointment of the Assessment Team

According to the technical scopes and experiences in the sectoral or national business environment, TÜV SÜD has composed a project team in accordance with the appointment rules of the TÜV SÜD certification body "climate and energy". The composition of an assessment team has to be approved by the Certification Body (CB) to assure that the required skills are covered by the team. The CB TÜV SÜD operates four qualification levels for team members that are assigned by formal appointment rules:

- Assessment Team Leader (ATL)
- Greenhouse Gas Auditor (GHG-A)
- Greenhouse Gas Auditor Trainee (T)
- Experts (E)

DRAFT

It is required that the sectoral scope/s and the technical area/s linked to the methodology and project have to be covered by the assessment team. The Determination team consisted of the following members (Assessment Team Leader is written in bold letters):

Name	Qualification	Coverage of scope 5	Coverage of technical area 5.1 and 5.2	Host country experience
Nikolaus Kröger	**ATL**	☑	☑	
Robert Mitterwallner	GHG-A	☑	☑	☑
Cyprian Fusi	GHG-T			

Nikolaus Kröger is environmental engineer and expert for emissions monitoring and quality assurance at the department "TÜV SÜD Carbon Management Service". He is located in the TÜV SÜD Hamburg office and is also engaged as personally accredited verifier in the EU-ETS serving the Northern German market. Being auditor for CDM projects he has already been involved in several CDM activities with a special focus on industrial non-CO_2 projects. Constitutive on 13 years experience at the department "Environmental Service" he verified many metallurgical plants, refineries, chemical plants, waste treatment and power plants and process engineering in many types of facilities. One of his former focal points had been implementation and calibration of complex automatic Environment-Data-Systems.

Robert Mitterwallner is a GHG-Auditor with a background as auditor for environmental management systems (according to ISO 14001), as expert in environmental permit procedures for industrial plants and as expert for environmental impact studies assessment. He is located at TUV SÜD Industrie Service in Munich since 1990. He has received training in the JI determination as well as CDM validation process and applied successfully as GHG Auditor for the scope chemical industries, among others.

Cyprian Fusi, is a GHG auditor (Trainee) for environmental management systems at the "Carbon Management Service" at the head office of TÜV SÜD Industrie Service GmbH, Germany. He holds a Dipl.-Ing (M.Sc) degree in electrical engineering with a speciality in Radio Frequency / Microwave (RF/MW) engineering. He has received training in the CDM validation and verification processes and has participated in several CDM and JI project audits, workshops, seminars and forums.

2.2 Review of Documents

The first version of the PDD was submitted to the AIE in June 2009. This PDD version and additional background documents related to the project design and reference case have been reviewed to verify the correctness, credibility, and interpretation of the presented information. Furthermore, a cross-check between information provided and information from other sources (if available) has been done as an initial step of the validation process. In May 2010 the design of the project has been changed by an updated N_2O abatement efficiency of the secondary catalyst. This is deemed not to be a substantial change of the design of the project activity (see chapter 3.4.5). A complete list of all documents and evidence material reviewed is attached as annex 2 to this report.

DRAFT

2.3 Follow-up Interviews

On 7. September 2009, TÜV SÜD performed an initial telephone conference with the project developer N-serve Germany. Physical site inspections and interviews with the project developer and the PP were held 2. and 3. July 2009 to confirm relevant information, and to resolve issues identified in the first document review.

The table below provides a list of all persons interviewed in this process.

Name	Organisation
Mr. Lizon Januel (Responsable Operation)	Yara Montoir Nitric Acid Plant
Ms. Daudon Antoine (Responsable Environment)	Yara Montoir Nitric Acid Plant
Mr. Thierry Loyer (Director of plant)	Yara Montoir Nitric Acid Plant
Mr. Fabrice Faldor (Responsible Electricity)	Yara Montoir Nitric Acid Plant
Mr. Denis Bartuduet (Responsible Maintenance)	Yara Montoir Nitric Acid Plant
Mr. Christopher Brandt (legal department)	N-serve, Germany
Ms. Rebecca Cardani Strange (project manager)	N-serve, Germany

2.4 Further cross-check

During the determination process the team has made reference to available information related to similar projects or technologies as the JI project activity. Project documentation has also been reviewed against the project specific methodology to confirm the appropriateness of formulae and correctness of calculations.

2.5 Resolution of Clarification and Corrective Action Requests

The objective of this phase of the determination is to resolve the requests for corrective actions, clarifications, and any other outstanding issues which needed to be clarified for TÜV SÜD`s conclusion on the project design. The CARs and CLs raised by TÜV SÜD were resolved during communication between the project developer / PP and TÜV SÜD. To guarantee the transparency of the validation process, the concerns raised and responses that have been given are documented in more detail in the validation protocol in annex 1.

2.6 Internal Quality Control

Internal quality control is the final step of the determination process and involves the internal quality control by the CB “climate and energy” of the final documentation, which includes the determination report and annexes. The completion of the quality control indicates that each report submitted has been approved either by the head of the CB or the deputy (a veto person can be used if necessary). In projects where either the Head of the CB or his/her deputy is part of the assessment team, the approval is given by the one not serving on the project.

It is the ultimate decision of TÜV SÜD’s Certification Body whether a project will be submitted for requesting registration at the French DFP or not.

DRAFT

Industrie Service

3 SUMMARY

The assessment work and the main results are described below in accordance with the DVM reporting requirements. The reference documents indicated in this section and annex 1 are stated in annex 2.

3.1 Approval

The project participant of France is YARA Montoir Nitric Acid Plant. The host Party France meets the requirements to participate in the JI track 1 (see chapter 1.1). Other project participants are YARA International ASA, Oslo (Norway) and N-serve Germany. The parties involved are not PP. Currently, only France and Germany have officially published its national guidelines and procedures for the approval of JI projects. Meanwhile, for Norway these documents are currently not available on JI- SC website. Therefore there is a risk in receiving the investor party's approval. However, this issue is out of the direct influence of the project participants.

The LoA of the DFP of France is still outstanding.

3.2 Project design document

The PDD is compliant with the form published by the French DFP (IRL-No. 18, see Annex 2).

3.3 Project description

The following description of the project as per PDD was verified during the on-site audit:

As described in the current PDD, YARA Montoir Nitric acid plant operates since 1972 one nitric acid production unit with two production lines (2 AORs) on its Montoir site with a total capacity of maximum daily production output of 1030 metric tonnes of HNO_3 (100% conc.) or a maximum annual production output of 350,200 metric tonnes of HNO_3 (100% conc.), based on 350 days per year of plant operation.

To produce nitric acid, ammonia (NH_3) is reacted with air over precious metal – normally a platinum-rhodium-palladium (Pt-Rh-Pd) alloy – catalyst gauze pack in the Ammonia Oxidation Reactor (AOR) of the nitric acid plant. The main product of this reaction is NO, which is metastable at the conditions present in the ammonia oxidation reactor:

$$4\ NH_3 + 5\ O_2 \rightarrow 4\ NO + 6\ H_2O$$

Simultaneously, undesired side reactions yield nitrous oxide (N_2O), nitrogen and water:

$$4\ NH_3 + 4\ O_2 \rightarrow 6\ H_2O + 2\ N_2O$$

$$4\ NH_3 + 3\ O_2 \rightarrow 6\ H_2O + 2\ N$$

The NO from the primary reaction is then further oxidised to form NO_2:

$$2\ NO + O_2 \rightarrow 2\ NO_2$$

The NO_2 is later absorbed in water to produce HNO_3 – nitric acid:

$$2\ NO_2 + H_2O \rightarrow HNO_3 + HNO_2$$

$$3HNO_2 \rightarrow HNO_3 + NO + H_2O$$

DRAFT

Nitric Acid is produced on three different percentages, 53% HNO_3, which is used as a raw material for the production of Ammonium Nitrate on-site at Montoir, 63% HNO_3 which is exported to customers and 100% HNO_3 which is sold for nitration.

From 2003 to 2009 the utilization of a N_2O abatement catalyst that was developed by Yara International ASA, has been investigated on an industrial trial basis in the Montoir plant. In May 2009, the baskets underneath the primary catalyst in the ammonia oxidation reactors were filled to their maximum capacity with a total of 4160 kg of catalyst (type: YARA58 Y 1 ®) in order to undertake the project activity and achieve the maximum emissions reductions possible. The catalyst YARA58 Y 1 ® and the equipment have following characteristics:

- Size of catalyst tablets: 9 mm
- Composition of catalyst: > 80% CeO_2, < 1% CoO
- Bulk density: 1.13 kg/l
- Basket: 4650 mm diameter, 150 mm depth
- Ammonia oxidation reactor pressure: 3.4 bar

The information presented in the PDD on the technical design is consistent with the actual planning and implementation of the project activity as confirmed by:

- The review and cross check of data and information (see annex 2).
- An on-site visit which has been performed. Relevant stakeholder and personnel with knowledge of the project were interviewed. In case of doubt, further cross checks through additional interviews were conducted.
- Information related to similar projects or technologies which have been used to validate the accuracy and completeness of the project description.

In conclusion, TÜV SÜD confirms that the project description, as included in the PDD, is sufficiently accurate and complete in order to comply with the general and specific JI requirements.

3.4 Reference case scenario and monitoring methodology

3.4.1 Applicability of the selected methodology

The selected methodology has been approved by the host country (see IRL No. 5).

Compliance with each applicability condition as listed in the chosen project specific reference case scenario and monitoring methodology has been demonstrated.

The assessment was carried out for each applicability criteria and included, among other checks, the compliance check of the local project setting with the applicability conditions in regard to reference case scenario setting and eligible project measures. This assessment also included the review of secondary sources, which further demonstrate that applicability conditions have been complied with.

The specific protocol that has been derived from the project specific methodology, included in the annex 1, documents the assessment process. The protocol also includes the steps taken in the assessment process. The results of the compliance check as well as relevant evidence are detailed in annex 1.

TÜV SÜD confirms that the chosen project specific reference case scenario and monitoring methodology is applicable to the project activity.

DRAFT

Emission sources, which are not addressed by the applied methodology, and which are expected to contribute more than 1% of the overall expected average annual emission reductions, have not been identified, as for *Integrated Pollution Prevention and Control Reference Document on Best Available Techniques (BREF) for the manufacture of Large Volume Inorganic Chemicals – Ammonia, Acids and Fertilizers* (IRL-No. 6).

3.4.2 Project boundary

The project boundary was assessed considering information gathered from the physical site inspection, interviews, and secondary evidence received on the design of the project.

The project boundary entails all parts of the nitric acid plant in so far as they are needed for the nitric acid production process itself. With regard to the process sequence, the project boundary begins at the inlets to the ammonia burner and ends at the tail gas stack. Any form of NO_X-abatement device shall also be regarded as being within the project boundary.

The Selective Catalytic Reduction (SCR) unit for the reduction of NOx emissions at YARA Montoir shall be regarded as being within the project boundary. This is because SCR technology does not reduce N_2O emission levels and thus the applicable benchmark value shall be unaffected.

- The project boundary includes all parts of the nitric acid plant in so far as they are needed for the nitric acid production process itself, beginning at the inlets to the ammonia burner and ending at the tail gas stack. Any form of NO_X-abatement device shall also be regarded as being within the project boundary.

  Relevant documentation assessed to confirm the project boundary are listed below:
  - *arrêté prefectoral* (plant operation permit) of 31 July 2003 (IRL-No. 10).

Therefore, TÜV SÜD confirms that the identified boundary, the selected sources, and gases as documented in the PDD are justified for the project activity and are fully in line with the requirements set by the applied methodology.

3.4.3 Reference case scenario identification

The PDD defines the following reference case scenario:

- *Business as usual scenario (contiunation of status quo with continuation of operation with the part of secondary catalyst installed that is necessary to comply with the national regulations)*

The information presented in the PDD has been determined by an initial document review of all data. Further confirmation has been made based on the on-site visit and researched information from similar projects and/or technologies. The sources referenced in the PDD have been quoted correctly. The information was verified against credible sources, such as:

- IRL-No. 10: *arrêté prefectoral* (plant operation permit) of 31 July 2003
- IRL-No. 29*: meeting of MEEDDAT and French fert*ilizer association UNIFA with subject: "*Projets Domestiques*"

DRAFT

TÜV SÜD has determined that no reasonable alternative scenario has been excluded.

Based on the validated assumptions used for project activity calculations, TÜV SÜD considers that the identified reference case scenario is reasonable.

Taking the definition of the reference case scenario into account, TÜV SÜD confirms that all relevant JI requirements, including relevant and/or sectoral policies and circumstances, have been identified correctly in the project PDD.

A verifiable description of the reference case scenario has been included in the PDD.

TÜV SÜD confirms that:

1. All the assumptions and data used by the project participants are listed in the PDD, including their references and sources;
2. All documentation used is relevant for establishing the reference case scenario and correctly quoted and interpreted in the PDD;
3. Assumptions and data used in the identification of the reference case scenario are justified appropriately, supported by evidence, and can be deemed reasonable;
4. Relevant national and/or sectoral policies and circumstances are considered and listed in the PDD;
5. The approved reference case methodology has been correctly applied to identify the most reasonable reference case scenario, and the identified reference case scenario reasonably represents what would occur in the absence of the proposed CDM project activity.

Details to the reference case scenario are given in chapter 3.4.4.1 below.

3.4.4 Algorithm and/or formulae used to determine emission reductions

TÜV SÜD has assessed the calculations of project emissions, reference case scenario emissions and emission reductions. Corresponding calculations were carried out based on calculation spreadsheets (IRL-No. 25). The parameters and equations presented in the PDD, as well as other applicable documents, have been compared with the information and requirements presented in the methodology and respective tools. The equation comparison has been made explicitly following all the formulae presented in the calculation files.

The assumptions and data used to determine the emission reductions are listed in the PDD and all the sources have been checked and confirmed.
Based on the information reviewed it can be confirmed that the sources used are correctly quoted and interpreted in the PDD.
The values presented in the PDD are considered reasonable based on the documentation and references reviewed and the results of the interviews.
The reference case methodology has been correctly applied.
The estimate of the reference case emissions can be confirmed as the same reference case emissions results have been replicated by the audit team using the information provided.
Detailed information on the verification of the parameters used in the equations can be found in annex 1. The algorithms for the determination of the reference case and project are discussed in the following sections.

DRAFT

Industrie Service

3.4.4.1 Reference case scenario emissions

The calculation of the reference case scenario emissions of the project activity was conducted according to the procedure described in the project specific methodology. According to YARA Montoir internal data measurements from year January to July 2003 checked by the audit team, the average EF prior to installation of 2ndary catalyst is calculated to 5.7 $kgN_2O/tHNO_3$. The calculation is based on the Empirical correlation between specific N_2O emission levels and N_2O concentrations in tail gases of IPPC BREF paper.

The project specific methodology (IRL-No. 3) applies a **benchmark value of 2.5 $kgN_2O/tHNO_3$** for the period until 31st December 2011, followed by a value of 1.85 $kgN_2O/tHNO_3$ for the period until 31st December 2012.

The **N_2O limit value** in the operation permit (arrêté prefectoral) that is fixed to **1.2 $kg/tHNO_3$** (see IRL-No. 10) is more severe than the benchmark value of the methodology and, hence, is applicable here.

If any of the above benchmark values are subsequently revised during the course of the project activity, the project proponents explicitly reserve the right to apply such new benchmark values for the respective project periods. The tentative new benchmark emission factor shall be below the actual baseline emission factor in order to ensure that ERUs are claimed only for *real* emission reductions.

All sources mentioned above are available and have been checked by the audit team. Thus, the benchmark emission factor can be confirmed.

3.4.5 Project emissions

According to 'Arrêté du 2 Février 1998'of the 'Ministère de l'écologie et du développement durable', a compulsory limit of 7 $kgN_2O/tHNO_3$ applicable to HNO_3 plants in French commissioned after February 1998. This is not applicable to this project activity since the plant was commissioned in 1972.

Anyway, YARA Montoir Nitric Acid Plant internal data measurements from 2003 showed that the average EF prior to installation of secondary catalyst is approximately about 5,7 $kgN_2O/tHNO_3$. Taking into account an abatement efficiency of 88% of secondary catalyst, which is based on QAL 2 tested AMS results, PP has calculated an ex-ante **project emission level of 0.684 $kgN_2O/tHNO_3$**. Initially, an abatement efficiency of 80% has been stated in the PDD for GSP. This figure was a first conservative estimation based on the minimum guaranteed abatement performance of the catalyst supplier.

An official QAL 2 report is available (see IRL-Number 23). The evidence for Yara Montoir Nitric Acid Plant internal data measurements has been checked by the audit team The updated abatement efficiency value has been cross-checked by experiences from similar projects. Hence, the AIE can accept this change in the design and the project emission factor is deemed to be credible.

3.4.6 Leakage

As per the methodology, the project does not need to consider leakage emissions.

DRAFT

Industrie Service

3.4.7 Emission Reductions

The annual ex-ante emission reductions have been calculated by an excel file (IRL-No. 25) as for the formula of the project specific methodology, taking into account the following parameters,

- Benchmark emission factor (see chapter 3.4.4)
- Project emission factor (see chapter 3.4.5)
- Nitric acid production for the Verification Period n ($tHNO_3$)
- Global Warming Potential : 310 tCO_2e/tN_2O
- Reduction factor of 90% required by the project specific methodology.

The budgeted annual nitric acid production of 350,200 $tHNO_3$ is based on a credible plant operation time of 340 days considering shut downs, e.g. for maintenance purposes (see chapter 3.3). The reduction factor is in accordance with Article 15 of the French linking directive from 2 March 2007 (IRL-No. 11).

Hence, the calculation of ERUs is more conservative. In summary, the calculation of the reference case emissions; project emissions, and the emission reductions, respectively, can be considered correct.

3.5 Additionality

The additionality of the project has been presented in the PDD using a step-by-step assessment as described in the project specific methodology “Catalytic reduction of N_2O at nitric acid plants”. According to Article 10 of the French linking directive from 2 March 2007 (IRL-No. 11) an investment analysis including IRR calculation has to be done for the project activity. In Annex 3 of the same directive the additionality approach of the project specific methodology is indicated.

The approach used in the PDD has been assessed initially through the document review, during which the following documents were reviewed:

- Project specific methodology (IRL-No. 3)
- Linking directive from 2 March 2007 (IRL-No. 11)

On site, the additionality was discussed principally with Mr. J-M Lizon (production manager of Yara Montoir Nitric Acid Plant) and Ms. Rebecca Cardani Strange (project manager of N-serve Germany. Further documents have been reviewed on-site (annex 2).

Based on this information we can confirm that the documentation assessed is appropriate for this project.

3.5.1 Starting Date of the Project Activity

The starting date of the project activity is determined by the purchase order in March 2009 for delivery of N2O catalyst type 58-Y1 (Rhodia type) from Yara group to Yara Montoir. In order to check this information, the assessment team has reviewed this document (see IRL-No. 14).

The starting date of the project has been determined to be in March 2009 which is before the GSP.

DRAFT

According to the e-mail from the vice president of Yara group from 11 July 2008 (IRL-No. 13), the "projet domestique" (national JI track 1) has been envisaged for this project activity among others together with the decision to involve N-serve Germany as project developer.

Therefore it can be confirmed that the project complies with the requirements regarding prior consideration of JI.

3.5.2 Identifications of alternatives

The aim of the project is to abate N_2O, hence, there is no output by the project.

The list of alternatives to abate N_2O as presented in the PDD includes the project activity undertaken without being registered as a JI project and the continuation of the situation prior to the implementation of the proposed project activity. The remaining alternatives presented do include all plausible scenarios taking into account the local and sectoral situations for this abatement project. The list of alternatives is therefore considered complete.

3.5.3 Step-by-step assessment (Barrier analysis)

According to the project specific methodology, the PP has used the step-by-step assessment (barrier analysis) in order to demonstrate the additionality of the project. The presented barriers are:

- Investment Barrier,
- Technological Barrier and
- Common Practice Barrier.

The **investment barrier** presented in Annex 4 of the PP (project costs and revenues) as well as in the excel calculation financial table (IRL-No. 26) has been assessed against the following two requirements:

- Project specific methodology (IRL-No. 3)
- Linking directive from 2 March 2007 (IRL-No. 11).

The following official documents have been checked for the assessment of the barrier analysis:

- Purchase order for N_2O catalyst (IRL-No. 14)
- Order of monitoring equipment (IRL-No. 15).

The figures presented in Annex 4 are deemed to be conservative.

The result of this assessment clearly shows that the calculation presented in Annex 4 of the PDD can be considered as complete and correct compared to the two investment barrier requirements listed above. This is confirmed through the documentation review, interviews, and the local and sectoral expertise of the assessment team as well as the BREF-Paper (IRL-No. 6).

Hence, the correct application of the national investment barrier requirements can be confirmed by the audit team and the project activity is deemed to be additional in terms of this barrier.

DRAFT

As **technological barriers** the following technical risks have been stated in the PDD:

- bed depth of catalyst installed inside the burner (increased risk of pressure drop) and
- depending on the load of catalyst, the supporting containment structure has to be stronger and more technical modifications will need to be made.

These technological barriers are deemed to be credible since in the reference scenario only a trial catalyst with less load as kind of pilot facility has been used.

As for the **common practice barrier**, it can be confirmed that no similar project(s) is/are running parallel to this project activity. The available power point presentation from the meeting of UNIFA and MEEDDM regarding Projects Domestiques from April 2009 (IRL- No. 29) indicates that the secondary catalyst is not common practice in the sector for HNO_3 production in France.

Taking into account the description of the determination of the barriers presented above, the assessment team can confirm, with reasonable certainty, that the barriers are credible and correctly presented to demonstrate the additionality of the project.

3.5.4 Common practice analysis

The region for the common practice analysis has been defined as the area of France. As a result, the region is defined by taking into account similar technologies as well as similar industry types.

The assessment team has reviewed official sources such as:

- IRL-No. 29: meeting of MEEDDAT and French fertilizer association UNIFA with subject: "*Projets Domestiques*"

This information confirms that all similar projects in France applied for JI or are currently applying for JI..

Therefore, it can be confirmed that the proposed JI activity is not a common practice in the defined region.

3.6 Monitoring plan

The monitoring plan presented in the PDD complies with the requirements of the applicable project specific methodology. The assessment team has verified all parameters in the monitoring plan against the requirements of the methodology; no relevant deviations have been found in the final PDD (see Annex 2).

The monitoring plan has been reviewed by the assessment team through document review and interviews with the relevant personnel. The information provided, together with a physical inspection, allows the assessment team to confirm that the proposed monitoring plan is feasible, and within the project design. The major parameters to be monitored have been discussed with the PPs. In specific, these parameters include the location of meters, data management, and the quality assurance and quality control procedures to be implemented in the context of the project.

DRAFT

Example: N2O analyser in the tail gas stack

- Automatic continuous measurement with Dr. Födisch MCA 04 hot extractive analyser
- AMS is subject to regular checking and calibrations that will take place according to vendor specifications and EN14181

Therefore, we find that the PP's will be able to implement the monitoring plan and the achieved emission reductions can be reported ex-post and verified.

The LoA of the host country that is deemed to confirm this statement is still outstanding.

Forward Action Request:

Information according to Annex D of EN14181 has to be available latest for the first verification.

3.7 Local stakeholder consultation

According to the DFP of France local stakeholder consultation meeting is not required.

3.8 Environmental impacts

The project participants did not undertake an environmental impact assessment since it is not required by the DFP of the host country. But, an analysis of environmental impacts has been conducted. The assessment team reviewed the documentation of the presented information. Due to the available information and our experience for such project activities, negative environmental impact by the project activity is not expected. We conclude that the PPs followed the requirements of the host country in regard to environmental impacts.

DRAFT

Industrie Service

4 COMMENTS BY PARTIES, STAKEHOLDERS AND NGOS

TÜV SÜD published the project documents on the UNFCCC website, and invited comments by affected Parties, stakeholders, and non-governmental organisations during a 30 day period.

The following table presents all gathered key information:

website: http://www.netinform.net/KE/Wegweiser/Guide22.aspx?ID=6175&Ebene1_ID=50&Ebene2_ID=1996&mode=5	
Starting date of the global stakeholder consultation process: 2009-08-24	
Comment submitted by: None	**Issues raised:** -
Response by TÜV SÜD: -	

DRAFT

Industrie Service

5 DETERMINATION OPINION

TÜV SÜD has performed a determination of the following proposed JI track 1 project activity in France:

Yara Montoir N_2O Abatement Project

Standard auditing techniques have been used for the determination of the project. Methodology-specific customized checklists and a protocol for the project have been prepared to carry out the audit in order to present the outcome in a transparent and comprehensive manner.

The review of the project design documentation, subsequent follow-up interviews and further verification of references have provided TÜV SÜD with sufficient evidence to determine the fulfilment of stated criteria in the protocol. In our opinion, the project meets all national guidelines and procedures of the host country France for JI track 1 (http://ji.unfccc.int/JI_Parties/PartiesList.html#France) as well as the specific requirements of the LoE of the DFP of France if the underlying assumptions do not change. TÜV SÜD will recommend the project for registration by the DFP of France. One Forward Action Request has to be solved latest during the first verification (see chapter 3.6).

An analysis, as provided by the applied project specific methodology, demonstrates that the proposed project activity is not a likely reference case scenario. Emission reductions attributable to the project are additional to any that would occur in the absence of the project activity. Given that the project is implemented as designed, the project is likely to achieve the estimated amount of emission reductions as specified within the final PDD version.

The determination is based on the information made available to us, as well as the engagement conditions detailed in this report. The determination has been performed according to the DVM. TÜV SÜD can therefore not be held liable by any party for decisions made, or not made, based on the validation opinion beyond that purpose.

Munich, 16-07-2010

Thomas Kleiser

Certification Body “climate and energy”
TÜV SÜD Industrie Service GmbH

Munich, 16-07-2010

Nikolaus Kröger

Assessment Team Leader

DRAFT

Annex 1: Determination Protocol

DRAFT

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD
***A.* General description of project activity**				
A.1. Title of the project activity				
A.1.1.1. Does the project title clearly enable the identification of a unique JI project activity?	1, 2	Yes. The project title mentioned in the PDD as "YARA Montoir N_2O abatement project" clearly enables the identification of a unique JI project activity. No other project in the host country has been identified with an identical title. Structure of the PDD has been provided by the French DFP.	☑	☑
A.1.1.2. Are there any indication concerning the revision number and the date of the revision?	1, 2	There is no indication concerning the revision. However, the revision date has been mentioned as June 18, 2009. This version has been published by TÜV SÜD. **Corrective Action Request No.1.** Project Participant has to indicate both the version of the PDD as well as the date of revision.	CAR 1	☑
A.1.1.3. Is this consistent with the time line of the project's history?	1, 2, 8	See CAR1 above	See CAR 1	☑
A.2. Description of the project activity				
A.2.1.1. Is the description delivering a transparent overview of the project activities?	1, 2, 8	The sole purpose of the proposed project activity is to catalytically reduce N_2O from HNO_3 production nitric acid at YARA's nitric acid plant in Montoir, France, by employing secondary abatement catalyst. This will drastically reduce N_2O emissions from this plant and therefore help in mitigating the effects of climate change. This has been described in the PDD in a transparent manner.		☑

		Corrective Action Request No.2. a) PP has to include in the PDD all the equations describing the production of HNO_3 and how the byproduct N_2O is generated. b) There is a need to take into consideration in section A.2 of the PDD that two burners do exist in the plant for HNO3 production. c) As information has been gathered from the audit the indicated pressure of the ammonia reactor is higher than indicated in the PDD, the figures in the PDD have to be corrected. d) All French text passages in the whole PDD have to be replaced translated in English.	CAR 2	
A.2.1.2. What proofs are available demonstrating that the project description is in compliance with the actual situation or planning?	8 13 12	The following time line for project implementation including the history of the period prior to the project implementation has been presented during the audit: • 03/2009: Modification of the supporting systems (gauzes) and the integration of new catalyst 872 kg in total • 07/2008: JI consideration by Yara group (as for Ambés) • 2003 - 04/2009: Industrial trial • 17/03/2008: PIN • 10/04/2009: LoE (Ambés, Montoir, Paradis) • 02/05/2009: Start of catalyst operation, 4160 kg in total (max) • 07/2009: expected installation of monitoring system		☑

			Clarification Request #1. The e-mail referring to the LoE has to be provided to the AIE.	CR 1	
A.2.1.3.	Is the information provided by these proofs consistent with the information provided by the PDD?	1, 2, 8, 12, 13	See CAR1, CAR2, CR1	See CAR 1, CAR 2, CR 1	☑
A.2.1.4.	Is all information presented consistent with details provided in further chapters of the PDD?	1, 2, 8, 12, 13	Apart from CAR1, CAR2 and CR1, all information provided is consistent with details provided in further chapters of the PDD. However, see A.2.1.2	See CAR 1, CAR 2, CR 1	☑
A.3. Project participants					
A.3.1.1.	Is the form required for the indication of project participants correctly applied?	1, 2, 18	Yes the form for indicating project participants has been correctly applied in comparison to the PDD template from the French DFP, as can be seen in section A.3 in the PDD.	☑	☑
A.3.1.2.	Is the participation of the listed entities or Parties confirmed by each one of them?	1, 2	See chapter A.5	☑	☑
A.3.1.3.	Is all information on participants / Parties provided in consistency with details provided by further chapters of the PDD (in particular annex 1)?	1, 2	Yes. Information on project participants provided in A.3 is consistent with those provided in other section of the PDD, especially with those provided in annex 1 of the PDD.	☑	☑
A.4. Technical description of the project activity					
A.4.1.	Location of the project activity				
A.4.1.1.	Does the information provided on the location of the project activity allow for a clear identification of the site(s)?	1, 2, 8	Yes, the information on the location of the project activity is sufficient to clearly indentify the project site. The project activity is located in Montoir-de-Bretagne, France with GPS coordinate:	☑	☑

			Plant absorption tower and tail gas stack: 47°18'3 0.85"N, 2° 7'4.50"W Ammonia burner: 47°18'30.67"N, 2° 7'9.02"W **Corrective Action Request No.3.** The Google map provided in the PDD is not clear enough. PP has to zoom the map in the PDD in a manner so as to clearly portray the site of the project activity.	CAR 3	
A.4.1.2.	How is it ensured and/or demonstrated, that the project proponents can implement the project at this site (ownership, licenses, contracts, etc.)?	10	Yara France has been operating this HNO3 production plant in Montoir since the early 1970th. The arrêté prefectoral (AP) of 2003 covers the permit of operation. See CR 3 regarding compliance of AP with methodology/PDD.	See CR 3	☑
A.4.2.	Technology(s) to be employed, or measures, operations or actions to be implemented by the project activity				
A.4.2.1.	Does the technical design of the project activity reflect current good practices?	1, 2, 8, 14	The project intends to employ well known and tested N_2O abatement technology involving the deployment of high efficient secondary catalyst. The project would not result to an increase in any GHG emissions and has not got any negative environmental impacts. The technology therefore reflects current good practice in the industry.	☑	☑

A.4.2.2.	Does the description of the technology to be applied provide sufficient and transparent input / information to evaluate its impact on the GHG balance?	14	The secondary catalyst that is the main project measure is characterized as following according to the purchase order that has been submitted to the audit team. • Type: YARA58 Y 1 ® • Weight of catalyst: 4080 kg • Size of catalyst tablets: 9 mm • Composition of catalyst: > 80% CeO_2, < 1% CoO • Bulk density: 1.13 kg/l • Unit prize: 100 €/kg catalyst • Basket: 4650 mm diameter, 150 mm depth • Ammonia oxidation reactor pressure: (see CAR 2c)	See CAR 2c	
A.4.2.3.	Does the implementation of the project activity require any technology transfer from annex-I-countries to the host country(s)?	8, 14	The project relevant secondary catalyst already has been delivered by Yara group Norway which is not the manufacturer as information was shared during the on-site audit. **Clarification Request #2.** Detailed information about the manufacturer of the project catalyst is needed (company name and country).	CR 2	☑
A.4.2.4.	Is the technology implemented by the project activity environmentally safe?	1, 2, 6, 8	The project would not result to an increase in any GHG emissions or to an increase in NO_x emissions. As for page 124 of *Integrated Pollution Prevention and Control Reference Document on Best Available Techniques (IPPC BREF) for the manufacture of Large Volume Inorganic Chemicals – Ammonia, Acids and Fertilisers*, there is no negative environmental impact caused by the application of the secondary catalyst, e.g. cobalt oxide particles. Furthermore, this document provides information	☑	☑

			stating that there are no losses in NO yield.		
A.4.2.5.	Is the information provided in compliance with actual situation or planning?	8	Yes, the information provided in the PDD is in compliance with actual planning phase.	☑	☑
A.4.2.6.	Does the project use state of the art technology and / or does the technology result in a significantly better performance than any commonly used technologies in the host country?	8	Yes, the project technology has been well tested and used in many N_2O abatement projects in the world.	☑	☑
A.4.2.7.	Is the project technology likely to be substituted by other or more efficient technologies within the project period?	8	As stated by the project owner, it is not foreseen to be replaced during the course of the crediting period by any other better technology (see also chapter C for the projected lifetime of the project).	☑	☑
A.4.2.8.	Does the project require extensive initial training and maintenance efforts in order to be carried out as scheduled during the project period?	1, 2, 7, 8	Yara Montoir is a relative large plant with well trained technicians and employees capable of monitoring emission reduction, calibrating and maintaining measuring instruments. Interviews with Fabrice Faldor and Denis Bartuovet confirm that Yara Montoir is ready to implement the project as scheduled. Also maintenance contract between YARA and equipment supplier is envisaged.	☑	☑
A.4.2.9.	Is information available on the demand and requirements for training and maintenance?	1, 2, 7, 8	Interviews with Fabrice Faldor and Denis Bartuovet confirm that Yara Montoir is ready to implement the project as scheduled. Also maintenance contract between YARA and equipment supplier is envisaged. Training requirement will be defined during the start-up together with the supplier of the N2O analyser.	☑	☑

A.4.2.10. Is there a brief explanation of how the anthropogenic emissions of GHGs by sources are to be reduced by the proposed JI project, including why the emission reduction would not occur in the absence of the proposed project, taking into account national and/or sectoral policies and circumstances?	1, 2, 3, 4, 8, 11	As for the approved methodology, the French DFP (Le Ministère de l'Écologie, de l'Énergie, du Développement Durable et de l'Aménagement du Territoire - MEEDDAT) has provided a Benchmark Emissions Factor (EF_{BM} = 2.5 $kgN_2O/tHNO_3$) to be applied by all nitric acid plants eligible to undertake JI projects regardless of their size, their technical characteristics and their past and present emissions levels. This benchmark is valid till December 31, 2011. Thereafter, a value of 1.85 $kgN_2O/tHNO_3$ will be applicable until December 31, 2012.		
	16	According to 'Arrêté du 2 Février 1998'of the 'Ministère de l'écologie et du développement durable', a compulsory limit of 7 $kgN_2O/tHNO_3$ applicable to HNO_3 plants in French commissioned after February 1998. This is not applicable to this project activity since the plant was commissioned in the beginning of the 1970th.		
	17	According to YARA internal data measurements from Jan –Jul 2003 checked by the audit team, the average EF prior to installation of 2ndary catalyst is approximately 5.7 $kgN_2O/tHNO_3$ PP has calculated a project emission level of 0.855 $kgN_2O/tHNO_3$,taking into account, initially, an abatement efficiency of 80% which is Yara experienced value. In the final PDD this figure has been updated to 88%.		
	10	**Clarification Request #3.** As indicated in the AP 2003, the limit value for N2O emissions in the stack of the installation for production of nitric acid is 200 ppm and 1.2 kg N_2O/t HNO_3 (both to be measured on a daily basis). This value is not consistent with the benchmark EF of the methodology and PDD, hence, clarification is needed. Anyway, as stated by the director of YARA Montoir plant, Yara has been discussing with the permitting authority (Prefecture de la	CR 3	

		Loire-Atlantique) to revise the AP for this plant. Yara claimed in this discussion with the authority that the current limit value is neither in line with the overall permitting practice in other departments of France nor in other EU member states.		
A.4.2.11. Is the explanation transparent, feasible and – if based on calculations – mathematical correct calculated?	1, 2, 8, 9	**Clarification Request #4.** The figures for the emission reductions presented in the PDD can not be cross checked by the Audit team. Although, the calculation files are confidential, the PP needs to provide to AIE a complete PDF conversion of the excel calculation file.	CR 4	☑
A.4.2.12. Is a schedule available for the implementation of the project and are there any risks for delays?	8	Considering that PP has undertaken extensive industrial testing of the technology and has already installed secondary catalyst at the plants, there are no risk of delays involve in the implementation of the project.	☑	☑
A.4.3. Estimated amount of emission reductions over the chosen crediting period				
A.4.3.1. Is the form required for the indication of projected emission reductions correctly applied?	1, 2, 18	PP has applied correctly the PDD format from the French DFP.	☑	☑
A.4.3.2. Are the figures provided consistent with other data presented in the PDD?	1, 2, 9	See CR 4	See CR 4	☑
A.5 *Project approval by the participants*				
A.5.1 Is the state of endorsement or approval by the host party clearly defined and a Letter of Endorsement (LoE), Letter of Approval (LoA) or any alternative statement of authorization	12	A hardcopy of LoE from 10 April 2009 has been provided by PP. AIE has demanded for the email that contained the LoE as attachment.	See CR 1	☑

	available?		LoA of each participating party will be provided latest before requesting the issuance of credits.		
A.5.2	Is the state of endorsement or approval by any other parties e.g. investing parties clearly defined and a Letter of Endorsement (LoE), Letter of Approval (LoA) or any alternative statement of authorization available?	12	See above	☑	☑
B.	**Reference Case Scenario and Monitoring Methodology**				
B.1	**Title of the reference case and monitoring methodology to be applied to the project activity**				
B.1.1	Are reference number, version number, and title of the reference scenario and monitoring methodology clearly indicated?	1, 2, 3, 4	The project applies a project specific methodology from the French DFP titled "Catalytic reduction of N_2O at nitric acid plants." **Clarification Request #5.** Evidence for the official approval of the methodology by the French DFP still needs to be provided to the AIE.	CR 5	☑
B.1.2	Is the applied version the most recent one and / or is this version still applicable?	1, 2, 3, 4	A version number is not indicated in the methodology since it is the first version.	☑	☑
B.2	**Justification of the choice of the methodology and reasons for which is it applicable for the project activity**				
B.2.1	Applicability Criterion 1: N_2O reduction activities undertaken with a tertiary catalyst, which is usually housed in a specific tail gas treatment reactor towards the end of the production process.	1, 2, 3, 4	Not applicable here since a secondary catalyst has been installed.	☑	☑

B.2.2	Applicability Criterion 2: Instead of applying a historic emissions factor, established by measuring the quantity of N_2O emitted per tonne of 100% concentrated nitric acid produced – a unique benchmark emissions value will be applied for all nitric acid plants on French territory of 2.5 kgN_2O / tHNO_3 in 2009, 2010 and 2011, then of 1.85 kgN_2O / t HNO_3 in 2012.	1, 2, 3, 4	This criterion has been applied correctly in the PDD.	☑	☑
B.2.3	Applicability Criterion 3: A N_2O abatement catalyst is installed in a nitric acid plant located in France.	1, 2, 3, 4 14	PP has been undertaking some industrial testing of the secondary catalyst to be employed in the project activity (see time schedule in A.2.1.2). This testing has bee accomplished before the start of the project activity and the installed catalyst was removed. However, PP has recently installed the secondary catalyst for the project activity.	☑	☑
B.2.4	Applicability Criterion 4: The project activity will not lead to an in crease in NO_X emissions.	1, 2, 3, 1, 2, 3, 4, 6	The project activity will not increase NO_X emissions. Industrial testing has shown that the secondary catalyst technology installed has no effect on NO_X emission levels. Not applicable in secondary abatement technology (See IPPCC BREF paper for this sector).	☑	☑
B.2.5	Applicability Criterion 5: The project will not result in the shut-down of any existing N_2O destruction or abatement technology. In cases where non-N_2O emissions are known to occur (e.g. with a	1, 2, 3, 4, 10, 16	The trial catalyst that has been tested from 2002 to 2009 had a significant lower capacity and is not deemed to be an existing N_2O abatement technology. There are currently national and/or local regulatory requirements to limit N_2O emissions in France. However, there are no incen-	☑	☑

	tertiary N_2O abatement technology) a project can be submitted under this methodology only if the other non-N_2O Greenhouse Gas emissions are accounted for in accordance with the relevant annex to this methodology.		tives to voluntarily reduce the level of N_2O emissions. According to the methodology, no leakage emissions are considered, because the applied technology is a secondary catalyst and not a tertiary catalytic reduction. No hydro-carbons are used as reducing agents. Therefore no other GHGs are considered but N_2O.		
B.3	**Description of how the definition of the project boundary is applied to the project activity**				
B.3.1	Is the table in the PDD consistent with that one in the methodology?	1, 2, 18	Boundary checklist / Yes / No Source and gas(s) discussed in the PDD? **No** Inclusion / exclusion justified? Yes Explanation / Justification sufficient? Yes Consistency with monitoring plan? Yes According to the methodology, the only GHG to be included in the project boundary is N_2O contained in the waste stream of the HNO_3 emitted into the atmosphere via stack. **Corrective Action Request No.4.** In order to comply with the form of the methodology, PP has to include in the table of chapter B.3 of the PDD the consideration of the reference scenario.	CAR 4	☑
B.3.2	Does the extent of the project boundary cover all technology and equipment necessary for the complete nitric acid production process, from the inlet of the ammonia burner to the stack, including all compressors, tail gas expander turbines and any NOX abatement equipment installed?	1, 2, 8	Yes, the scheme presented in the PDD and during the Audit clearly identifies all technology and equipment for the project.	☑	☑

B.3.3	Has is been taken into account that in case a tertiary catalyst technology is applied that entails the injection of a reducing agent, will project proponents also have to account for any CO_2 and / or CH_4 emissions?	1, 2	Not applicable here, since secondary catalyst is installed.	☑	☑
B.3.4	Is a plant-specific flow diagram provided in the PDD to demonstrate the project boundary of the particular nitric acid plant(s) involved in the project activity?		A scheme of the project is part of the PDD. **Corrective Action Request No.5.** The scheme in the PDD indicating the components of the plant is not readable. PP has to replace it with that which was presented during the site visit, indicating additionally the location of DeNOx facility.	CAR 5	☑
B.4	**Identification and Description of the Reference Case Scenario (Business As Usual Scenario)**				
B.4.1	Have all technically feasible reference scenario alternatives to the project activity been identified and discussed in the PDD according to the project specific methodology? Why can this list be considered as being complete?	1, 2, 8	PP has discussed all technically feasible reference scenario alternatives to the project activity taking into account national and/or local compliance requirements. Anyway, the list cannot be considered complete since it does not explicitly state the alternative of the project activity undertaken without revenue from the sales of ERUs. **Corrective Action Request No.6.** PP has to include the alternative of implementing the project activity without revenues from the sales of ERUs (project without JI) in the list of option in step 1.	CAR 6	☑

B.4.2 Step 1: Have the reference case scenarios been discussed that are technically feasible within the framework of the project activity?	1, 2	Yes, NSCR scenario alternative could be triggered by any future NO_X regulations. YARA Montoir could therefore be forced to reduce N_2O in a reference scenario accordingly if NO_X regulation forced the plant operators to install NSCR technology. However, due to the uneconomical attractiveness of NSCR, the most economical option would be to upgrade the existing SCR NO_X abatement unit already installed at the plant in response to any lower NO_X regulation limits. **Clarification Request #6.** It has to be taken into account that as a consequence of new NOX regulations over the course of the crediting period of the proposed project activity the most conservative reference scenario can be changed and needs to be of re-assessed. In such a case the additionality of the project must be re-determined.	CR 6	
B.4.3 Step 2: Have all the reference scenario alternatives been eliminated that do not comply with national or local regulations?	1, 2 11 10	Yes, the project identifies correctly and excludes those options not in line with national and/or local regulatory or legal requirements. In France, the most relevant documents of legislation are: 1. 'Décret n° 2006-622 du 29 mai 2 006' for the application of articles L. 229-20 to L. 229-24 of the 'code de l'environnement' 2. 'Arrêté du 2 mars 2007'of the 'Ministère de l'écologie et du développement durable', a compulsory limit of 7kgN_2O/tHNO_3 applicable to HNO_3 plants in French commissioned after February 1998 3. EU ETS Directives	☑	☑

B.4.4 Step 3: Have all the reference scenario alternatives been eliminated that would face prohibitive barriers (barrier analysis)?	1, 2	Yes, a list of barriers comprising of investment barriers, technological barriers and barriers due to common practice has been included in the PDD. This can be considered to be complete. Regarding common practice analysis, the PP referred to publication of UNIFA – association of French fertilizer industries meeting with French DFP in April 2009. **<u>Corrective Action Request No.7.</u>** a) The items 2b, 2c and 2d of step 3 of the methodology should be discussed in the PDD. b) Evidence has to be provided to the AIE that there is no N_2O abatement project in the fertilizer industry in France without JI	CAR 7	☑
B.5 Description of how the emissions reductions achieved as a result of the project activity are greater than those that would be achieved in the absence of the Projet Domestique (evaluation and demonstration of additionality)				
B.5.1 Has a step-by-step assessment been undertaken in accordance with Annex 3 of the 'Arrêté du 2 Mars 2007'?	1, 2, 11	Yes, generally, the assessment approach for additionality is consistent with the methodology.	☑	☑
B.5.2 Step 1: Did the PP summarize the different options that remain available to him following the 'identification of the reference scenario' analysis in B.4?	1, 2	Yes, all options are listed in the PDD.	☑	☑

B.5.3 Step 1: Did the PP showed that the implementation of the project activity (1) would result in a greater reduction of GHG emissions than would be achieved in either of the following alternative scenarios: (2) undertaking of alternative investments that result in a comparable production of goods or a comparable provision of services and (3) continuation of the situation prior to the implementation of the proposed project activity.	1, 2	In the PDD it has been shown that the non of the alternatives (2) or (3) result in a higher reduction of N_2O emissions compared to the project activity.	☑	☑
The proponent must choose now either step 2 or step 3. The choice of step 3 does not relieve the proponent of the obligation specified in the second paragraph of article 10 of the 'Arrêté du 2 Mars 2007' (the financing table).				
B.5.4 In case step 2 has been chosen: Did the PP establish that the project activity would not be undertaken because the economic incentives existing at the time of submission of the project dossier are insufficient to guarantee a return on investment equal to that of the alternative investments or, as the case may be, to the standards of the relevant sector?	1, 2	Not Applicable here	☑	☑

B.5.5 In case step 3 has been chosen: Did the PP present a full and documented analysis of all of the following barriers: 1) investment barriers and 2) technological barriers and 3) common practice barriers?	1, 2 14, 15	Step 3 has been chosen here. The list of barriers presented in the PDD is complete. 2) The investment analysis presented in annex 4 has been done generally according to the requirements of article 10 of arrêté of March 02, 2007. Anyway, the figures in Annex 4 are not completely consistent with the figures indicated in the purchase orders for the catalyst and analyser or are not detailed enough. **Corrective Action Request No.8.** The figures in annex 4 have to be revised according to the information gathered during on site audit, precisely specify the project relevant capacity of catalyst and details regarding the estimated sum of AMS cost. 3) PP has discussed or analysed similar activity in France. No similar project (s) is/are running parallel to this project activity. PP has already concluded the industrial testing of the secondary abatement catalyst. The only secondary abatement installed is for regulatory compliance. But see CAR 7	CAR 8 See CAR 7	☑

B.6 Emission Reductions					
B.6.1 Explanation of Methodological Choices					
B.6.1.1	Are the GHG calculations documented in a complete and transparent manner?	1, 2, 8	This equation in section B.6.1 (allocation of ERUs) is not consistent with that indicated in the methodology. This 0.9 factor is missing. The format of the table in section B.6.2 of the PDD is not consistent with that one of the methodology. Thus anyway the format used in the PDD has been chosen according to a PDD template that has been supplied by the French DFP to PP. **Clarification Request #7.** There is a need to clarify why the factor 0.9 that is part of the equation of the methodology to calculate the ERUs has not been included in the equation.	CR 7	☑
B.6.1.2	Are the estimated project emissions transparent, feasible and mathematical correct calculated?	1, 2	The following equation is used to calculate the quantity of N_2O emissions (in Kg) in the course of the monitoring period. **$PEn = VSGn * NCSGn * OHn * 10^{-6}$** The average N_2O emissions per metric ton of 100% concentrated nitric acid (plant-specific emission factor) for the Monitoring Period (PE_n) shall then be calculated as follows: **$EFn = (PEn / NAPn)$ in $kgN_2O/tHNO_3$** The emission reductions obtained in a particular monitoring period will be calculated using the equation: **$ERU = (EF_{BM} - EF_n)/1000 \times NAPn \times GWP_{N2O}$** in tCO_2 e	See CR 7	☑

B.6.1.3	Are the estimated emissions for reference scenario transparent, feasible and mathematical correct calculated?	1, 2	The reference scenario has been defined by the following: According to the methodology "a unique benchmark emissions value will be applied for all nitric acid plants on French territory of 2.5 kgN_2O / $tHNO_3$ in 2009, 2010 and 2011, then of 1.85 kgN_2O / t HNO_3 in 2012."	☑	☑
B.6.1.4	Has any new national or local regulatory limit value identified that is lower than the benchmark emission factor of the applied methodology? If yes, is this lower limit value applied in the PDD?	1, 2, 10	See CR 4	See CR 4	☑
B.6.2	**Data and parameter determined prior to validation**				
B.6.2.1	Will the project result in fewer GHG emissions than the reference scenario?	1, 2, 10	See CR 4	See CR 4	☑
B.6.2.2	Is the form/table required for the indication of projected emission reductions correctly applied?	1, 2, 18	PP has applied format from French PDD.	☑	☑
B.6.3	**Ex-ante calculation of emission reductions**				
B.6.3.1	Is the projection in line with the envisioned time schedule for the project's implementation and the indicated crediting period?	1, 2, 9	See CR 4	See CR 4	☑
B.6.3.2	Is the data provided in this section in consistency with data as presented in	1, 2, 9	See CR 4	See	☑

other chapters of the PDD?			CR 4	
B.6.4 Summary of ex-ante estimations of emission reductions				
B.6.4.1 Are the obtained values for estimated project emissions, estimated reference scenario emissions and estimated emissions reductions provided in the table reproducible when applying formulae submitted in the PDD?	1, 2, 9	See CR 4	See CR 4	☑
B.7 Application of the monitoring methodology and description of monitoring plan				
B.7.1 Measured data and parameters				
B.7.1.2 Is the list of parameters to be collected in order to monitor emissions from the project considered to be complete with regard to the requirements of the applied methodology?	1, 2, 3, 4	Apart from one parameter (see CAR 9), the list of parameters is complete according to the applied methodology.	See CAR 9	☑
B.7.1.3 Are the following default factors applied appropriately and has the form of the PDD template been applied correctly? a) GWP of N2O according to Kyoto protocol b) Benchmark Emission Factor	1, 2, 3, 4	Yes the two default parameters are applied.	☑	☑

<table>
<tr><td>B.7.1.4 Are the following monitoring parameters applied appropriately and has the form of the PDD template been applied correctly?</td><td>1, 2, 3, 4</td><td>See below for each parameter.</td><td>☑</td><td>☑</td></tr>
<tr><td>B.7.1.4.1 Parameter Title:
NCSGn
Average N2O concentration in the tail gas during project Monitoring Period n.</td><td>1, 2, 3, 4</td><td><table><tr><th>Data Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>Yes</td></tr><tr><td>Data unit correctly expressed?</td><td>Yes</td></tr><tr><td>Appropriate description of parameter?</td><td>Yes</td></tr><tr><td>Source clearly referenced?</td><td>Yes</td></tr><tr><td>Choice of data correctly justified?</td><td>Yes</td></tr><tr><td>Measurement method correctly described?</td><td>Yes</td></tr></table></td><td>☑</td><td>☑</td></tr>
<tr><td>B.7.1.4.2 Parameter Title:
VSG_n
Average Volume flow rate of the tail gas during project Monitoring Period n.</td><td>1, 2, 3, 4</td><td><table><tr><th>Data Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>Yes</td></tr><tr><td>Data unit correctly expressed?</td><td>Yes</td></tr><tr><td>Appropriate description of parameter?</td><td>Yes</td></tr><tr><td>Source clearly referenced?</td><td>Yes</td></tr><tr><td>Choice of data correctly justified?</td><td>Yes</td></tr><tr><td>Measurement method correctly described?</td><td>Yes</td></tr></table></td><td>☑</td><td>☑</td></tr>
<tr><td>B.7.1.4.3 Parameter Title:
PE_n
N_2O emissions during the Verification Period</td><td>1, 2, 3, 4</td><td><table><tr><th>Data Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>Yes</td></tr><tr><td>Data unit correctly expressed?</td><td>Yes</td></tr><tr><td>Appropriate description of parameter?</td><td>Yes</td></tr><tr><td>Source clearly referenced?</td><td>Yes</td></tr><tr><td>Choice of data correctly justified?</td><td>Yes</td></tr><tr><td>Measurement method correctly described?</td><td>Yes</td></tr></table></td><td>☑</td><td>☑</td></tr>
</table>

B.7.1.4.4 Parameter Title: OH_n Total Operating hours of Verification Period	1, 2, 3, 4	Data Checklist / Yes / No Title in line with methodology? Yes Data unit correctly expressed? Yes Appropriate description of parameter? Yes Source clearly referenced? Yes Choice of data correctly justified? Yes Measurement method correctly described? Yes	☑	☑
B.7.1.4.5 Parameter Title: NAP_n metric tonnes of 100% concentrated Nitric acid produced during the Verification Period.	1, 2, 3, 4	Data Checklist / Yes / No Title in line with methodology? Yes Data unit correctly expressed? Yes Appropriate description of parameter? Yes Source clearly referenced? Yes Choice of data correctly justified? Yes Measurement method correctly described? Yes	☑	☑
B.7.1.4.6 Parameter Title: OT_h Oxidation Temperature in the ammonia reactor	1, 2, 3, 4	Data Checklist / Yes / No Title in line with methodology? Yes Data unit correctly expressed? Yes Appropriate description of parameter? Yes Source clearly referenced? Yes Choice of data correctly justified? Yes Measurement method correctly described? Yes	☑	☑
B.7.1.4.7 Parameter Title: OP_h Pressure in the ammonia oxidation reactor	1, 2, 3, 4	Data Checklist / Yes / No Title in line with methodology? Yes Data unit correctly expressed? Yes Appropriate description of parameter? Yes Source clearly referenced? Yes Choice of data correctly justified? Yes Measurement method correctly described? Yes	☑	☑

B.7.1.4.8 Parameter Title: AFR Ammonia Flow Rate to the ammonia oxidation reactor.	1, 2, 3, 4	Data Checklist / Yes / No Title in line with methodology? Yes Data unit correctly expressed? Yes Appropriate description of parameter? Yes Source clearly referenced? Yes Choice of data correctly justified? Yes Measurement method correctly described? Yes	☑	☑
B.7.1.4.9 Parameter Title: AIFR Ammonia to Air Ratio going into the oxidation reactor.	1, 2, 3, 4	Data Checklist / Yes / No Title in line with methodology? Yes Data unit correctly expressed? Yes Appropriate description of parameter? Yes Source clearly referenced? Yes Choice of data correctly justified? Yes Measurement method correctly described? Yes	☑	☑
B.7.1.4.10 Parameter Title: TSG Temperature of tail gas	1, 2, 3, 4	Data Checklist / Yes / No Title in line with methodology? Yes Data unit correctly expressed? Yes Appropriate description of parameter? Yes Source clearly referenced? Yes Choice of data correctly justified? Yes Measurement method correctly described? Yes	☑	☑
B.7.1.4.11 Parameter Title: PSG Pressure of tail gas	1, 2, 3, 4	Data Checklist / Yes / No Title in line with methodology? Yes Data unit correctly expressed? Yes Appropriate description of parameter? Yes Source clearly referenced? Yes Choice of data correctly justified? Yes Measurement method correctly described? Yes	☑	☑

<table>
<tr>
<td>B.7.1.4.12 Parameter Title:
EF_n
Project emission Factor calculated during the Monitoring Period</td>
<td>1, 2, 3, 4</td>
<td><table>
<tr><th>Data Checklist</th><th>Yes / No</th></tr>
<tr><td>Title in line with methodology?</td><td>Yes</td></tr>
<tr><td>Data unit correctly expressed?</td><td>Yes</td></tr>
<tr><td>Appropriate description of parameter?</td><td>Yes</td></tr>
<tr><td>Source clearly referenced?</td><td>Yes</td></tr>
<tr><td>Choice of data correctly justified?</td><td>Yes</td></tr>
<tr><td>Measurement method correctly described?</td><td>Yes</td></tr>
</table></td>
<td>☑</td>
<td>☑</td>
</tr>
<tr>
<td>B.7.1.4.13 Parameter Title:
EF_{reg}
Emission cap for N_2O from nitric acid production set by the government or local regulation</td>
<td>1, 2, 3, 4</td>
<td><table>
<tr><th>Data Checklist</th><th>Yes / No</th></tr>
<tr><td>Title in line with methodology?</td><td>No</td></tr>
<tr><td>Data unit correctly expressed?</td><td>No</td></tr>
<tr><td>Appropriate description of parameter?</td><td>No</td></tr>
<tr><td>Source clearly referenced?</td><td>No</td></tr>
<tr><td>Choice of data correctly justified?</td><td>No</td></tr>
<tr><td>Measurement method correctly described?</td><td>No</td></tr>
</table>
<u>Corrective Action Request No.9.</u>
The Monitoring Parameter EF_{REG} is missing in the PDD although it is required by the methodology.</td>
<td>CAR 9</td>
<td>☑</td>
</tr>
<tr>
<td colspan="5">B.7.2 Description of the monitoring plan</td>
</tr>
<tr>
<td>B.7.2.1 Is it explained how the procedures provided in the methodology are applied by the proposed project activity?</td>
<td>1, 2</td>
<td>Yes, the PP is going to apply the European Norm EN14181 (2004) “Stationary source emissions - Quality assurance of automated measuring systems” as a guidance for installing and operating the Automated Monitoring System (AMS) at Yara Montoir for the monitoring of N_2O emissions.

<u>Corrective Action Request No.10.</u>
a) According to information gathered during on site audit the Emerson Rosemount Analyzer will not be used during</td>
<td>CAR 10</td>
<td>☑</td>
</tr>
</table>

			the project. The PDD at Page 37 has to be revised accordingly. b) For the sampling point definition maximum stack gas temperature of 300°C as for the methodology has to be considered in the PDD. c) It is indicated in the PDD that NOx emissions will be monitored online whereas it is being reported by the PP. This has to be corrected accordingly.		
B.7.2.2	Is every selection of options offered by the methodology correctly justified and is this justification in line with the situation verified on-site?	1, 2, 3, 4	Yes, the PP has correctly justified every option offered by the methodology.	☑	☑
B.7.2.3	Is the operational and management structure clearly described and in compliance with the envisioned situation?	1, 2, 3, 4	The following staff at the nitric acid plant will be responsible for the ongoing operation of the project and for the quality assurance and maintenance of the N_2O monitoring system: 1. J-M Lizon: Production Manager 2. D. Barthouet: Maintenance of AMS 3. F. Faldor: AMS Calibration Roles have been allocated according to the methodology.	☑	☑
B.7.2.4	Are responsibilities and institutional arrangements for data collection and archiving clearly provided?	1, 2, 3, 4, 7	Operation, maintenance and calibration intervals will be carried out by staff from the instrument department according to the vendor's specifications and under the guidance of internationally relevant environmental standards, in particular EN 14181 (2004). Service will be performed by the supplier of the AMS. Interviews with Fabrice Faldor and Denis Barthuet were conducted to discuss issues concerning training and qualification.	☑	☑
B.7.2.5	Does the monitoring plan (MP) provide current good monitoring	1, 2, 8	Yes. All monitoring procedures at YARA are also conducted and recorded in accordance with the procedures under ISO		☑

	practice?		9001:2000 and ISO 14001:2004, which is regularly audited by certified independent auditing organization accredited for ISO 9001 certification. As for the PDD, AMS calibration and QA/QC procedures will be implemented in the ISO 9001 procedures. **Clarification Request #8.** a) The QAL 1 and QAL 2 certification evidence for the N2O analyzer and the flow meter have to be provided to the AIE. b) There is a need to explain in more detail how the requirements of Annex D of EN 14181 (documentation) will be fully applied, taking into account the future tools to ensure compliance with EN 14181, e.g. procedures, instructions, manual, logbook.	CR 8	
B.7.2.6	Has the monitoring system installed using the European Norm 14181 (2004)?		Yes, as outlined in the PDD the EN 14181 will be applied for monitoring.	☑	☑
B.7.2.7	Will the three quality assurance levels been met by the planned Automated Measuring System (AMS) according to the EN14181?	1, 2	Yes. Procedures specified in EN14181 for QAL1, QAL2 and QAL3 Quality Assurance Level have been adapted and are practically applied at the YARA Montoir nitric acid plant.	☑	☑
B.7.2.8	Are the specific performance characteristics of the monitoring system chosen by the project listed in the PDD?	1, 2	Yes. The specific performance characteristics of the monitoring system chosen by the project are listed in the PDD. This includes the trip point parameters.	☑	☑
B.7.2.9	Is information on the margins of errors and the cumulative error for the	1, 2	Yes, the uncertainty has been taken into account in compliance with the methodology.	☑	☑

	complete measurement system provided in the PDD?		For each emission source, the permitted overall uncertainty of the average hourly annual emissions must be less than 7.5%. The next level, and the maximum allowed, is 10%, which can only be applied if it can be proven to the satisfaction of the competent authority that the application of the 7.5% level is technically impossible to achieve or that it would entail excessive costs.		
B.7.2.10	Is the inclusion of external accredited services providers for calibration and function tests foreseen in the planning of the project?	1, 2	Yes, it is foreseen according to the PDD.	☑	☑
B.7.2.11	Are the requirements on the treatment of downtime of the AMS clearly reflected in the envisioned calculation routines, e.g. malfunction of abatement system, trip point values?	1, 2, 8	Yes. During downtime of the AMS or other interruption of measurement during part of one hour, the hourly average will be calculated based on the remaining values for the rest of the hour in question. If these remaining values account for less than 50% of the hourly data for one or more parameters, then this hour will be eliminated from the calculation. Each time it is impossible to calculate an hour of valid data, substitute values will be defined in accordance with the procedures described in the PDD.	☑	☑
B.7.2.12	If applicable: Does Annex 3 provide useful information enabling a better understanding of the envisioned monitoring provisions?	1, 2	Yes. Annex 3 provides a brief Background summary on EN14181.	☑	☑
B.8 Date of finalization of application of the reference scenario and monitoring methodology and the name of the person/entity responsible					
B.8.1	Is there any indication of a date when the reference scenario and monitoring methodology was determined?	1, 2, 3, 4	Yes, reference scenario and monitoring methodology have been established with the issuance of the methodology.	☑	☑
B.8.2	Is this consistent with the time line of the	1, 2, 8	Yes, see time line in A.2.1.2.	☑	☑

	PDD history?				
B.8.3	Is the information on the person(s) / entity (ies) responsible for the application of the reference scenario and monitoring methodology provided consistent with the actual situation?	1, 2	No, this information is still missing in the PDD. **Corrective Action Request No.11.** There is a need to include in the PDD the name of the person/entity responsible for the application of reference scenario and monitoring methodology.	CAR 11	☑
C. Duration of the project activity / crediting period					
C.1. Duration of the Starting date of the project:					
C.1.1.	Is the project's starting date of the project activity clearly defined and reasonable?	1, 2	Yes. The starting date is clearly defined in the PDD. See also time line in section A.2.1.2 of the PDD	☑	☑
C.1.2	Is the expected operational lifetime of the project activity clearly defined and reasonable?	1, 2, 8	No. The operational lifetime of the project is not clearly defined in the PDD. According to YARA Montoir the lifetime of the plant is at least 20 years. **Corrective Action Request No.12.** PP has to indicate clearly in the PDD the lifetime of the project activity itself.	CAR 12	☑
C.2. Crediting period:					
C.2.1.	Is the date of the start of the assumed crediting period clearly defined and reasonable?	1, 2, 8	The start of the crediting period depends on the approval of the project by the French DFP. This is not known at the commencement of the validation process.	☑	☑

C.2.2.	Is the duration of the crediting period clearly defined and reasonable?	1, 2	The duration of the crediting period is clearly stated in the PDD.	☑	☑
D. Environmental impacts					
D.1. Documentation concerning environmental impact assessment					
D.1.1.	Has the analysis of the environmental impacts of the project activity been sufficiently described?	1, 2, 6, 8	The project activity has got no known negative environmental impacts but rather a positive environmental effect. It leads to the reduction of N_2O emissions – a GHG with a high GWP.	☑	☑
D.1.2.	Are there any Host Party requirements for an Environmental Impact Assessment (EIA), and if yes, has an EIA been approved?	1, 2, 10	The arrête Prefectoral already covers the whole plant and as a result EIA is not required. **Corrective Action Request No.13.** However, there is a need to specify the method of treatment of used catalyst since on-site it was not clear if a recycling of the used catalyst is planned.	CAR13	☑
D.1.3.	Will the project create any adverse environmental effects?	1, 2	The project activity has got no known negative environmental impacts.	☑	☑
D.1.4.	Were transboundary environmental impacts identified in the analysis?		The project activity is located solely in French territory. Therefore no trans-boundary effects are expected.	☑	☑
D.2 If the impact on the environment is considered significant by the project participants or by the French administration, please provide conclusions and all reference documentation from the Environmental Impact Assessment in accordance with the procedures required by the French administration					
D.2.1	Have the identified environmental impacts been addressed in the project design sufficiently?	1, 2	NA	☑	☑
D.2.2	Does the project comply with environmental legislation in the host	1, 2	NA	☑	☑

	country?				
E. Local Stakeholder Consultation					
E.1.1.	Have relevant stakeholders been consulted?	1, 2, 8	**Clarification Request #9.** As information has been gathered during the Audit obviously the DFP did not require conducting local stakeholder consultation. PP has to provide proofs to substantiate the statement "As the JI project does not have any relevance for local air, water or soil emissions, a local stakeholder consultation is not considered necessary."	CR 9	☑
E.1.2.	Have appropriate media been used to invite comments by local stakeholders?		See CR 9	See CR 9	☑
E.1.3.	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 CR 9	See CR 9	☑
E.1.4.	Is the undertaken stakeholder process that was carried out described in a complete and transparent manner?		See CR 9	See CR 9	☑
F. Annexes 1 – 3					
F.1. Annex 1: Contact details of the project participants					
F.1.1.	Is the information provided consistent with the one given under section A.3?	1, 2	Yes. The information provided in Annex 1 is consistent with the one given under section A.3.	☑	☑
F.1.2.	Is the information on all private participants and directly involved Parties presented?	1, 2	Yes, involved in the project are Yara France, Yara International ASA, Norway and NServe GmbH Germany. This information is correctly and consistently provided in the PDD.	☑	☑
F.2. Annex 2: Information concerning the application of the reference scenario methodology					

F.2.1.	If additional background information on reference scenario data is provided: Is this information consistent with data presented by other sections of the PDD?	1, 2	NA	☑	☑
F.2.2.	Is the data provided verifiable? Has sufficient evidence been provided to the validation team?	1, 2	NA	☑	☑
F.2.3.	Does the additional information substantiate / support statements given in other sections of the PDD?	1, 2	NA	☑	☑
F.3. Annex 3: Information concerning the monitoring plan					
F.3.1.	If additional background information on monitoring is provided: Is this information consistent with data presented in other sections of the PDD?	1, 2	Annex 3 provides a brief Background summary on EN14181. This information is consistent with those presented in other section of the PDD.	☑	☑
F.3.2.	Is the information provided verifiable? Has sufficient evidence been provided to the assessment team on-site?	1, 2	yes	☑	☑
F.3.3.	Do the additional information and / or documented procedures substantiate / support statements given in other sections of the PDD?	1, 2	yes	☑	☑

Industrie Service

Table 2. Resolution of Corrective Action and Clarification Requests

Clarifications and corrective action requests by the AIE's determination team	Ref. to table 1	Summary of project owner response(s)	AIE's conclusion
Corrective Action Request No. 1: Project Participant has to indicate both the version of the PDD as well as the date of revision.	A.1.1.2	Date and version of PDD is now indicated.	Closed Date and version number are now included in the PDD.
Corrective Action Request No. 2: a) PP has to include in the PDD all the equations describing the production of HNO_3 and how the byproduct N_2O is generated. b) There is a need to take into consideration in section A.2 of the PDD that two burners do exist in the plant for HNO3 production. c) As information has been gathered from the audit the indicated pressure of the ammonia reactor is higher than indicated in the PDD, the figures in the PDD have to be corrected. d) All French text passages in the whole PDD have to be replaced translated in English.	A.2.1.1	a) Equations now included b) 2 burners now taken into consideration c) Pressure now corrected d) All French words now replaced with the English	All changes have been done in the PDD. **Additional CAR No.1:** The amended figure of CO_2 emissions without N_2O abatement in chapter A.2 of the PDD is not correct. The underlying capacity of HNO_3 production is not consistent with the figure in the excel sheet calculation.
Clarification Request No. 1: The e-mail referring to the LoE has to be pro-	A.2.1.2		Closed, the e-mail is available.

vided to the AIE.		Email now forwarded.	
Corrective Action Request No. 3: The Google map provided in the PDD is not clear enough. PP has to zoom the map in the PDD in a manner so as to clearly portray the site of the project activity.	A.4.1.1	Zoomed aerial view now inserted	Closed The additional map in the revised PDD indicates clearly the project site.
Clarification Request No. 2: Detailed information about the manufacturer of the project catalyst is needed (company name and country).	A.4.2.3	The catalyst is manufactured by a Polish company called "Instytut Szkla, Ceramiki, Materialow, Ogniotrwalych i Budovlanych" (Institue of Glass, Ceramics, Refractory and Construction Materials). **However, this is confidential information that Yara is prepared to provide to TUEV SUED, but would appreciate not being put into the public domain.** Therefore, this information has not been included in the PDD.	Closed Information about the manufacturer of the catalyst is now available.
Clarification Request No. 3: As indicated in the AP 2003, the limit value for N2O emissions in the stack of the installation for production of nitric acid is 200 ppm and 1.2 kg N_2O/t HNO_3 (both to be measured on a daily basis). This value is not consistent with the benchmark EF of the methodology and PDD, hence, clarification is needed. Anyway, as stated by the director of YARA Montoir plant, Yara has been discussing with the permitting authority (Prefecture de la Loire-Atlantique) to revise the AP for this plant. Yara claimed in this discussion with the authority that the current limit value is neither in line with the overall permitting practice in oth-	A.4.2.10	N.serve is awaiting the outcome of a discussion between the local authorities and Yara Montoir on the suitable regulatory value to be applied at Montoir. In the case where the authorities decide upon a value that is lower than the benchmark factor of 2.5kg, then this lower regulatory value will be used as a level from which to calculate the ERUs to be awarded to the project.	**Closed** Since there was no other decision made by the local authority, the PP decided in Mai 2010 to update the PDD by applying the benchmark EF from the AP of 2003.

er departments of France nor in other EU member states.			
Clarification Request No. 4: The figures for the emission reductions presented in the PDD can not be cross checked by the Audit team. Although, the calculation files are confidential, the PP needs to provide to AIE a complete PDF conversion of the excel calculation file.	A.4.2.1 1	Please see attached excel spreadsheet with ERU calculations for both Ambes and Montoir.	The ERU calculation sheet has been provided to the AIE. **Additional CAR No. 2:** The figure for the annual production of HNO_3 is not consistent with the figure in the PDD. The figures in the folder "parameters" are not linked with the formulas in the calculation itself. The excel calculation as well as corresponding calculations in chapters A.4.3 and B.6 have to be revised, if applicable.
Clarification Request No. 5: Evidence for the official approval of the methodology by the French DFP still needs to be provided to the AIE.	B.1.1	First reply: As of the 15th July, the MEEDDAT has confirmed that there are no further issues, questions or problems regarding the official approval of the methodology. However, it is just waiting for the final signature by the minister for the environment, Mr Borloo, and this	Closed According to the e-mail of MEEDDAT to n-serve (IRL-No. 5) the methodology *Réduction*

		will definitely be provided before their summer break at the end of July. (excerpt from email received on 15.07 from French DFP:) *« Il n'y a plus de point en discussion concernant la méthode: elle est toujours dans les circuits de signature. Il est vrai que cela prend beaucoup de temps, mais elle doit être signée par le ministre ce qui explique la longueur des délais. Nous vous informerons par courriel dès référencement ».* Second reply : The MEEDDAT has now confirmed that the methodology has been fully approved and signed by the relevant minister. The confirmation email will be forwarded to you, along with the updated English translation.	*Catalytique du N2O dans des usines d'acide* nitrique (IRL-No. 3) is approved from the French DFP (MEEDDAT) together with the GSP PDD (IRL-No. 1) and it is published among others here: http://www.ecologie.gouv.fr/Methodologies-de-projets.html
Corrective Action Request No. 4: In order to comply with the form of the methodology, PP has to include in the table of chapter B.3 of the PDD the consideration of the reference scenario.	B.3.1	'Reference scenario' added to table 3 in section B.3.	**Additional CAR No. 3:** The N_2O emissions in the table for the reference scenario are filled with N/A which is not consistent with the methodology.
Corrective Action Request No. 5: The scheme in the PDD indicating the components of the plant is not readable. PP has to replace it with that which was presented during the site visit, indicating additionally the location of DeNOx facility.	B.3.4	A more simplified flow sheet is unfortunately not available, but a number code has now been added underneath the flow sheet to indicate and explain the most important pieces of process equipment.	Closed The project facilities are now clearly indicated in the scheme.

Corrective Action Request No. 6: PP has to include the alternative of implementing the project activity without revenues from the sales of ERUs (project without JI) in the list of option in step 1.	B.4.1	'Implementation of technology in the absence of a projet domestique' is now also included in the list of options in step 1.	Closed Option d) now covers more clearly the project without JI credits.
Clarification Request No. 6: It has to be taken into account that as a consequence of new NOX regulations over the course of the crediting period of the proposed project activity the most conservative reference scenario can be changed and needs to be of re-assessed. In such a case the additionality of the project must be re-determined.	B.4.2	Please see the last paragraph in the 'conclusion' box at the end of Section B.4. We feel that this requirement is already taken into account here.	Closed In chapter B.4 it is clearly stated that in case of a change in environmental legislation (i.e. the introduction of more stringent NOX- or N2O-regulations) that could lead to a change in the results of this assessment, the reference scenario has to be re-assessed. This is covered by the monitoring parameter EFreg.
Corrective Action Request No. 7: a) The items 2b, 2c and 2d of step 3 of the methodology should be discussed in the PDD. b) Evidence has to be provided to the AIE that there is no N_2O abatement project in the fertilizer industry in France without JI	B.4.4	a) All these options have now been addressed (see tracked changes in 'technological barriers' and 'common practice barriers' of Step 3 in section B.4). b) Please see the second point of the attached slide of the UNIFA (Union of French Fertilizer Industries) presentation to the French DFP (only the relevant slide of the presentation has been attached).	Closed a) Technological and common practice barrier are now justified completely in compliance with the methodology. The available power point presentation from the meeting of UNIFA

		The following HNO3 plants are undertaking JI projects in France: YARA Ambes YARA Montoir YARA Pardies GPN Grand Quevilly N7 GPN Grand Quevilly N8 None of the remaining plants in France is equipped with any N2O abatement technology. It is difficult to provide further 'evidence' of this. We believe the UNIFA statement (as mentioned above) should already provide sufficient evidence.	and MEEDDAT regarding Projects Domestiques from April 2009 indicates that the secondary catalyst is not common practice in the sector for HNO_3 production in France.
Corrective Action Request No. 8: The figures in annex 4 have to be revised according to the information gathered during on site audit, precisely specify the project relevant capacity of catalyst and details regarding the estimated sum of AMS cost.	B.5.5	Figures in Annex 4 now confirmed.	Closed The revised investment calculation in annex 4 has been done according to the requirements of article 10 of arrêté of March 02, 2007. The quantity of 2,073 kg of catalyst that is necessary for the project is now allocated to the costs, taking into account that the virtual compliance with the benchmark emission factor is already deducted from the max of

			catalyst quantity of 4,160 kg.
Clarification Request No. 7: There is a need to clarify why the factor 0.9 that is part of the equation of the methodology to calculate the ERUs has not been included in the equation.	B.6.1.1	The French DFP has introduced a rule stating that only 90% of the actual emissions reductions achieved are to be awarded to the project, which is understandable for the sake of conservativeness in the case where ERUs are being awarded from a factual measured baseline. However, since the ERUs are being awarded from a significantly lower Benchmark value, the PPs believe this 10% deduction rule should not apply to N2O reduction projects. The subject is under discussion with the DFP and will be clarified as soon as possible.	**Additional CAR No. 4:** The factor of 0.9 still is not integrated in the formula to calculate ERUs, as required by the methodology in chapter 4.4. If the outcome of the discussions with the French DFP is to cancel this factor, the revised methodology has to be provided to the AIE.
Corrective Action Request No. 9: The Monitoring Parameter EF_{REG} is missing in the PDD although it is required by the methodology.	B.7.1.4. 13	This parameter has now been added.	**Additional CAR No. 5:** Now all monitoring parameters are in compliance with the methodology. Anyway, the applied procedure (see CR 6) and the measurement frequency (required continuously) are not consistent with the methodology.
Corrective Action Request No. 10: a) According to information gathered during on site audit the Emerson Rosemount Analyzer will not be used during the project. The PDD at Page	B.7.2.1	a) The paragraph of the PDD regarding the use of the Emerson analyser has now been revised accordingly in section 1 of B.7.2	Closed The corresponding amendments have been done by the PP in

37 has to be revised accordingly. b) For the sampling point definition maximum stack gas temperature of 300°C as for the methodology has to be considered in the PDD. c) It is indicated in the PDD that NOx emissions will be monitored online whereas it is being reported by the PP. This has to be corrected accordingly.		b) Stack gas temperature of 300°C has now been taken into consideration in section 2 of B.7.2 c) Has now been corrected in step 3 of B.4	the PDD.
Clarification Request No. 8: a) The QAL 1 and QAL 2 certification evidence for the N2O analyzer and the flow meter have to be provided to the AIE. b) There is a need to explain in more detail how the requirements of Annex D of EN 14181 (documentation) will be fully applied, taking into account the future tools to ensure compliance with EN 14181, e.g. procedures, instructions, manual, logbook.	B.7.2.5	a) Please find attached the QAL 1 certificate for the flow meter and a QAL1 report for the analyser. The QAL2 certificate is not available, since the QAL2 has not yet been undertaken (this will be performed later in the year, as specified in the PDD) b) The plant has confirmed that it is not a problem to comply with the requirements of Annex D of EN14181. More detailed information will be made available by the time of the first verification.	The QAL 1 certificate for the flow meter is available. **Additional CAR No. 6:** The available QAL 1 certificate for the infrared analyzer MCA04 does not cover the component N_2O, furthermore the standard EN14181 is not stated. **Forward Action Request No. 1:**

			a) Information according to Annex D of EN14181 has to be available latest for the first verification. b) QAL 2 tests of AMS according to EN14181 has to be conducted prior to the start of the crediting period.
Corrective Action Request No. 11: There is a need to include in the PDD the name of the person/entity responsible for the application of reference scenario and monitoring methodology.	B.8.3	This is now included in section B8.	Closed The names of the persons responsible for the application of the reference scenario and monitoring methodology are indicated in the revised PDD.
Corrective Action Request No. 12: PP has to indicate clearly in the PDD the lifetime of the project activity itself.	C.1.2	This has now been changed accordingly in section C.1.2.	Closed The project's lifetime lasts at least for the duration of the crediting period.
Corrective Action Request No. 13: However, there is a need to specify the method of treatment of used catalyst since onsite it was not clear if a recycling of the used catalyst is planned.	D.1.2	This has now been clarified in section D.1	Closed The method of treatment of used catalysts is specified in the PDD.

Clarification Request No. 9: As information has been gathered during the Audit obviously the DFP did not require conducting local stakeholder consultation. PP has to provide proofs to substantiate the statement "As the JI project does not have any relevance for local air, water or soil emissions, a local stakeholder consultation is not considered necessary."	E.1.1	Extract from email received from Helene Martineaud of the MEEDDAT on 22nd July 2009: *« Les investissements ayant lieu sur des sites d'installations classées devant être transmis pour information/autorisation aux autorités publiques, il n'est pas nécessaire de mener une consultation des parties prenantes ».* As per the confirmation from the French DFP above, there is no requirement to undertake a LSC. However, in accordance with article number R 512-33 of the 'code de l'environnement', there is a necessity for the project participants to inform the local authorities of the changes made at the plant as a result of the project. In this case, Montoir has been in close contact for several months with both the local prefet and the DRIRE regarding the installation of a catalyst to reduce N2O emissions at their plant. This explanation has now been included in section E of the PDD.	Closed According to the MEEDDAT a stakeholder consultation meeting is not required for this JI track 1 project.
Additional CAR No.1: The amended figure of CO_2 emissions without N_2O abatement in chapter A.2 of the PDD is not correct. The underlying capacity of HNO3 production is not consistent with the figure in footnote 3 of the PDD.	See CAR 2	The production figure specified in section A.2 is the annual production capacity for the nitric acid plant. The figure specified in the calculation sheet and in the section B.6.1 is the expected 'budgeted' annual production, which in reality is almost never the same as the plant capacity listed in the production manual.	Closed The revised Excel sheet does now more transparently demonstrate the ERU calculation. The calculation of ERUs based on the budgeted annual pro-

			duction is more conservative compared to the calculation with the maximum annual production (see IRL-No. 27 and 28).
Additional CAR No. 2: The figure for the annual production of HNO_3 is not consistent with the figure in the PDD. The figures in the folder "parameters" are not linked with the formulas in the calculation itself. The excel calculation as well as corresponding calculations in chapters A.4.3 and B.6 have to be revised, if applicable.	CR 3	- Please see additional CAR No 1 above for a response regarding the first point. - As many figures as possible from the calculation sheet have now been linked in with the 'parameters' sheet. Please see the attached updated spreadsheet	Closed (see Additional CAR 1)
Additional CAR No. 3: The N_2O emissions in the table for the reference scenario are filled with N/A which is not consistent with the methodology.	CAR 4	The table 3 in section B.3 has now been changed in a manner that is consistent with the methodology.	Closed The revised PDD is now consistent with the methodology (IRL-No. 24).
Additional CAR No. 4: The factor of 0.9 still is not integrated in the formula to calculate ERUs, as required by the methodology in chapter 4.4. If the outcome of the discussions with the French DFP is to cancel this factor, the revised methodology has to be provided to the AIE.	CR 6	The 90% issuance factor has now been taken into account in the formula for ERU calculation in section B.6.1. Table 1 in section A.4.3, table 9 in section B.6.4 and table 2 in Annex 4 have also been adjusted accordingly.	Closed The factor of 0.9 has been applied now correctly for the calculation of ERUs in the PDD (IRL-No. 24) as well as in the corresponding excel-file (IRL-No. 25).

Additional CAR No. 5: Now all monitoring parameters are in compliance with the methodology. Anyway, the applied procedure (see CR 6) and the measurement frequency (required continuously) are not consistent with the methodology.	CAR 9	Parameter P.12 in section B.7.1 has now been changed in a manner that is consistent with the methodology and measurement frequency of this parameter shall be continuous.	Closed The revised PDD is now consistent with the methodology (IRL-No. 24).
Additional CAR No. 6: The available QAL 1 certificate for the infrared analyzer MCA04 does not cover the component N_2O, furthermore the standard EN14181 is not stated.	CR 7	As stated in the PDD the QAL 1 test for N2O will be completed in the near future. The suitability of the analyser for N2O measurements will be proven during the QAL2 audit. In any case, complete adherence to EN14181 is not actually required by the methodology and other, less stringent, standards may be used (ex. AFNOR)	Closed The QAL 1 of MCA04 is triggered for N2O and the certificate was available already in autumn 2009. QAL 2 certificate as well is available (IRL-No. 23).
Forward Action Request No. 1: a) Information according to Annex D of EN14181 has to be available latest for the first verification. b) QAL 2 tests of AMS according to EN14181 has to be conducted prior to the start of the crediting period.	CR 7	These issues will be assessed by the time of the first verification.	A) During the first verification the resolution of the FAR has to be confirmed/verified. B) Meanwhile closed, since the QAL 2 certificate has been submitted end of Mai 2010, see ACAR 6 above.

Industrie Service

Table 3. Unresolved Corrective Action and Clarification Requests (in case of denials)

Clarifications and corrective action requests by the AIE's determination team	Id. of CAR/CR	Explanation of Conclusion for Denial
-	-	-

Annex 2: Information Reference List

DRAFT

Ref. No.	Issuance and/or submission date(dd/mm/yyyy)	Title/Type of Document	Author/Editor/ Issuer	Additional Information
1	18/06/2009	PDD "Yara Montoir N2O abatement project", (without version number)	n-serve	PDD for GSP
2	06/08/2009	PDD "Yara Montoir N2O abatement project", Version 03	n-serve	PDD final
3	24/07/2009	Projet Domestique Methodology: "Catalytic reduction of N2O at nitric acid plants	DFP France	French version
4	No date	Projet Domestique Methodology: "Catalytic reduction of N2O at nitric acid plants	DFP France	English version
5	24/07/2009	Approval of the methodology "*Réduction Catalytique du N2O dans des usines d'acide nitrique"* by e-mail of MEEDDM to n-serve	MEEDDA (French DFP)	Official webpage: http://www.ecologie.gouv.fr/Methodologies-de-projets.html
6	August 2007	Integrated Pollution Prevention and Control Reference Document on Best Available Techniques for the manufacture of Large Volume Inorganic Chemicals – Ammonia, Acids and Fertilisers	European Commission	BAT
7	2/07/2009	Participant list of on-site interviews	TÜV SÜD	
8	30/06/2009	On-site interviews conducted by TÜV SÜD. **Determination Team:** Robert Mitterwallner TÜV SÜD Industrie Service GmbH (GHG Auditor) Cyprian Fusi TÜV SÜD Industrie Service GmbH (Trainee) **Interviewed Persions:** Rebecca Cardani Strange n-serve (Project Manager) Christopher Brandt n-serve (Consultant) T. Januel Lizon Yara France Montoir (Responsible Exploitation) Antoine Daudon Yara France Montoir (SQE Responsible) Thierry Loyer Yara France Montoir (Direction usine) Fabrice Faldor Yara France Montoir (Responsible Electrique) Denis Bartuovet Yara France Montoir (Responsible Maintenance)	TÜV SÜD	

Ref. No.	Issuance and/or submission date(dd/mm/yyyy)	Title/Type of Document	Author/Editor/ Issuer	Additional Information
9	2009	Excel Sheet Calculation for ERUs, first version	Yara	
10	31/07/2003	Arrêté Préfectorale Complementaire for Society Hydro Agri France in Montoir-de-Bretagne (Hydro Agri France was the former owner of Yara)	Prefecture de la Loire-Atlantique	Doc version
11	2/03/2007	Décret 2006-622, (translation of linking directive)		Incl. Additionality requirements
12	11/04/2009	LoE as attachment of an e-mail to the PP; Letter of Endorsement – Confirmation for other French Yara projects of Ambes and Montoir is available	French DFP	
13	11/07/2008	Evidence of JI consideration (e-mail from head of Yara)		
14	13/03/2009	Purchase order for delivery of N2O catalyst type 58-Y1 (Rhodia type) from Yara group to Yara Montoir	Yara International ASA, Norway	
15	20/03/2009	Purchase order of delivery of continuos monitoring system from Dr. Födisch Umweltmesstechnik AG, Germany to Yara group		
16	02/02/1998	Arrêté Ministériel relative aux prélèvement et la consommation d'eau ainsi qu'aux émissions de toute nature des installations classés pour la protection de l'environnement (avec 7 kg N2O/tHNO3)		footnote 6 of PDD
17	No date	« N2O figures of 2003 Montoir », Yara internal data sets		confidentiel
18	24/04/2009	PDD template	French DFP	
19	10/02/2009	Rapport No 08184584/3 Contrôle des rejets gazeux a l'emission de l'atelier acide nitrique ; Yara France, Montoir de Bretagne	Apave	
20	06/07/2007	Declaration of Conformity – Laboratory test to determinate the measurement uncertainty of an N2O analyzer according to the guideline EN ISO 14956 and EN 14181 for the manufacturer Emerson Process Management, type NGA 2000 MLT	TÜV SÜD Industrie Service, Munich	This analyzer is not used in the project!
21	13/07/2005	QAL 1 Certificate for N2O analyser MCA04 Montoir/France	TÜV Rheinland , Germany	Footnote 39 of PDD

Ref. No.	Issuance and/or submission date(dd/mm/yyyy)	Title/Type of Document	Author/Editor/ Issuer	Additional Information
22	15/10/2003	QAL 1 Certificate for FMD 99 flow meter Montoir/France	TÜV Rheinland, Germany	Footnote 40 of PDD
23	23/10/2009	QAL 2 report on performance tests and calibration of the automatic measuring system for N2O of acid plant Montoir/France	Müller-BBM, Germany	
24	27/05/2010	PDD "Yara Montoir N2O abatement project", Version 04	n-serve	PDD final
25	27/05/2010	Excel Sheet Calculation for ERUs	Yara	Final version
26	27/05/2010	Financial table, Montoir/France	Yara	
27	27/05/2010	Table with monthly and yearly operating hours of nitric acid plant; 2008	Yara	
28	27/05/2010	Table with monthly and yearly operating hours of nitric acid plant; 2009	Yara	
29	10/04/2009	MEEDDM UNIFA; meeting with subject: "Projets Domestiques"	Union des Industries de la Fertilisation (UNIFA)	Power point presentation