FINAL
JI DETERMINATION REPORT

YARA TERTRE SA/NV

YARA TERTRE UHDE 3 ABATEMENT PROJECT IN BELGIUM

Report No: 8000388923 – 10/479

Date: 2011-12-07

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

Date of first issue: 2011-06-10	Project No.: Report No: 8000388922 – 10/478
Project Type: ☒ JI Track 1 ☐ JI Track 2	Organisational unit: TÜV NORD JI/CDM Certification Program
Client: Yara Tertre SA/NV	Client ref.: Rémi Lemetter
Summary:	☒ positive determination opinion ☐ negative determination opinion

Yara Tertre SA/NV has commissioned the TÜV NORD JI/CDM Certification Program (CP) as a Third Party to determinate the project: "YARA Tertre Uhde 3 abatement project in Belgium" with regard to the relevant requirements of the host country Belgium and of the UNFCCC for JI project activities, as well as criteria for consistent project operations, monitoring and reporting. UNFCCC criteria refer to the Kyoto Protocol Article 6 criteria and the Guidelines for the implementation of Article 6 of the Kyoto Protocol as agreed in the Marrakech Accords.

The project applies to the CDM baseline & monitoring methodology AM0034, version 5, "Catalytic reduction of N2O inside the ammonia burner of nitric acid plants" with project specific amendments.

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

In detail the conclusions can be summarised as follows:

- The project is in line with all relevant host country criteria (Belgium) and all relevant UNFCCC requirements for JI.
- The project additionality is sufficiently justified in the PDD, the monitoring plan is transparent and adequate.
- The calculation of the project emission reductions is carried out in a transparent and conservative manner, so that the calculated emission reductions of 192,267 tCO_2e (between 2010 and 2012) are most likely to be achieved within the crediting period.

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

Since the LoA will be issued after registration of the project at the DFP, CAR A1 and CAR A1a will automatically be closed if the host country issues the LoA.

Report No.: 8000388922 – 10/478	Subject Group: Climate Protection	
Report title: YARA Tertre Uhde 3 abatement project in Belgium		
Work carried out by: Mrs. Alex Nebel Mr. Ulrich Walter Mrs. Sabine Meyer		
Technical review by: Mr. Rainer Winter	Final approval by Mr. Eric Krupp	
Date of this revision: 2011-12-07	Rev. No.: 1	Number of pages: 109

Indexing terms

JI – Track 1

Determination PDD

AM0034

Abbreviations

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

Table of Contents *Page*

1 OBJECTIVE / SCOPE

Yara Tertre SA/NV has commissioned the TÜV NORD JI/CDM Certification Program (CP) to carry out a determination of the:

"YARA Tertre Uhde 3 abatement project in Belgium"

with regard to the relevant requirements for JI project activities.

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

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

2 GHG PROJECT DESCRIPTION

2.1 Project Characteristics

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

Table 2-1: Project Characteristics

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

Item	Data		
	☐	12	Solvents use
	☐	13	Waste handling and disposal
	☐	14	Afforestation and Reforestation
	☐	15	Agriculture
Applied Methodology	*Approved baseline and monitoring methodology AM0034 "Catalytic reduction of N_2O inside the ammonia burner of nitric acid plants"*		
Track	*1*		
Crediting period	☐ Renewable Crediting Period (7 y) ☒ Fixed Crediting Period 2010-09-02 – 2012-12-31 (If N_2O is not included in the ETS after 2012, the period will extend to regular 10 Years until 2020.)		
Start of crediting period[1]	2010-09-02		

2.2 Involved Parties and Project Participants

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

Table 2-2: Project Parties and project participants

Characteristic	Party	Project Participant
Host party	Belgium (Wallonia)	YARA Tertre SA/NV
Other involved party/ies	France	N.serve Environmental Services GmbH

2.3 Project Location

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

Table 2-3: Project Location

No.	Project Location
Host Country	Belgium (Walloon Region)
Region	Hainaut
Project location address	Yara Tertre SA/NV Rue de la Carbo 10 B-7333 Tertre, Belgium
Plant coordinates	Stack: 50°28'52.14"N and 3°47'56.07"E AOR: 50°28'50.09"N and 3°47'58.79"E

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

2.4 Technical Project Description

The project involves the installation of a secondary N_2O reduction catalyst of the nitric acid and Manganese Nitrate production plant of YARA Tertre. The emission reductions are a result of the catalytic decomposition of nitrous oxide. Nitrous oxide which is formed as by-product of the nitric acid production will be removed by the catalyst installed below the ammonia oxidation gauze pack in the ammonia burner. The nitrous oxide would otherwise be emitted through the gas stack into the atmosphere.

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

Table 2-4: Technical data of the project

Parameter	Unit	Value
Ammonia Oxidation Reactor		
Manufacturer	-	Steinmüller
Diameter	mm	2,700
Start of commercial production	-	1995
Operating conditions as per specifications (trip point values)		
- Temperature (min/max):	℃	750 / 920
- Pressure (min/max):	bar	4.5 (safety)
- Ammonia to Air ratio (max)	Vol.-%	11.5
Ammonia Oxidation Catalyst		
Manufacturer	-	K. Rasmussen
Composition:	-	95% Pt / 5% Rh
Absorber		
Design campaign length	d	318
Design capacity per day	t/d (100 %)	551
Annual operation (design)	days	363
Campaign length	Days	318
Secondary Catalyst		
Manufacturer	-	Yara
Type	-	Y8_51
Design efficiency N_2O reduction	%	90
$DeNO_X$-Catalyst		
Manufacturer	-	BASF
Type	-	O4_81
Future N_2O Analyzer (stack)		
Manufacturer	-	Dr. Foedisch
Type	-	MCA04
Measurement Principle	-	FTIR
Current N_2O Analyzer (stack)		
Manufacturer	-	ABB
Type	-	Uras
Measurement Principle	-	FTIR

Parameter	Unit	Value
Future stack volume flow rate measurement		
Manufacturer	-	Dr. Foedisch
Type	-	FMD99
Measurement Principle	-	Differential Pressure

3 METHODOLOGY AND DETERMINATION PDD SEQUENCE

3.1 Determination PDD Steps

The determination of the project consisted of the following steps:

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

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

Table 3.1: Determination PDD sequence

Topic	Time
Assignment of determination	2010-10-19
Submission of PDD for global stakeholder commenting process	2010-11-14
On-site visit	2010-11-08 to 2010-11-10
Draft reporting finalised	2011-05-02
Final reporting finalised	2011-05-24
Technical review on final reporting finalised	2011-06-10
Revision of final report	2011-12-07

3.2 Contract review

To assure that

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

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

3.3 Appointment of team members and technical reviewers

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

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

Table 3-2: Involved Personnel

	Name	Company	Function [1]	Qualification Status [2]	Scheme competence	Technical competence [4]	Host country Competence	Team leading competence
☐ Mr. ☒ Ms.	A. Nebel	TN Cert	TL	LA	☒		☐	☒
☐ Mr. ☒ Ms.	S. Meyer	TN Cert	TM	A	☒		☒	☐
☒ Mr. ☐ Ms.	U. Walter	TN Cert	TM	A	☒	Q	☐	☐
☒ Mr. ☐ Ms.	D. Speyer	TN Cert	OT	T	☐	5.1	☐	☐
☒ Mr. ☐ Ms.	R. Winter	TN Cert	TR[3]	SA	☒	Q	☐	☒
☒ Mr. ☐ Ms.	E. Krupp	TN Cert	FA	SA	☒		☐	☒

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

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

[3] No team member

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

3.4 Consideration of Public Stakeholder Comments

The draft PDD, as received from the project participants, has been made publicly available on TÜV NORD Website www.global-warming.de during a 30 days period from 2010-11-15 to 2010-12-15 (http://www.global-warming.de/e/1986/).

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

3.5 Determination PDD Protocol

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

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

The determination protocol as described in Figure 1.

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

Figure 1: Determination protocol tables

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

3.6 Review of Documents

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

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

3.7 Follow-up Interviews

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

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

Table 3-3: Interviewed persons and interview topics

Interviewed Persons / Entities	Interview topics
Project proponent representatives (Yara Tertre) Project consultant (N.serve)	- Chronological description of the project activity with documents of key steps of the implementation. - Implementation status

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

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

3.8 Project comparison

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

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

3.9 Resolution of Clarification and Corrective Action Requests

3.9.1 Definition

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

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

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

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

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

3.9.2 Draft Determination PDD

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

3.9.3 Final Determination PDD

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

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

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

3.10 Technical review

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

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

3.11 Final approval

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

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

4 DETERMINATION FINDINGS

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

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

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

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

Finding:	**A1**		
Classification	☒ CAR	☐ CL	☐ FAR
Description of finding *Describe the finding in unambiguous style; address the context (e.g. section)*	No letters of approval have been provided so far.		
Corrective Action #1 *This section shall be filled by the PP. It shall address the corrective action taken in details.*	The Letter of Approval cannot be issued by the DFP until receipt of the full application, which includes the preliminary determination report. The LoA will be provided to TUEV Nord as soon as it becomes available.		
AIE Assessment #1 *The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and AIE assessments (#2, #3, etc.) shall be added.*	Since the LoA will be issued after registration of the project at the DFP, CAR A1 will automatically be closed.		
Conclusion *Tick the appropriate checkbox*	☒ To be checked during the first periodic verification ☐ Appropriate action was taken ☐ Project documentation was corrected correspondingly ☐ Additional action should be taken ☐ The project complies with the requirements		

Finding:	**A1a**		
Classification	☒ CAR	☐ CL	☐ FAR
Description of finding *Describe the finding in unambiguous style; address the context (e.g. section)*	It appears during the determination process that an additional plant (SNM-process), which uses a share of the nitrous gases, was assembled in parallel to the absorption process (production of HNO_3). To calculate the emission factor of the complete plant, the PP includes a HNO_3-equivalent basing on the stoichiometry of the involved processes. The determination team is convinced that the PP uses a conservative approach to describe the process and emissions of the plant but nevertheless the use of HNO_3-equivalents is not covered by the used methodology AM0034. By giving the approval, the Belgian DFP agrees with the HNO_3-equivalent approach which take into account the N_2O-emissions from the SNM plant.		
Corrective Action #1 *This section shall be filled by the PP. It shall address the corrective action taken in details.*	The Letter of Approval cannot be issued by the DFP until receipt of the full application, which includes the preliminary determination report. The LoA will be provided to TUEV Nord as soon as it becomes available.		

Finding:	A1a
AIE Assessment #1 *The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and AIE assessments (#2, #3, etc.) shall be added.*	Since the LoA will be issued after registration of the project at the DFP,CAR A1a will automatically be closed.
Conclusion *Tick the appropriate checkbox*	☒ To be checked during the first periodic verification ☐ Appropriate action was taken ☐ Project documentation was corrected correspondingly ☐ Additional action should be taken ☐ The project complies with the requirements

Finding:	A2		
Classification	☒ CAR	☐ CL	☐ FAR
Description of finding *Describe the finding in unambiguous style; address the context (e.g. section)*	PDD: Editorial issues • The description of boundary in section B.3. should include the "Table 1: Overview of emission sources included or excluded from the project boundary" figured in the methodology with project specific explanations/justification if necessary. • The statement "No project emissions factor after the 10th project campaign may be higher than the lowest recorded during these campaigns." Shall be corrected according to the methodology. • Section A.4.1.4. should include longitude/latitude of the burner and stack. • France should be listed as investor country instead of Germany • The PDD should reference to the actual version of AM0034 (Ver. 5) and AM0028 (Ver. 5) • The reference to *"best practice monitoring standards"* in section D.1.2.2. needs to be specified. • The PDD should clearly state the starting date. • Section D.1., point 6.: The data acquisition system should clearly describe the generation and logging of the status signal of the plant • Emission data in Table 1 until 2008 should be revised according to the documentation provided during the on-site visit. • The Arrete regarding the application of the IPPC regulation /IPPC/ stating the reduction of N_2O-emission from 2013 on (page 8 first sentence of the doc): *"Considérant que cette valeur sera à considérer par l'exploitant dans son projet de modification des installations Uhde 3 et Uhde 3 visant à réduire les émissions de N_2O dans un délai de trois ans"*. Should be included in section B.2.		

Finding:	A2
Corrective Action #1 *This section shall be filled by the PP. It shall address the corrective action taken in details.*	*1) Tables showing the emissions sources excluded and included in the project boundary have been added to both PDDs in section B.3.* *2) The statement regarding the minimum project emissions factor after 10 campaigns has now been corrected in both PDDs, in the table in section B.1, to comply with the methodology.* *3) Map coordinates of the burner and stack for both plants have been added to section A.4.1.4 of the PDDs.* *4) France has now been listed as the investor country in the table in section A.3.* *5) The PDD now refers to the latest versions of AM0034 and AM0028 (ver 05).* *6) The vague reference to 'best practice monitoring standards' in section D.1.2.2 of both PDDs has now removed. The section has been re-written to explain the exact approach taken.* *7) The U3 project starting date was already clearly stated in the PDD as the 2nd September 2010.* *8) The approach with regard to the status signals of the plants has been more accurately described in section 6 of D.1.* *9) The emissions data in table 1 of section A.4.3.1 in both PDDs have now been updated to reflect the correct figures.* *10) Step 2 of section B.2 in the PDD now makes reference to the statement in the environmental permit that N_2O emissions must be reduced in 3 years' time to comply with the rules of the EU ETS.*

Finding:	A2
AIE Assessment #1 *The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and AIE assessments (#2, #3, etc.) shall be added.*	OK. 1) Emissions sources are included in Table 1. 2) The statement regarding the minimum project emissions factor after 10 campaigns now complies with the methodology. 3) Map coordinates of the burner and stack are included in section A.4.1.4 of the PDDs. 4) France is listed as the investor country in both PDDs in the table in section A.3. 5) The PDD now refers to Ver. 5 of AM0034 and AM0028. 6) Section D.1.2.2 has been re-written to explain the exact approach taken. 7) The 2th September 2010 is now clearly mentioned as starting date. 8) The status signals are correctly and sufficiently described in section 6 of D.1. 9) The emissions data in table 1 of section A.4.3.1 in both PDDs were updated to reflect the correct figures. 10) Step 2 of section B.2 in both PDDs now makes reference to the statement in the environmental permit that N_2O emissions must be reduced in 3 years' time to comply with the rules of the EU ETS
Conclusion *Tick the appropriate checkbox*	☐ To be checked during the first periodic verification ☒ Appropriate action was taken ☒ Project documentation was corrected correspondingly ☐ Additional action should be taken ☒ The project complies with the requirements

Finding:	A3		
Classification	☒ CAR	☐ CL	☐ FAR
Description of finding *Describe the finding in unambiguous style; address the context (e.g. section)*	• It appears during the Determination process that the PP changed the name of the project in the PDD. Now the AIE requests the PP to revise the title according to the GSC-version which is: "Yara Tertre Uhde 3 abatement project in Belgium". • The PP envisaged to include Norway as investor party. Since Norway does not provide national procedures for approving JI projects until date of registration by the Belgian designated focal point, Norway cannot be considered as involved Party. The PP is requested to revise the list of project participants in chapter A.3.		

Finding:	A3
Corrective Action #1 *This section shall be filled by the PP. It shall address the corrective action taken in details.*	• The project title in PDD Ver. 6 has been changed according to initial PDD-version • Norway has been removed from the list of involved parties
AIE Assessment #1 *The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and AIE assessments (#2, #3, etc.) shall be added.*	• OK The project title is now as the published version (see: http://www.global-warming.de/e/1986/) • Norway is not envisaged as involved party
Conclusion *Tick the appropriate checkbox*	☐ To be checked during the first periodic verification ☒ Appropriate action was taken ☒ Project documentation was corrected correspondingly ☐ Additional action should be taken ☒ The project complies with the requirements

Finding:	B1		
Classification	☐ CAR	☒ CL	☐ FAR

Description of finding
Describe the finding in unambiguous style; address the context (e.g. section)
	Section B.1.: Explanation and Justification of deviations from AM0034
	• Applicability criteria:
	  • The Explanation should follow the relevant list of conditions in the methodology
	  • Criterion (b) of the PDD: *"no effect on HNO_3-production"* should not be eliminated but assessed according to the actual situation of the plant
	  • Criterion (e) of the PDD: *"continuous N_2O-measurement"* : This criterion is fulfilled
	• Statistical analysis:
	  • The statement: *"Project emissions are calculated based on Verification Periods and not on standard production campaigns"* should be discussed as a separate aspect.
	  • The PP should clearly state that statistical analysis according to the methodology will carried out for the project emissions data.
	• Recording frequency:
	  • The 2 minutes interval of the existing ABB analyser should be included		

Finding:	B1
Corrective Action #1 *This section shall be filled by the PP. It shall address the corrective action taken in details.*	• *Applicability criteria: this section of the table in B.1 in both PDDs has now been changed. Most of this section was previously irrelevant, since the projects comply with the majority of the conditions. The PDD now only takes into account the applicability criterion that cannot be complied with.* • *Statistical analysis:* - *The statement "Project emissions are calculated based on Verification Periods and not on standard production campaigns" has now been completely removed. This is already discussed as a separate issue under 'Monitoring Periods based on campaigns' further down the same table.* - *It has now been made clear that project emissions data will still be subject to statistical analysis* • *Recording frequency: the 2-minute recording frequency of the ABB analyser has now been taken into account in the PDD.*
AIE Assessment #1 *The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and AIE assessments (#2, #3, etc.) shall be added.*	Applicability criteria: • The PP follows the methodology to explain/justify the necessity and non-necessity of adjustments of applicability criteria. The PP explains the special situation of the parallel driven SNM-plant under the aspect: "Definition of NAP". Statistical analysis: • The statistical analysis now follows the procedure of the methodology The recording frequency is no correctly mentioned in the PDD.
Conclusion *Tick the appropriate checkbox*	☐ To be checked during the first periodic verification ☒ Appropriate action was taken ☒ Project documentation was corrected correspondingly ☐ Additional action should be taken ☒ The project complies with the requirements

Finding:	B2		
Classification	☒ CAR	☐ CL	☐ FAR
Description of finding *Describe the finding in unambiguous style; address the context (e.g. section)*	Section B.2.: Point 1.2 *"Most realistic scenario in the absence of JI revenues for N_2O reductions achieved"*: The discussion of realistically feasible scenario alternatives should strictly follow the procedure to identify the baseline scenario described in AM0028 and include all alternatives listed in this document.		
Corrective Action #1 *This section shall be filled by the PP. It shall address the corrective action taken in details.*	*The whole of section B.2 of both PDDs has been re-written to strictly follow the exact format shown in AM0028.*		

Finding:	B2
AIE Assessment #1 *The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and AIE assessments (#2, #3, etc.) shall be added.*	OK. The section B.2.: Point 1.2 "Most realistic scenario in the absence of JI revenues for N_2O reductions achieved" now follows the procedure of the methodology.
Conclusion *Tick the appropriate checkbox*	☐ To be checked during the first periodic verification ☐ Appropriate action was taken ☒ Project documentation was corrected correspondingly ☐ Additional action should be taken ☒ The project complies with the requirements

Finding:	B3		
Classification	☒ CAR	☐ CL	☐ FAR
Description of finding *Describe the finding in unambiguous style; address the context (e.g. section)*	• The calculation of estimated emission should base on the real and evidenced design output of 551 tonnes HNO_3 per day. • The description of the application of instrument correction factors / elimination of implausible values in section D.1.2.2. should be described as implemented in the project activity. • The statistical analysis acc. to the methodology should be included in section D.1.2.2.		
Corrective Action #1 *This section shall be filled by the PP. It shall address the corrective action taken in details.*	• *The daily design capacity of the U3 plant has now been corrected to 551t HNO3 and all resulting calculations have been amended accordingly.* • *The description of the application of instrument correction factors / elimination of implausible values has now been added to section D.1.2.2 of both PDDs* • *The statistical analysis step has been added in section D.1.2.2*		
AIE Assessment #1 *The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and AIE assessments (#2, #3, etc.) shall be added.*	• The PDD now takes correctly into account the 551 t of HNO3 as daily capacity • The application of instrument factor and statistical analysis is now included as per methodology		
Conclusion *Tick the appropriate checkbox*	☐ To be checked during the first periodic verification ☒ Appropriate action was taken ☒ Project documentation was corrected correspondingly ☐ Additional action should be taken ☒ The project complies with the requirements		

Finding:	D1		
Classification	☐ CAR	☒ CL	☐ FAR

Finding:	D1
Description of finding *Describe the finding in unambiguous style; address the context (e.g. section)*	The use of the ABB analysers for the first time of project periods should be described and also included in the monitoring plan.
Corrective Action #1 *This section shall be filled by the PP. It shall address the corrective action taken in details.*	The use of the ABB analysers for the first months of the project period has been included in section D.1 of the PDD.
AIE Assessment #1 *The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and AIE assessments (#2, #3, etc.) shall be added.*	OK. The PP explained in section D.1. that the plant uses an old analyser which did not pass the QAL 2 test in the first weeks of the crediting period. According to the methodology, the emission reduction calculation will use the conservative substitute value in this period.
Conclusion *Tick the appropriate checkbox*	☐ To be checked during the first periodic verification ☒ Appropriate action was taken ☒ Project documentation was corrected correspondingly ☐ Additional action should be taken ☒ The project complies with the requirements

Finding:	D2		
Classification	☐ CAR	☐ CL	☒ FAR
Description of finding *Describe the finding in unambiguous style; address the context (e.g. section)*	Since the PP will use the already installed ABB analysers for measuring the N_2O emissions during first time of the project, the verifier should • Check the suitability of the analysers, sampling points and sampling pipes proved in a corresponding QAL 2 test. • Check the consideration of longer measurement frequency in the monitoring report		
Corrective Action #1 *This section shall be filled by the PP. It shall address the corrective action taken in details.*			
AIE Assessment #1 *The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and AIE assessments (#2, #3, etc.) shall be added.*			
Conclusion *Tick the appropriate checkbox*	☒ To be checked during the first periodic verification ☐ Appropriate action was taken ☐ Project documentation was corrected correspondingly ☐ Additional action should be taken ☐ The project complies with the requirements		

Finding:	D3		
Classification	☐ CAR	☐ CL	☒ FAR

Finding:	D3

Description of finding
Describe the finding in unambiguous style; address the context (e.g. section)
	The PP should
	• provide calibration and maintenance records of all monitoring and measuring devices of the project. Each record should include:
	  • Tracking Number. This tracking number is also on the equipment.
	  • Equipment Description, type, Manufacturer and Model Location - Calibration requirements
	  • Calibration interval with justification for the interval
	  • Calibration Procedure
	  • Calibration History
	  • Calibration Due
	• develop an ISO document showing relevant responsibilities/ procedures/demands/documents of the project (project book).
	• implement a procedure for calibration/maintenance of the Dr. Foedisch AMS including measures for the case that the error exceeds the allowed limits.
	• develop a ISO procedure for the cross check of the HNO_3 mass flow meter

Corrective Action #1 *This section shall be filled by the PP. It shall address the corrective action taken in details.*	
AIE Assessment #1 *The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and AIE assessments (#2, #3, etc.) shall be added.*	
Conclusion *Tick the appropriate checkbox*	☒ To be checked during the first periodic verification ☐ Appropriate action was taken ☐ Project documentation was corrected correspondingly ☐ Additional action should be taken ☒ The project complies with the requirements

Finding:	D4		
Classification	☒ CAR	☐ CL	☐ FAR
Description of finding *Describe the finding in unambiguous style; address the context (e.g. section)*	The PDD should take into account in all sections: • the use of a share of the nitrous ammonia burner gas output for the SNM-production ($MN(NO_3)_2$) and • the back feeding of the exhaust from SNM-production into the absorption tower and further to the stack of the Nitric Acid plant.		

Finding:	D4
Corrective Action #1 *This section shall be filled by the PP. It shall address the corrective action taken in details.*	*The use of part of the NOx gases from the HNO3 production process for the production of manganese nitrate solution has been addressed in the PDD in the following sections:* - *A.2* - *B.1 (table under 'Explanations and Justifications for deviations from AM0034')* - *D.1.1.1 (P.5)* - *D.1.2.2* *However, due to confidentiality reasons, this process has not been described in detail in the PDD. Please find attached the following documents that provide more information on this process and the calculation of the resulting HNO3-equivalent production:* *1) SNM process description (original document in French)* *2) SNM process description (English translation)* *3) Very simplified SNM process diagram* *4) Photographs of plant flow sheet showing gas streams in and out of HNO3 process* *5) HNO3-equivalent calculation*

Finding:	D4
AIE Assessment #1 *The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and AIE assessments (#2, #3, etc.) shall be added.*	OK. The PP explained and evidenced in detail the production of manganese nitrate solution (SNM) to the determination team and provided a calculation to determine the amount of HNO3-equivalents which are equal to a specific amount of SNM produced from the nitrous gases from the ammonia burner/TET/, /TET1/, /TET2/, /P&ISNM/. The PP included formulas to derive the NAP equivalent (NAP_{EQn}) from Nitric acid (NAP_{HNO3}) and SNM production (NAP_{SNM}) NAP_{HNO3}: Will be determined according to the methodology through NAP-flow metering (P.5) and crosscheck with tank level measurements NAP_{SNM}: The PP included following parameter in the monitoring plan to determine the amount of produced SNM and to calculate the equivalent amount of HNO_3: • DSNM (Density of $Mn(NO_3)_2$ • NCONT (N-NO_3 content of $Mn(NO_3)_2$ solution) • VSNM (Volume flow rate of $Mn(NO_3)_2$ solution) • $HNO3_{tech}$ (technical grade Nitric Acid added to the SNM process from external sources According to stoichiometric calculation $63/17^2$, the HNO3 equivalent is determined. The plant will crosscheck the results using stoichiometric assumptions. The result [$tHNO_3$/day] will be added to the NAP_{HNO3}-figure to calculate the Nitric acid and nitric acid-equivalent production for the Verification Period: $NAP_{EQn} = NAP_{HNO3} + NAP_{SNM} – HNO_{3tech}$ [t HNO_3) NAP_{EQn} = Total nitric acid equivalent during the Verification Period [$tHNO_3$] The emission factor for the verification period (EF_n) which will be determined by following equitation: $EF_n = (PE_n / NAP_{EQn})$ PE_n = total specific N_2O emissions during the Verification Period (tN_2O) from HNO_3- and SNM-plant. Note: The PP foresees a weekly interval for DSNM determination. This frequency should be explicit checked by the verifier regarding the reliability of the results and the necessity to shorten the interval. A corresponding FAR D5 was raised.

Finding:	D4
Conclusion *Tick the appropriate checkbox*	☐ To be checked during the first periodic verification ☒ Appropriate action was taken ☒ Project documentation was corrected correspondingly ☐ Additional action should be taken ☒ The project complies with the requirements

Finding:	D5		
Classification	☐ CAR	☐ CL	☒ FAR
Description of finding *Describe the finding in unambiguous style; address the context (e.g. section)*	The PP foresees a weekly interval for DSNM determination. This frequency should be explicit checked by the verifier regarding the reliability of the results and the necessity to shorten the interval.		
Corrective Action #1 *This section shall be filled by the PP. It shall address the corrective action taken in details.*			
AIE Assessment #1 *The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and AIE assessments (#2, #3, etc.) shall be added.*			
Conclusion *Tick the appropriate checkbox*	☒ To be checked during the first periodic verification ☐ Appropriate action was taken ☐ Project documentation was corrected correspondingly ☐ Additional action should be taken ☐ The project complies with the requirements		

Finding:	F1		
Classification	☐ CAR	☒ CL	☐ FAR
Description of finding *Describe the finding in unambiguous style; address the context (e.g. section)*	The PP should clarify the necessity of an EIA.		
Corrective Action #1 *This section shall be filled by the PP. It shall address the corrective action taken in details.*	It has been confirmed by Mme. Dominique Defrise of the Wallonian government that an environmental impact assessment is not necessary for the YARA projects. Her email confirming this has been forwarded to the Tuev Nord auditing team on 28/12/2010.		

[2] Molecular weight of HNO_3
Molecular weight of the Nitrogen (N)

Finding:	F1
AIE Assessment #1 *The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and AIE assessments (#2, #3, etc.) shall be added.*	OK. The Walloon Government states/EIA/ that the proposed project is not subject to environmental permit under section 10 of the Decree of 11 March 1999. The problematic for a study of environmental impact should not be considered.
Conclusion *Tick the appropriate checkbox*	☐ To be checked during the first periodic verification ☒ Appropriate action was taken ☒ Project documentation was corrected correspondingly ☐ Additional action should be taken ☒ The project complies with the requirements

5 DETERMINATION ASSESSMENT SUMMARY

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

5.1 General Description of the Project Activity

5.1.1 Participation

LOA

No correct Letter of Approval (LoA) has been provided from the Belgian DFP so far[3]. A corresponding CAR A1 has been raised. As the LoA will only be issued upon a positive determination opinion, this CAR will be closed upon issuance of host country approval.

Legal situation in Belgium

In Belgium the approval of JI projects on its own territory is a regional competence.

As the project is located in the Walloon Region, the Walloon climate administration is involved in the approval process and in charge for setting rules for the project implementation/MAIL1/.

General information about the division of competences and approval procedures with regard to JI/CDM projects in Belgium can be found on

http://klimaatplan.vito.be/KLIMAATPLAN/EN/Home/Focalpoint/ .

Walloonian eligibility criteria and approval procedures for projects implemented under the Kyoto Protocol's flexible mechanisms can be found under:

http://wallex.wallonie.be/index.php?mod=voirdoc&script=wallex2&PAGEDYN=indexBelgiqueLex.html&MBID=2010027187

Project Participants

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

Project participant involved in the project activity are the YARA Tertre SA/NV, Belgium; N.serve Environmental Services GmbH, France.

[3] In the course of the determination process the PP provided a host country LoA with different title. The CAR is still open.

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

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

5.1.2 PDD Editorial Aspects

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

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

5.1.3 Technology to be Employed

Within the project, N_2O emissions from the production of nitric acid and Manganese Nitrate at Tertre Uhde 3 plant will be reduced by installation of a secondary YARA N_2O abatement technology.

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

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

For an in depth evaluation of these topics, please refer to section A.4 of the table A-1 of the annex 1 and chapter 2 of this validation report.

5.1.4 Type of Project

The project qualifies as a Large Scale JI Track 1 Project, scope 5: "Chemical Industry". The host country Belgium fulfils the requirements for Track 1 participation.

5.2 Project Baseline, Additionality and Monitoring Plan

5.2.1 Application of the Methodology

The project applies in principle the approved baseline and monitoring methodology AM0034 methodology: "Catalytic reduction of N_2O inside the ammonia burner of nitric acid plants", version 5. /B-1/. Since the methodology is applied in the context of a JI Track 1 projects, some deviations were made and properly described in the PDD.

Main deviations:

- The Baseline Emission factor will not be determinated by assessment of historical baseline campaigns because the DFP sets a benchmark factor/BENCH/, which will

be applied for the calculation of the emission reduction. This leads to an adjustment of the abovementioned methodology due to these specific project conditions.

- The methodology only takes into account the production of nitric acid from the nitrous, N_2O-containing gases from the ammonia burner. In the project case this main flow will be divided and led to two different plants: The largest quantity will be used to produce Nitric Acid, a smaller share will be led through a SNM plant (Manganese Nitrate Solution).

To clarify this situation, the PP made project specific deviations to monitor the process of SNM production in order to include this process in the boundaries of the project.

The project activity meets all applicability conditions of the applied methodology (except deviations). Beyond this, the proposed project activity meets all the other possible requirements or stipulations mentioned in all sections of the selected methodology.

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

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

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

5.2.2 Project Boundary

The PDD correctly describes the project boundary including the physical delineation of the project activity (all parts of the Uhde 3 Plant Tertre with Nitric Acid and SNM facilities).

All equipment used within the project activity has been indicated in the PDD including the information about its purpose and the technical specification. Project boundary is clearly described in words and a visualisation of the physical project boundary as well as a table defining all significant GHG gases in compliance with the methodology has been included in the PDD.

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

In the course of determination the determination team has inspected the whole process of HNO_3-production. The project boundary begins at the inlets to the ammonia burners and ends at the tail gas stack. It could be verified that all equipment mentioned has been physically installed and is in a good working condition. Furthermore the technical specification of the installed equipment is in line with provided documentation and is in line with the indication in the PDD.

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

5.2.3 Baseline Identification

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

The procedure to identify the most plausible reference scenario derived from the methodology AM0028/B-6/ has been applied correctly and is transparently and sufficiently documented in the PDD.

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

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

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

5.2.4 Calculation of GHG Emission Reductions

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

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

Baseline Emissions:

The baseline takes into account benchmarks set by the Waloon Government/BENCH/.

The local authorities have not passed any N_2O limits that might have an impact on the project in the crediting period, so these benchmark values will be eligible for determination of the baseline.

These values/years are:

Year:	2010	2011	2012	
Value:	2.5	2.5	1.85	[kg N_2O/t HNO_3 (100%)]

Baseline emissions as per final PDD/ERU-calculation are: 308,995 t CO_2e.

Project Emissions:

Taking into account an 90 % efficiency of the secondary N_2O abatement catalyst and an Emission Factor of 8.37 kg $N_2O/tHNO_3$ (N_2O concentration in the stack measured over a period of 12 months in 2009), the resulting Project Emission Factor was calculated to 0.837 kg $N_2O/tHNO_3$.

Project emissions as per final PDD/ERU-calculation until end of 2012 are: **116,728 tCO_2e**

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

5.2.5 Calculation of GHG Emission Reductions

The calculation has been done as per applied project specific methodology project. All data not to be monitored have been assessed as correct. The values for the monitoring parameters within the calculation are plausible. It could be concluded that the estimated emission reductions are plausible and conservative.

Emission reductions as per final PDD/ERU-calculation until end of 2012 are: **192,267 t CO_2e.**

5.2.6 Additionality Determination

Prior consideration of JI

The starting date of the project is conducted with the installation of the catalyst during a regular shut down of the plant and was on 2nd September 2010. This date is prior to the determination of the project.

Since the PP provided different correspondence with between plant, project developer and local/national authorities, the determination team can confirm that the project complies with the requirements regarding prior consideration of JI.

Application of Methodology / Methodological Tools

The discussion of additionality in the PDD was justified and conducted according to the step-by-step-approach of the Methodological CDM Tool "Combined Tool to identify the baseline scenario and demonstrate additionality" (Version 05.2)".

Alternatives

The PDD contains a complete list of all realistic alternatives to the project scenario. The project activity not undertaken as a JI project activity and the continuation of the current practice have been identified as plausible and realistic alternatives.

Project activities that apply this tool in context of approved consolidated methodology ACM00034, only need to identify that there is at least one credible and feasible alternative that would be more attractive than the proposed project activity. This is the case in the Tertre project

Investment Analysis

According to the "Methodological Tool "Tool for the demonstration and assessment of additionality" (Version 05.2), the PP can choose between investment analysis (step 2) and barrier analysis (step 3). Since the PP applied to the barrier analysis, no financial assessment was carried out.

Barrier Analysis

The PP has justified the additionality on the basis of

a) Investment barriers

b) Technological barriers

c) Other barriers

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

Investment barrier

None of the N_2O destruction technology options are expected to generate any financial or economic benefits other than JI related income. Their operation AIEs not create any marketable products or by-products. However, any operator willing to install and thereafter operate such technology faces significant investment and additional operating costs.

Technological Barrier

The installation of a secondary abatement technology causes

- significant changes in plant structure (installation of a catalyst basket, modifications in the ammonia burner)

- high risks in the operation of the modified plant through malfunction/shortage in the abatement catalyst (destruction of primary catalyst, shut downs, synthesis of ammonium nitrate in the plant)

These barriers will prevent the plant operator to involve the installation of the abatement catalyst without incentives generated from an emission trading project.

Common practice analysis

Common practice in the relevant regions/industrial scopes is the inclusion of N_2O abatement projects in emission trading projects. There is no incentive to invest in the technology without revenues through tradable emission reduction units.

Summary of assessment of barrier analysis

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

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

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

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

5.2.7 Monitoring Methodology

The project activity applies the approved baseline and monitoring methodology AM0034: "Catalytic reduction of N_2O inside the ammonia burner of nitric acid plants", AM0034, Version 05, Sectoral Scope: 05, EB 55[/B-1/]. This methodology covers project activities involving the installation of a dedicated N_2O abatement catalyst inside the ammonia burner of a nitric acid plant that catalytically reduces N_2O, once it has been formed in the Ammonia Oxidation Reactor.

The baseline scenario was identified using procedure for identification of the baseline scenario described in the approved methodology AM0028: "Catalytic N_2O destruction in the tail gas of nitric acid plants"[/B-6/] as required by the AM0034.

The determination team can confirm that the applicability criteria set in the methodology were met by the project activity. Project specific deviations were made, because of two fundamental deviations:

- The Walloon Government applicates benchmark values for the determination of the baseline and related criteria cannot be fulfilled (Continuous real-time measurements of N_2O concentration and total gas volume flow can be carried out in the stack prior to the installation of the secondary catalyst for one campaign).
- The nitrous, N_2O-containing gases from the ammonia burner will be divided in two flows: The largest quantity will be used to produce Nitric Acid, a smaller share will be led through a SNM plant (Manganese Nitrate Solution). Since only the Nitric Acid production is included in the methodology AM0034, the PP made project specific deviations to monitor the process of SNM production in order to include this process in the boundaries of the project.

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

5.2.8 Monitoring Plan

The PP made amendments to the monitoring methodology of the applied methodology AM0034. The amendments are related to the fact, that

- no baseline campaigns were applied and there is no necessity to compare baseline operational parameters with operational parameters of the project period and
- an SNM plant uses a share of the nitrous gas from the ammonia burner.

According to CAR D4, following additional parameter were included in the monitoring plan to determine the HNO_3-equivalents of the SNM-plant.:

- NAP_{SNM}: HNO3-equivalent production at 100% concentration used in the SNM process, during any Verification Period.
- DSNM: Density of $Mn(NO_3)_2$
- NCONT: N-NO_3 content of $Mn(NO_3)_2$ solution
- VSNM: Volume flow rate of $Mn(NO_3)_2$
- $HNO3_{tech}$ Monthly billing sheets to SNM customer

Determination of NAP (total specific N_2O emissions during the Verification Period (tN_2O) from HNO_3- and SNM-plant):

In this special project case, NAP is expressed as NAP_{EQn}, which will be the equivalent of Nitric Acid

- produced in the absorption tower of the Nitric acid plant (NAP_{HNO3}) and
- the calculated Nitric Acid equivalent of the SNM process (NAP_{SNM})
- minus the technical grade Nitric Acid which is added to the SNM process (HNO_{3tech})

The provided monitoring plan can be implemented and the determination team arrived at the conclusion that all monitoring arrangements are feasible within the project design.

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

5.2.9 Project Management Planning

The project management planning is appropriate for the purpose of the projects monitoring. The project will be involved in the existing quality management system of the Tertre plant, referring to the standards: ISO 9001:2008, ISO 14001:2004 and OHSAS 18001:2007.

The data processing will be carried out by N.serve GmbH as PP which is involved in various N_2O emission reduction projects.

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

5.2.10 Crediting Period

The project starting date was on 2010-09-02 which was also the start of the crediting period.

It should be mentioned, that the Walloon government has not given an official statement, that they are willing to accept retro crediting (start of crediting period at the beginning of the project activity and not with the registration date).

Since the PP explained, that

- the DFP stated the acceptation of retro crediting in discussions in the course of the project preparation/MAIL2/ and
- due to the fact, that most of the EU-members which are eligible for track 1 projects also accept the retro crediting approach,

the determination team will carry out the determination of the project and the estimated emission reductions on the basis of the early starting date.

The Project Participants applies for a crediting period of 10 years. It is expected that the project will run for only 2 years and 3 month (until the end of 2012-12-31), since it is almost certain that N_2O emissions from HNO_3 plants will be covered by the EU ETS from 2013 onwards.

Hence the emission calculation considers a crediting period extending from 2010-09-02 to 2012-12-31, which is deemed realistic and appropriate.

If N_2O is not included in the ETS after 2012, the period will extend to regular 10 Years until 2020.

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

5.2.11 Environmental Impacts

The Host Country Belgium AIEs not require an Environmental Impact Assessment (EIA) for the project. This could be proved by the PP with a respective e-mail from the DFP[/EIA/]. Furthermore on the basis of document review and the on-site visit the validation team is convinced that negative environmental impacts due to the project are unlikely to occur.

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

5.2.12 Comments by Stakeholders

Global
The global stakeholder consultation for the project was carried out on the TÜV NORD website (http://www.global-warming.de/e/1986/)[/gw/], in line with the applicable requirements.

Lokal

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

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

5.2.13 Issues for verification

FAR D2:

Since the PP will use the already installed ABB analysers for measuring the N2O emissions during first time of the project, the verifier should

Check the suitability of the analysers, sampling points and sampling pipes proved in a corresponding QAL 2 test.

Check the consideration of longer measurement frequency in the monitoring report

FAR D3:
The PP should

- provide calibration and maintenance records of all monitoring and measuring devices of the project. Each record should include:
    - Tracking Number. This tracking number is also on the equipment.

    - Equipment Description, type, Manufacturer and Model Location - Calibration requirements
    - Calibration interval with justification for the interval
    - Calibration Procedure
    - Calibration History
    - Calibration Due
- develop an ISO document showing relevant responsibilities/ procedures/demands/documents of the project (project book).
- implement a procedure for calibration/maintenance of the Dr. Foedisch AMS including measures for the case that the error exceeds the allowed limits.
- develop an ISO procedure for the cross check of the HNO_3 mass flow meter.

FAR D5:

The PP foresees a weekly interval for DSNM determination. This frequency should be explicit checked by the verifier regarding the reliability of the results and the necessity to shorten the interval.

6 DETERMINATION OPINION

Yara Tertre SA/NV has commissioned the TÜV NORD JI/CDM Certification Program (CP) as a Third Party to determinate the project: "YARA Tertre Uhde 3 abatement project in Belgium" with regard to the relevant requirements of the host country Belgium and of the UNFCCC for JI project activities, as well as criteria for consistent project operations, monitoring and reporting. UNFCCC criteria refer to the Kyoto Protocol Article 6 criteria and the Guidelines for the implementation of Article 6 of the Kyoto Protocol as agreed in the Marrakech Accords.

The project applies to the CDM baseline & monitoring methodology AM0034, version 5, "Catalytic reduction of N2O inside the ammonia burner of nitric acid plants with project specific amendments.

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

In detail the conclusions can be summarised as follows:

- The project is in line with all relevant host country criteria (Belgium) and all relevant UNFCCC requirements for JI.
- The project additionality is sufficiently justified in the PDD, the monitoring plan is transparent and adequate.
- The calculation of the project emission reductions is carried out in a transparent and conservative manner, so that the calculated emission reductions of 192,267 tCO_2e (between 2010 and 2012) are most likely to be achieved within the crediting period.

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

Since the LoA will be issued after registration of the project at the DFP, CAR A1 and CAR A1a will automatically be closed if the host country issues the LoA.

Essen, 2011-12-07

Mrs Alexandra Nebel,
TÜV NORD JI/CDM CP
Determination Team Leader

Essen. 2011-12-07

Mr. Eric Krupp
TÜV NORD JI/CDM CP
Final Approval

7 REFERENCES

Table 7-1: Documents provided by the project participant

	Document
/**2370**/	Province de Hainaut – Deputation Permanente: Permit from the local government stating the maximum capacity of the site for HNO_3-production of 2,370 t/a, dated 2001-09-10.
/**550K3**/	Announcement from former plant owner Kemira to the local government stating capacity of Uhde 3 of 550 t HNO_3/a, dated 1994-12-21.
/**551S3**/	Study of Uhde stating 551 t HNO_3 per day as present production capacity of plant 3
/**BASKET**/	Technical drawing of the catalyst basket
/**BENCH**/	Project confirmation letter, issued by the Walloon government (Cabinet du Ministre de l'Environnement, de l'Aménagement du territoire et de la Mobilité) on 2010-10-22, setting benchmark emission factors as follows: • 2.5 kg N_2O/t HNO_3 for 2010 and 2011 • 1.85 kg N_2O/t HNO_3 for 2012.
/**CERT**/	• ISO 9001:2008 certificate, issued by Det Norske Veritas, valid until 2012-03-15 • ISO 14001:2004 certificate, issued by Det Norske Veritas, valid until 2012-03-15 • OHSAS 18001:2007 certificate, issued by Det Norske Veritas, valid until 2012-03-15
/**EFMA**/	Position paper of the European Fertilizer Manufacturers Association (EFMA) on N_2O emissions from nitric acid plants, agreed by EFMA's Steering Committee on 2005-03-30.
/**EIA**/	Email from the Walloon government, Dominique Defrise, Conseillère au Cabinet de Philippe Henry, dated on 2010-12-22, stating that no environmental impact assessment is mandatory for this type of project.
/**EMSITE**/	Partie Air – Registre de Rejets-Enquete 2010 Données 2009 No.: 20706, (Publication from the Walloon government with emission values of industrial gases, including 3,427 kg N_2O from Tertre site) -Including the declaration from Tertre to the government: Plant mass of N_2O/a Uhde 3 1,500 kg

	Document
/**FILL**/	Detailed procedure for filling the abatement catalyst in the provided basket, incl. safety sheet, technical drawings, photos of recent actions and improvement suggestions, dated 2008-10-13
/**GAS**/	Certificates d'analyse (Certificate of the testing gas for N_2O-analyser Uhde 3: Expiry date is: 2012-03-20
/**HIST23**/	External report from Vincotte sa No. 60140674_10(2005_8).doc, confirming the historical N_2O emissions from 2005 to 2008 for Uhde 3 and 2 plants.
/**INV3**/	Invoice from YARA International ASA regarding 2700 kg of N_2O abatement catalyst YST 58-Y, No.: HKA-100018, dated 2010-08-10
/**IPCC**/	Projet arrêté inodificatif des authorisations de YARA S.A.-mise en oeuvre de la Directive IPPC, dated March 2010 (Arrete regarding the application of the IPPC regulation
/**MAIL1**/	Mail from Bart Naessens Flemish government Environment, Nature and Energy Department, explaining the legal situation in Belgian/Wallonia regarding competences of DFPs and approval rules dated 2008-04-09
/**MAIL2**/	Summarised protocol with Stéphane COOLS, responsible for tradable permits in the Région Wallonne, Belgium regarding different issues of the proposed project implementation.
/**MASS3**/	Unités d'acide nitrique. Calcul du débit d'air á la turbine de détente (Mass balance calculating volume flow as burner Uhde 3 output
/**MO3**/	Manuel operatoire TET-010920 (operation manual for plant Uhde 3) stating the trip point of the plants
/**N2ODATA3**/	Table with N_2O-emissions from 2010-08-11 09:51 to 2010-09-04 17:41, including plant start with catalyst on 2010-09-02 19:51 (two hour basis)
/**N2OEM3**/	Plot of N_2O-emission of plant 3 on existing measurement point after DeNOx (2AI1083.PV) from 2009-11-11 15:28:53 to 2010-09-10 15:28:53
/**O**/	Organigramme (Organisational Chart)
/**ORG**/	Organigramme de YARA (Organisational sheet) for the plant 2 and 3
/**P&I3**/	Pipe and Installation sheet of Uhde 3 plant • 1 of 3 • 2 of 3 • 3 of 3

	Document
/**PDD**/	JOINT IMPLEMENTATION PROJECT DESIGN DOCUMENT FORM: • YARA Tertre Uhde 3 abatement project in Belgium, Version: 2010-10-26 (Version #1) • YARA Tertre Uhde 3 abatement project in Belgium, Version: 2011-12-06 (Version #6) – final version
/**PERM23**/	Site permission from local government (Deputation permanente), dated 1990-12-28
/**PERM23N**/	Renewed site permission from local government (Deputation permanente), dated 1998-03-26
/**PERM3**/	Authorisation for plant operation, dated 1995-02-10
/**PRAS**/	Tertre site presentation
/**PRES**/	Tertre site presentation (.ppt)
/**PROC**/	Comptabilisation des emissions (NOx, N2O) des Unites UH2, UH3 DUPON (TE/PO-ACD-06), (Quality procedure regarding the measurement of NO_X and N_2O emissions, TET-010417
/**PROC1**/	Manual operatoire laboratoire –Utilisation du chromatographie en phase gazeuse (TET-011545), (Quality procedure regarding utilisation of existing analysers)
/**PROC2**/	Analyses acide nitrique – Protocol of laboratory values of output of HNO_3-plants, including titration printout
/**PROC33**/	Calibration protocol of the Uhde 3 gas analyser
/**PROC4**/	Manual operatoire laboratoire –determination N2O 'dans les cheminees des installations acide nitrique par chromatographie en phase gazeuse (TET-011662), (Quality procedure regarding N_2O measurements in gas phase utilisation of existing analysers)
/**PROC53**/	PT-technical procedure –etalonnage de l'analysateur de N2O, O2, NO et NO2 de queue de Uhde 3 (TET-011517), (Technical procedure regarding calibration of Uhde 3 gas analyser
/**PUR**/	Purchase order No.: 4501078852, regarding 1,440 tonnes of abatement catalyst 58-Y1, dated 2010-10-15
/**RESP**/	Overview of responsibilities for the project activity • General responsibilities • Local responsibilities

	Document
/**ROAD**/	Road map 2011 to 2015 stating the planned outputs of Uhde 3 plant: Plant 2011 2012 Uhde 3: 190,233 196,779 $tHNO_3/a$
/**SCREEN**/	Screenshot of PSC of plant 3
/**TRAIN**/	List of trained persons of the plant for maintenance of the analyser
/**TET**/	"Manuel Operatoire Laboratoire TET-011540, HNO_3 equivalent calculation to calculate % of N-NO_3 content of the solution of the SNM-plant. This figure will be determined by a laboratory procedure once per week and the attached document describes the laboratory procedure that is used to derive this figure. Document is dated
/**TET1**/	"Plan De Controle Qualite De L'installation SNM", (TE/PO-SED-04), Document ID : TET-010392 Revision date: 2010-09-22 • Quality control document: Flow diagram on page 3, which shows that the gas stream from Uhde 3 enters the process at reactor R103-A, is fed also through reactor R103-B, and then back into the main Uhde 3 process stream. • Product specification sheet
/**TET2**/	MO / Production Handbook SNM; TET-011131 – REV 00: • Detailed process description of SNM, original French • Detailed process description of SNM, English translation
/**P&ISNM**/	P&I-Sheet of the SNM plant
/**TRIP3**/	Trip points of plant 3 from PCS
/**XLS**/	ERU calculation-sheet in XLS-format: • "Uhde 3 ERU calculations PDD 102010.xls"

Table 7-2: Background investigation and assessment documents

Reference	Document
/**B-1**/	Approved baseline and monitoring methodology AM0034: "Catalytic reduction of N_2O inside the ammonia burner of nitric acid plants", version 5.
/**B-2**/	European Standard DIN EN 14181: "Stationary source emissions – Quality assurance of automated measuring systems

Reference	Document
/**B-3**/	Joint Implementation Supervisory Committee: Guidelines for users of the Joint Implementation Project Design Document Form, Version 04
/**B-4**/	Background paper: "N_2O emissions from adipic acid and nitric acid production", Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories issued by the NGGIP
/**B-5**/	European IPPC Bureau publication „Integrated Pollution Prevention and Control; Reference Document on Best Available Techniques for the Manufacture of Large Volume Inorganic Chemicals – Ammonia, Acids and Fertilizers (August 2007)
/**B-6**/	Approved baseline and monitoring methodology AM0028: "Catalytic N2O destruction in the tail gas of Nitric Acid or Caprolactam Production Plants", Ver. 5
/**B-7**/	Methodological Tool: "Tool for the demonstration and assessment of additionality" (Version 05.2), EB 39, Annex 10

Table 7-3: Websites used

Reference	Link	Organisation
/bref/	http://eippcb.jrc.ec.europa.eu/reference/	Website of the European Commission, Joint Research Centre, Institute for Prospective Technological Studies (Provision of BAT-Reference documents)
/dfp/	http://klimaatplan.vito.be	Belgian DFP
/walloon/	http://environnement.wallonie.be/	Wallonian air and climate agency which is the relevant DF for this project activity
/cwedd/	http://www.cwedd.be/	Walloon Environmental Council for Sustainable Development (CWEDD)
/gw/	http://www.global-warming.de/	TÜV Nord platform hosting projects open for comments at the determination stage
/ipcc/	www.ipcc-nggip.iges.or.jp	IPCC publications
/jir/	http://www.jirulebook.org/track1	JI-Rulebook, Practice and Procedures
/unfccc/	http://ji.unfccc.int	UNFCCC

Table 7-4: List of interviewed persons

Reference	MoI[1]		Name	Organisation / Function
/IM01/	V	☒ Mr. ☐ Ms	Rémi Lemetter	Plant Manager of YARA Tertre plant
/IM01/	V	☐ Mr. ☒ Ms	Sandrine Allaert	Process and project engineer of YARA Tertre plant
/IM01/	V	☒ Mr. ☐ Ms	Philippe Stevenart	Production Manager of YARA Tertre plant
/IM01/	V	☒ Mr. ☐ Ms	André Guillet	Safety Adviser of YARA Tertre plant
/IM01/	V	☒ Mr.	Ubaldo Michelon	Instrumentation Engineer of YARA

Reference	MoI[1]		Name	Organisation / Function
		☐ Ms		Tertre plant
/**IM01**/	V	☐ Mr. ☒ Ms	Rebecca Cardani-Strange	Project manager from N.serve
/**IM01**/	V	☒ Mr. ☐ Ms	J. De Schrijver	Analytic Technical at laboratory of YARA Tertre plant

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

ANNEX

A1:	Determination Protocol
A2:	Assessment of Baseline Information
A3:	Assessment of Financial Parameters
A4:	Assessment of Barrier Analysis
A5:	Outcome of the GSCP
A6:	Application of non approved Methodologies Requirement Checklist
A7:	Appointment / Authorisation statements

ANNEX 1: DETERMINATION PROTOCOL

Table A-1: Requirements Checklist

Checklist Item (incl. guidance for the determination team)	**Determination Team Comments** (Means and results of assessment)	**Ref.**	**Draft Concl.**	**Final Concl.**
A. General Description of Project Activity				
A.1. Approval *The written approval of the parties involved is a mandatory requirement*				
A.1.1. Which Parties and project Participants are involved in the project?	Parties involved are Belgium (as a Host Party) and France. The Project Participant of the Host Country is YARA Tertre SA/NV Germany as party involved will be replaced by France as stated by the PP during on-site-visit. The Project Participant of France is N.serve Environmental Services GmbH CAR A2: France should be listed as investor country instead of Germany CAR A3: • It appears during the Determination process that the PP changed the name of the project. Now the AIE requests	/PDD/	~~CAR A2~~ ~~CAR A3~~	OK

Checklist Item (incl. guidance for the determination team)	Determination Team Comments (Means and results of assessment)	Ref.	Draft Concl.	Final Concl.
	the PP to revise the title according to the GSC-version which is: "Yara Tertre Uhde 3 abatement project in Belgium". • The PP envisaged to include Norway as investor party. Since Norway does not provide national procedures for approving JI projects until date of registration by the Belgian designated focal point, Norway cannot be considered as involved Party. The PP is requested to revise the list of project participants in chapter A.3.			
A.1.2. Are the parties involved eligible for JI Track 1?	By means of checking the UNFCCC website, it was confirmed that Belgium and France are eligible under JI track 1.	/dehst/ /unfccc/		OK
A.1.3. Has the project provided written approvals of all parties involved?	CAR A1: The pending letters of approval from the host country will be provided only on the basis of the successful conclusion of this determination. Thus this CAR will be closed if the host country issues their LoA. Nevertheless, a corresponding CAR was raised. CAR A1a: By giving the approval, the Belgian DFP agrees with the HNO_3-equivalent approach which take into account the N_2O-emissions from the SNM plant.	/PDD/	CAR A1 CAR A1a	
A.1.4. Are the approvals issued from organisations	Please refer to the comment under A.1.3.		CAR A1	

Checklist Item (incl. guidance for the determination team)	Determination Team Comments (Means and results of assessment)	Ref.	Draft Concl.	Final Concl.
listed as DFPs on the UNFCCC JI website?				
A.1.5. Do the written approvals confirm that the corresponding party is a Party to the Kyoto Protocol?	Please refer to the comment under A.1.3.		CAR A1	
A.1.6. Do the written approvals refer to the precise project title in the PDD submitted for registration?	Please refer to the comment under A.1.3.		CAR A1	
A.1.7. Is the information regarding the project participants listed in section A3 and in Annex 1 of the PDD internally consistent to each other?	Yes, the information regarding project participants is consistent in both sections.			OK
A.1.8. Are all project participants listed in the PDD approved at least by one Party involved?	Please refer to the comment under A.1.3.		~~CAR A2~~	
A.1.9. Are any other project participants approved but not listed in the PDD?	Please refer to the comment under A.1.3.		~~CAR A2~~	
A.2. PDD editorial aspects *The PDD used as a basis for determination shall be prepared in accordance with the latest template and guidance from the JISC available on the UNFCCC JI website.*				
A.2.1. Has the latest version of the PDD form been applied?	Since this is a JI Track 1 project activity there are no mandatory forms that have to be used. A latest version of a Project Design Document (Joint	/PDD/ /B-3/		OK

Checklist Item (incl. guidance for the determination team)	Determination Team Comments (Means and results of assessment)	Ref.	Draft Concl.	Final Concl.
	Implementation Project Design Document Form, Version 01 - in effect as of: 15 June 2006) in accordance with Decision 10/CMP.1 was used.			
A.2.2. Has the PDD been duly filled in accordance with the latest guidance(s)?	The PDD is in line with the Guidelines for users of the Joint Implementation Project Design Document Form, Version 4. CAR A2: Section A.4.1.4. should include longitude/latitude of the burner and stack. Table A.3. AIEs not fully match with name of project participants listed in Annex 1, please correct.	/PDD/ /B-3/	~~CAR A2~~	OK
A.3. Technology to be employed *Determination of project technology focuses on the project engineering, choice of technology and competence/ maintenance needs. The AIE should ensure that environmentally safe and sound technology and know-how is used.*				
A.3.1. AIEs the PDD contain a clear, accurate and complete project description?	Within the project, N_2O emissions from the production of nitric acid at YARA Tertre nitric acid plant will be reduced by installation of a secondary N_2O abatement catalyst. The project description was provided in various parts of the PDD, esp. in the chapters A.2, A.4.2 and A.4.3. The description of the project activity is assessed as clear, accurate, complete and sufficient; the PDD is mostly in line with provided evidences and physical implementation	/PDD/ /P&I/	~~CAR A3~~	OK

Checklist Item (incl. guidance for the determination team)	Determination Team Comments (Means and results of assessment)	Ref.	Draft Concl.	Final Concl.
	(regarding N_2O-plant) of the project activity. The details including the technical specification of the state of the art catalyst technology for the abatement of N_2O have been provided in the PDD in a detailed and appropriate manner. The applicability of the type of installed abatement catalyst (YARA58 Y 1 ®) under appropriate plant conditions is suitable to decompose N_2O. CAR A2: Section A.4.1.4. should include longitude/latitude of the burner and stack. The Arrete regarding the application of the IPPC regulation /IPPC/ stating the reduction of N_2O-emission from 2013 on (page 8 first sentence of the doc): "Considérant que cette valeur sera à considérer par l'exploitant dans son projet de modification des installations Uhde 3 et Uhde 3 visant à réduire les émissions de N2O dans un délai de trois ans" should be included in section B.2.			
A.3.2. Is this description in accordance with the real situation or (in case of greenfield projects) is it most likely that the project will be implemented acc. to the project description?	The situation on site was inspected by the determination team and is as described in the PDD and other project documentation documents. During the on-site visit the determination team has inspected the facilities of the HNO_3-production site and it could be verified that physical implementation of the project activity (installation of the abatement catalyst into the ammonia	PDD /P&I/ /FILL/	~~CAR D4~~	OK

Checklist Item (incl. guidance for the determination team)	Determination Team Comments (Means and results of assessment)	Ref.	Draft Concl.	Final Concl.
	burner) is in line with the information provided in the PDD. But the determination team found a significant deviation of plant installations to the description in the PDD, since the plant includes a parallel installed facility to produce $Mn(NO_3)_2$ from a share of the process gas. This additional installation • Reduces the amount of produced HNO_3 which is conservative in the context of the projects as it increases the project emission factor EF_n, • But also might have a significant influence on the N_2O-mass flow since side reactions, which are not determinable at the moment take place. In this context, the PP was requested to clarify the plant situation in the project documentation and to communicate this issue to the DFP, since the methodology and confirmation letter do not cover this special case. CAR D4: The PDD should take into account in all sections: • the use of a share of the nitrous ammonia burner gas output for the SNM-production and • the back feeding of the exhaust from SNM-production into the absorption tower and further to the stack of the Nitric Acid plant.			
A.3.3. In case the project involves alteration of the existing installation or process, is a clear	Within the project, N_2O emissions from the production of nitric acid at Tertre nitric acid plant will be reduced by installation of	/PDD/		OK

Checklist Item (incl. guidance for the determination team)	Determination Team Comments (Means and results of assessment)	Ref.	Draft Concl.	Final Concl.
description available regarding the differences between the project and the pre-project situation?	a secondary N_2O abatement catalyst. The N_2O catalyst will be installed in the ammonia burner. Prior to the project activity, no N_2O abatement-technology was used so that the pre-project situation AIEs not envisage any N_2O abatement measures.			
A.3.4. AIEs the project design engineering reflect current good practices?	Yes. The project involves the installation of a secondary catalyst in the ammonia burner to abate nitrous oxide. Since this or similar type of catalyst is installed in several nitric acid plants which are involved in CDM and JI-projects, this project reflects current good practices.	/PDD/		OK
A.3.5. AIEs the project use state of the art technology or would the technology result in a significantly better performance than any commonly used technologies in the host country?	The employed technology is defined as best available technology acc. to the BREF-Documents of the IPCC.	/PDD/ /B-5/		OK
A.4. Small scale project activity *It is assessed whether the project qualifies as small-scale JI project activity*				
A.4.1. AIEs the project qualify as a small scale project activity as defined by the JISC	Not applicable, because the project activity is a large scale project since the estimated mean value of emission reduction	/PDD/		OK

Checklist Item (incl. guidance for the determination team)	Determination Team Comments (Means and results of assessment)	Ref.	Draft Concl.	Final Concl.
	of 82,498 tCO2/year (192,267 tCO_2e between 2010 and 2012) stated in the initial PDD exceeds the limit of 60,000 tCO_2e annually.			
A.4.2. AIEs the project apply one of the approved small scale categories and any methodology and tool referred therein?	See A.4.1.			
A.4.3. Is the small scale project activity not a debundled component of a larger project activity?	See A.4.1.			
B. Project Baseline, Additionality and Monitoring Plan				
B.1. Application of the Methodology				
B.1.1. What kind of methodology has been used?	The PDD references the "Approved baseline and monitoring methodology AM0034: "Catalytic reduction of N_2O inside the ammonia burner of nitric acid plants", version 5". Type: ☒ I: CDM Approved Methodology – latest version with project specific amendments ☐ II: CDM Approved Methodology – older version ☐ III: National Methodology	/PDD/ /B-1/ /		OK

Checklist Item (incl. guidance for the determination team)	**Determination Team Comments** (Means and results of assessment)	**Ref.**	**Draft Concl.**	**Final Concl.**
	☐ IV: Combination of Approved Methodologies ☐ V: Project specific Methodology			
B.1.2. In case of methodology types I and II: Is the applied CDM methodology identical with the version available on UNFCCC website or -in case of a country or project-specific methodology- is the methodology approved by the Host Country? In case of methodology types III – V: Annex 6 has to be filled	The proposed project activity applies the latest version of AM0034 available on the UNFCCC web-base (http://cdm.unfccc.int/methodologies/DB/993RRDBB2WJI9TAD2XCKPK5YATQXY6). Note: According to the JI rulebook : "Under the Track 1 process, the determination of the eligibility of the project and the monitoring and verification of emission reductions is subject to national rules and procedures only". A 100% compliance of the project methodology to an approved UNFCCC-methodology is -the consent of the national DFP presumed- not mandatory. The PP includes some deviations from the methodology, which is eligible in the context of the track 1 modalities. **Aspect:** Baseline campaign, Baseline emissions	/PDD/ /B-1/ /jir/ /XLS/	~~CAR B1~~ ~~CAR D4~~	OK

Checklist Item (incl. guidance for the determination team)	**Determination Team Comments** (Means and results of assessment)	**Ref.**	**Draft Concl.**	**Final Concl.**
	Requirement of the methodology: BE established based on distinct baseline campaign. Adjustment in JI project specific context: Benchmark factors are used for determining reference case emissions. Assessment of the determination team: The Walloon government sets benchmark Instead, a benchmark of 2.5 $kgN_2O/tHNO_3$ will be applied by the Walloon government during 2010 and 2011, and of 1.85 $kgN_2O/tHNO_3$ in 2012. The determination team follows the reasoning of the PP. **Aspect:** Permitted range of operational parameters Requirement of the methodology: Establishing a permitted range of operational parameters to avoid manipulation of baseline emissions. Adjustment in JI project specific context: No permitted range of operational parameters is established Assessment of the determination team: Since a benchmark for baseline emissions will be implemented, there is no chance for increasing the emission			

Checklist Item (incl. guidance for the determination team)	Determination Team Comments (Means and results of assessment)	Ref.	Draft Concl.	Final Concl.
	reductions by manipulating the operation conditions. The determination team follows the reasoning of the PP. **Aspect:** Statistical Analysis of baseline and project emissions data Requirement of the methodology: Collected baseline and project campaign data is subject to statistical analysis in order to eliminate values which are not representative for standard plant operation. Adjustment in JI project specific context: No such step is undertaken. As no baseline campaign is undertaken, there is no baseline campaign data that could be subject to statistical analysis. Project emissions are calculated based on Verification Periods and not on standard production campaigns Assessment of the determination team: Since no baseline campaign was carried out, statistical analysis of baseline date could not be carried out. The determination team follows this reasoning of the PP regarding statistical assessment of baseline campaign, but raised a CAR regarding following issue: CAR B1: The statement: “Project emissions are calculated based on Verification Periods and not on standard production			

Checklist Item (incl. guidance for the determination team)	**Determination Team Comments** (Means and results of assessment)	**Ref.**	**Draft Concl.**	**Final Concl.**
	campaigns" should be discussed as a separate aspect. The PP should clearly state that statistical analysis according to the methodology will carried out for the project emissions data. **Aspect:** Deduction of AMS combined uncertainty from baseline emission factor <u>Requirement of the methodology:</u> Combined uncertainty for all parts of the AMS is deducted from EF_{BL}. <u>Adjustment in JI project specific context:</u> Uncertainty is not taken into account <u>Assessment of the determination team:</u> Since a benchmark for baseline emissions will be implemented, not uncertainty factor has to be applied on the benchmark value. The determination team follows the reasoning of the PP. **Aspect:** Recalculation of $EF_{B}L$-value in case of shorter project campaign. <u>Requirement of the methodology:</u> In case a project campaign is shorter than the baseline			

Checklist Item (incl. guidance for the determination team)	**Determination Team Comments** (Means and results of assessment)	**Ref.**	**Draft Concl.**	**Final Concl.**
	campaign, EF_BL is re-calculated for that campaign Adjustment in JI project specific context: EF_{BL} is not being applied. Assessment of the determination team: Because emission reductions are not assessed based on factual emissions, this measure is not needed. The determination team follows the reasoning of the PP. **Aspect:** Monitoring Periods basing on campaigns. Requirement of the methodology: Verifications can only be undertaken for full campaigns, not merely for parts of campaigns. Adjustment in JI project specific context: This restriction AIEs not apply. Assessment of the determination team: Project campaigns are not be related to baseline campaigns. Because of that, emission reductions can also be determined for parts of campaigns. The determination team follows the reasoning of the PP. **Aspect:** Moving Average Emissions Factor ($EF_{ma,n}$).			

Checklist Item (incl. guidance for the determination team)	**Determination Team Comments** (Means and results of assessment)	**Ref.**	**Draft Concl.**	**Final Concl.**
	Requirement of the methodology: Project emissions are compared to the average emission factor of all previous project campaigns (of the first 10 campaigns only). Adjustment in JI project specific context: This step is not being applied. Assessment of the determination team: Since a benchmark for baseline emissions will be implemented, no moving average for monitoring of catalyst efficiency is necessary. The determination team follows the reasoning of the PP. **Aspect:** Minimum project emissions factor after 10th campaign (EF_{min}) Requirement of the methodology: No project emissions factor after the 10th project campaign may be lower than the lowest recorded during these campaigns. Adjustment in JI project specific context: This restriction AIEs not apply. Assessment of the determination team: Since a benchmark for baseline emissions will be implemented, the project emission factor should not be			

Checklist Item (incl. guidance for the determination team)	**Determination Team Comments** (Means and results of assessment)	**Ref.**	**Draft Concl.**	**Final Concl.**
	capped taking into account a loss of efficiency of the N_2O abatement catalyst. The determination team follows the reasoning of the PP, but CAR B1 was raised, since the requirement of methodology was misquoted as: "no PE may be *higher* than the lowest recorded…". **Aspect:** Downtime of the AMS Requirement of the methodology: In the event that the monitoring system is down, the lowest between the conservative 4.5 $kgN_20/tHNO_3$ IPPC default factor or the last measured value will be valid and applied for the downtime period for the baseline emission factor, and the highest measured value in the campaign will be applied for the downtime period for the campaign emission factor. Adjustment in JI project specific context: In the case of a period of AMS downtime that constitutes a malfunction of the AMS, the missing data from the relevant hour should be replaced with the highest value measured during the whole of the relevant verification period. The assessment should be based on values measured during periods of standard AMS operation and recording after elimination of mavericks. This replacement of missing data will be done on the basis of hourly average values. In the case of equipment downtime due to a routine calibration for			

Checklist Item (incl. guidance for the determination team)	Determination Team Comments (Means and results of assessment)	Ref.	Draft Concl.	Final Concl.
	any part of one hour, the hourly average value will be calculated pro-rata from the remaining available data from the hour in question. If the remaining available data from that hour constitutes less than 2/3 of the hour (less than 40 minutes), that hour should be considered missing. Each time it is impossible to calculate one hour of valid data, substitute values should be used instead of the missing hour for the further calculations of emissions reductions. As a substitute value, the last valid hourly average value before the calibration will be used for the calculation of emissions reductions. Assessment of the determination team: Firstly there is no distinction between downtime during the baseline and downtime during the project, since no baseline is being measured. Secondly, the default factor contained in AM0034 would not be appropriate in the case where the benchmark factor being applied is the same as, or lower than, the default value. In addition, AM0034 AIEs not distinguish between times when the AMS was malfunctioning and periods of standard calibration. The approach taken here differentiates between these two scenarios. The determination team follows the reasoning of the PP. **Aspect:** Recording and storage interval for the parameters NCSG,			

Checklist Item (incl. guidance for the determination team)	**Determination Team Comments** (Means and results of assessment)	**Ref.**	**Draft Concl.**	**Final Concl.**
	VSG, TSG and PSG. Requirement of the methodology: AM0034 requires a recording frequency of 2 seconds for these parameters. Adjustment in JI project specific context: A recording frequency of 5 seconds will be applied. Assessment of the determination team: Due to the stable operating conditions in the plant and very low variations of N_2O emission values, an interval of 5 seconds is sufficient in order to establish high-quality hourly mean values. A higher frequency of recorded values is not necessary. The determination team follows the reasoning of the PP, but CAR B1 was raised, since the 2 minutes interval of the existing ABB analyser should be included in this statement. Nevertheless, since an older version of the methodology was referenced in some parts of the PDD, CAR B1 was raised: "The PDD should reference to the actual version of AM0034 (Ver. 5) and AM0028 (Ver. 5)" **Aspect:** Definition of NAP Requirement of the methodology:			

Checklist Item (incl. guidance for the determination team)	**Determination Team Comments** (Means and results of assessment)	**Ref.**	**Draft Concl.**	**Final Concl.**
	NAP is defined as the number of metric tonnes of 100% concentrated nitric acid produced Adjustment in JI project specific context: NAP shall be defined as the number of metric tonnes of 100% concentrated nitric acid produced, as well as the number of tonnes of HNO_3-equivalent used during the production of Manganese Nitrate. The NAP figure in the emission reduction calculations therefore includes also the HNO_3-equivalent production (See chapter 5.2.8). Assessment of the determination team: The PP shall include the inclusion of the SNM-plant in all sections of the PDD and provide • Quality documents • Process descriptions • Calculations to the determination team to inclusion of the plant into the project. CAR D4: The PDD should take into account in all sections: • the use of a share of the nitrous ammonia burner gas output for the SNM-production (MN(NO3)2) and • the back feeding of the exhaust from SNM-production into the absorption tower and further to the stack of the Nitric			

Checklist Item (incl. guidance for the determination team)	**Determination Team Comments** (Means and results of assessment)	**Ref.**	**Draft Concl.**	**Final Concl.**
	Acid plant.			
B.1.3. Are all applicability criteria in the methodology, the applied tools or any other methodology component referred to therein fulfilled?	The PP includes following discussion of applicability criteria in the PDD: a. exclusion of projects resulting in shut-down of N_2O abatement Applied: Unchanged. b. no effect on HNO_3 production Applied: This criterion has been eliminated since it has been consistently proven that N_2O abatement AIEs not affect nitric acid production. c. no increased NO_X emissions Applied: Unchanged. d. no other GHG emissions Applied: This criterion AIEs not apply, because secondary catalyst technology AIEs not lead to any non-N2O GHG emissions. e. continuous N_2O measurement possible This criterion AIEs not address a question of applicability as such. If monitoring is not possible / is complicated, a more appropriate and differentiating discussion can take place within the discussion of the monitoring aspects associated with the project The determination team raised some issues regarding this	/PDD/ /B-1/	~~CAR D4~~	OK

Checklist Item (incl. guidance for the determination team)	**Determination Team Comments** (Means and results of assessment)	**Ref.**	**Draft Concl.**	**Final Concl.**

	statement:
	CAR B1
	Section B.1.: Explanation and Justification of deviations from AM0034
	• Applicability criteria:
	  • The Explanation should follow the relevant list of conditions in the methodology:
	  • Criterion (b) of the PDD: *"no effect on HNO_3-production"* should not be eliminated but assessed according to the actual situation of the plant
	  • Criterion (e) of the PDD: *"continuous N_2O-measurement"* : This criterion is fulfilled.
	CAR D4:
	Since the methodology states as applicability criteria:
	"This baseline methodology is applicable to project activities that install a secondary N_2O abatement catalyst inside the ammonia burner of a nitric acid plant",
	the situation, that a $Mn(NO_3)_2$-(SMN)-plant is driven in parallel shall be considered as described under A.3.4 and expressed in CAR D4.			

B.1.4. Is the project in accordance to every other stipulation or requirement mentioned in all sections of the methodology?	Yes, the project meets all stipulations of the methodology. In this context it has to be mentioned, that there has been a close contact between the project proponents and the Walloon government regarding the development of the	/PDD/ /B-1/ /B-2/		OK

Checklist Item (incl. guidance for the determination team)	Determination Team Comments (Means and results of assessment)	Ref.	Draft Concl.	Final Concl.
	project specific methodology.			
B.2. Project Boundaries *Project Boundaries are the limits and borders defining the GHG emission reduction project*				
B.2.1. Are the project's spatial boundaries (geographical) clearly defined?	The project boundary includes the nitric acid plant from the inlets to the ammonia burner to the outlet of the stack. All NO_X and N_2O abatement-devices and the AMS in the stack are included. According to the methodology, only the emissions of N_2O as tail gas emission have to be considered in the project boundary. This is -according to the methodology- described in words and a visualisation of the physical project boundary as well as a table defining all significant GHG gases has been included in the PDD. CAR A2: The description of boundary in section B.3. should include the "Table 1: Overview of emission sources included or excluded from the project boundary" figured in the methodology with project specific explanations/justification if necessary. CAR D4: The inclusion of the SMN-production shall be included in the boundary definition.	/PDD/	~~CAR A2~~ ~~CAR D4~~	OK

Checklist Item (incl. guidance for the determination team)	Determination Team Comments (Means and results of assessment)	Ref.	Draft Concl.	Final Concl.
B.2.2. Are all sources and GHGs included in the project boundary as required in the applied methodology?	The methodology only considers N_2O as the main emission source in tail gas after the destruction facility. All other gases/sources are not included in the project boundary.	/PDD/		OK
B.2.3. In case the methodology allows choosing whether a source and/or gas is to be included, is the choice sufficiently explained and justified?	See B.2.2	/PDD/		OK
B.3. Baseline Identification *The choice of the baseline scenario will be validated with focus on whether the baseline is a likely scenario, and whether the methodology to define the baseline scenario has been followed in a complete and transparent manner.*				
B.3.1. What has been identified as the baseline scenario?	Because of absence of any N_2O regulations at the plant, Uhde 3 would not install any reduction technology and would continue emitting N_2O at the current levels until the introduction of the nitric acid sector into the EU ETS from January 2013 onwards	/PDD/ /2370/ /550K3/ /IPCC/		OK
B.3.2. What possible baseline scenarios have been considered?	Following alternative to the project activity has been identified: • Continuation of the *Status Quo*, where there is no N_2O destruction technology installed	/PDD/ /B-1/ /B-6/	~~CAR B2~~	OK

Checklist Item (incl. guidance for the determination team)	Determination Team Comments (Means and results of assessment)	Ref.	Draft Concl.	Final Concl.
	• Installation of a Non-Selective Catalytic Reduction unit (NSCR) • Implementation of a primary, secondary or tertiary N_2O destruction technology in the absence of the registration of the project activity. Since not all possible scenarios listed in the methodology AM0028 were discussed, CAR B2 was raised: "Section B.2.: Point 1.2 "Most realistic scenario in the absence of JI revenues for N_2O reductions achieved": The discussion of realistically feasible scenario alternatives should strictly follow the procedure to identify the baseline scenario described in AM0028 and include all alternatives listed in this document."			
B.3.3. In case alternatives have to be considered, are all scenarios supplemental to those provided in the methodology reasonable in the context of the project activity?	No additional scenarios have been considered.	/PDD/		OK
B.3.4. Has the baseline scenario been determined according to the methodology?	No, the scenarios: • Alternative use of N_2O such as: ○ Recycling of N_2O as a feedstock for the plant; ○ The use of N_2O for external purposes Were not included in the assessment. CAR B2 was raised.	/PDD/ /B-1/ /B-6/	~~CAR B2~~	OK
B.3.5. Is the list of alternatives complete?	No see B.3.4.	/PDD/	~~CAR~~	OK

Checklist Item (incl. guidance for the determination team)	**Determination Team Comments** (Means and results of assessment)	**Ref.**	**Draft Concl.**	**Final Concl.**
		/B-1/ /B-6/	~~B6~~	
B.3.6. Has the baseline scenario been determined using conservative assumptions where possible?	The determination of the baseline scenario was carried on the basis of the methodology AM0028 which deemed to be a conservative approach. In addition, the application of a benchmark value instead of (higher) historical emissions can also be rated as conservative.	/PDD/ /BENCH/ /B-1/		OK
B.3.7. AIEs the baseline scenario sufficiently take into account relevant national and/or sectoral policies, macro-economic trends and political aspirations?	Yes, as explained above, all legal requirements have been taken into account; it was checked by the determination team that no legal emission limits for N_2O exists until 2012-12-31.	/PDD/ /B-1/ /BENCH/ /PERM/ /PERM3/ /PERM23/ /PERM23N/ /IPCC/ /650/		OK

Checklist Item (incl. guidance for the determination team)	Determination Team Comments (Means and results of assessment)	Ref.	Draft Concl.	Final Concl.
B.3.8. Is the baseline scenario determination compatible with the available data and are all literature and sources clearly referenced?	The baseline scenario determination is compatible with the available data and literature sources are clearly referenced. The PDD provides references to all relevant literature sources (sources were submitted for determination, too) and data.	/PDD/ /B-1/ /IPCC/ /BENCH/ /B-5/		OK
B.4. Additionality Determination *The assessment of additionality will be validated with focus on whether the project itself is not a likely baseline scenario.*				
B.4.1. Methodology				
B.4.1.1. Did the additionality justification follow the requirements of the applied methodology and/or methodological tools?	The additionality has been assessed according to the methodology (Section II). The additionality has been proved according to the methodology, which includes a scheme for the assessment of the reference scenario and additionality of the project activity. The PP used the "Combined tool to identify the baseline scenario and demonstrate additionality", which is consistent to the "Additionality Tool" referenced in the methodology AM0034.	/PDD/ /B-1/ /B-7/		OK

Checklist Item (incl. guidance for the determination team)	Determination Team Comments (Means and results of assessment)	Ref.	Draft Concl.	Final Concl.
B.4.2. Consideration of JI before project				
B.4.2.1. Is the project starting date reported in accordance with the glossary of JI terms?	The start of the project activity was on 02nd September 2010 after a routine stop of the plant. At this date, the plant operation restarts with a fully operational secondary catalyst in the ammonia burner. This date is fixed as the starting date of the project since it is the start of the "real action". CAR A2 was raised, since the PDD mentioned the beginning of September as starting date which is not the 2nd as detected during on-site visit. To avoid misunderstandings, the PP was requested to mention the full date	/PDD/ /jir/	~~CAR A2~~	OK
B.4.2.2. In case the project start date is before commencing of determination, was the incentive from JI seriously considered and are details given in the PDD?	The starting date of the project was on 2010-09-02, which is prior to the determination date. But since • the PP provides a couple of documents regarding the correspondence with the involved parties and • the second plant on site will start after the determination date with the JI-project activity, a further prove of considering of JI before this date is not necessary.	/PDD/		OK
B.4.2.3. How and when was the decision to proceed with the project?	N/A			
B.4.2.4. Is the project start date consistent with the available evidences?	The project starting date was evidenced with plant protocols on 2010-09-02 19:51 (first measured value).	/PDD/ /N2ODA		OK

Checklist Item (incl. guidance for the determination team)	Determination Team Comments (Means and results of assessment)	Ref.	Draft Concl.	Final Concl.
		TA3/		
B.4.2.5. Was the decision to proceed with the project taken by a person entity which has the authority to do so?	N/A			-
B.4.2.6. How was the JI involved in the decision making process?	It is obvious, that the only incentive to carry out the project activity is the income generated by the ERUs claimed. JI is the prerequisite to implement the project and the main driver in the decision making process.	/PDD/		OK
B.4.2.7. Can the JI involvement in the decision be assessed as serious?	Yes, see above			-
B.4.3. Identification of alternatives Step 1 (in case of SSC projects pl. skip steps 1 and 2)				
B.4.3.1. Have all realistic alternatives been identified to the project?	No, the scenarios: • Alternative use of N_2O such as: o Recycling of N_2O as a feedstock for the plant; o The use of N2O for external purposes Were not included in the assessment. CAR B2 was raised.	/PDD/ /B-6/	~~CAR B2~~	OK
B.4.3.2. Contains the list of alternatives at least the status-quo situation and the project not undertaken as a JI project?	Yes the list of alternatives includes the status-quo situation and the implementation of the abatement technology in the absence of the registration of the project activity.	/PDD/		OK
B.4.3.3. Do all identified alternatives comply with	Yes, the alternatives are complying with the legal obligations,	/PDD/		OK

Checklist Item (incl. guidance for the determination team)	Determination Team Comments (Means and results of assessment)	Ref.	Draft Concl.	Final Concl.
applicable regulation?	since there are no restrictions for N_2O emissions during the proposed project period.			
B.4.4. Investment analysis Step 2 *In case the investment analysis as per step 2 is chosen to justify the additionality Annex 2 "Assessment of Financial Parameters" has to be used to provide additional details of the calculation parameters..*				
B.4.4.1. Is an appropriate analysis method chosen for the project (simple cost analysis, investment comparison analysis or benchmark analysis)?	According to the "Methodological Tool "Tool for the demonstration and assessment of additionality" (Version 05.2), the PP can choose between investment analysis (step 2) and barrier analysis (step 3). Since the PP applied the barrier analysis, no financial assessment was carried out.	/PDD/ /B-7/		OK
B.4.4.2. Is a clear, viewable and unprotected Excel spreadsheet available for the investment calculation?	N/A			
B.4.4.3. AIEs the period chosen for the investment analysis reflect the technical lifetime of the project activity or in case a shorter period is chosen, is the fair value of the project activity's assets at the end of the investment analysis period (as a cash inflow) included?	N/A			
B.4.4.4. Is the fair value calculated in accordance with local accounting regulations (where	N/A			

Checklist Item (incl. guidance for the determination team)	Determination Team Comments (Means and results of assessment)	Ref.	Draft Concl.	Final Concl.
available) or international best practice?				
B.4.4.5. Is the book value as well as the expectation of the potential profit or loss included in the fair value calculation?	N/A			
B.4.4.6. Are depreciation and other non-cash related items added back to net profits for the purpose to calculate the financial indicator?	N/A			
B.4.4.7. Is taxation excluded in the investment analysis or is the benchmark intended for post tax comparisons?	N/A	-	-	-
B.4.4.8. Were the input values used in the investment analysis valid and applicable at the time of the investment decision?	N/A	-	-	-
Investment comparison				
B.4.4.9. In case of project IRR: Are the costs of financing expenditures (loan repayments and interests) excluded from the calculation of project IRR?	N/A	-	-	-
B.4.4.10. In case of equity IRR: Is the part of the investment costs, which is financed by equity considered as net cash outflow and is the part financed by debt excluded in net cash outflow?	N/A	-	-	-

Checklist Item (incl. guidance for the determination team)	Determination Team Comments (Means and results of assessment)	Ref.	Draft Concl.	Final Concl.
B.4.4.11. Is the type of benchmark chosen appropriate for the type of IRR calculated (e.g. local commercial lending rates or weighted average costs of capital for project IRR; required/expected returns on equity for equity IRR)?	N/A	-	-	-
B.4.4.12. Is the benchmark value suitable for the project activity?	N/A, see above	-	-	-
B.4.4.13. Is it ensured that the project cannot be developed by other developers than the PP?	N/A, see above	-	-	-
B.4.4.14. Was the benchmark consistently used in the past for similar projects with similar risks?	N/A, see above.	-	-	-
B.4.4.15. Was sensitivity analysis appropriately done by the project participants?	N/A, see above	-	-	-
B.4.5. **Barrier analysis Step 3 or SSC additionality assessment**				
B.4.5.1. Are there any barriers given whose issues have a clear and definable impact on the profitability of the project?	Revenues from the sale of ERUs are the only income that would be generated by the project activity. This implies that without the registration of the project as a JI activity, the project will not take place.	-	-	-
B.4.5.2. How is it justified and evidenced that the barriers given in the PDD are real?	The PP explained and proved that: • None of the N_2O destruction technology options (including	-	-	-

Checklist Item (incl. guidance for the determination team)	Determination Team Comments (Means and results of assessment)	Ref.	Draft Concl.	Final Concl.
	NSCR) are expected to generate any significant financial or economic benefits other than JI related income (Financial barrier). • It is therefore unlikely that any plant operator would install such technologies on a voluntary basis without the incentive of any regulatory requirements (emissions caps) or financial benefits (such as revenues from the sale of ERUs). A deep evaluation is made in annex A4: assessment of barrier analysis.			
B.4.5.3. How is it justified that one or a set of real barriers prevent(s) the implementation of the project activity?	The determination team can confirm. That similar projects have only been implemented (Europe and over-seas) in the context of emission trading projects (JI, CDM, VCS,…). According to the "Additionality tool", Sub-step 3a: Identify barriers that would prevent the implementation of the proposed CDM project activity: *"(a) Investment barriers, other than the economic/financial barriers in Step 2 above, inter alia:* *• For alternatives undertaken and operated by private entities: Similar activities have only been implemented with grants or other non-commercial finance terms. Similar activities are defined as activities that rely on a broadly similar technology or practices, are of a similar scale, take place in a comparable environment with respect to regulatory framework and are undertaken in the relevant*	PDD/ /B7/	-	-

Checklist Item (incl. guidance for the determination team)	Determination Team Comments (Means and results of assessment)	Ref.	Draft Concl.	Final Concl.
	country/region." The financial barrier is justified according to the relevant tool.			
B.4.6. Common practice analysis Step 4 (in case of SSC projects skip this step)				
B.4.6.1. Is the defined region for the common practice analysis appropriate for the technology/industry type?	This project type is already diffused in Europe and other countries resp. industrial sector (fertilizer industry) but always related to emission trading-projects like JI, CDM or VCS. The EFMA published a position paper regarding the implementation of benchmarks in near future related to emission trading projects and future inclusion of N_2O in the ETS.	/PDD/ /EFMA/		OK
B.4.6.2. To what extent similar projects have been undertaken in the relevant region?	There are several similar projects related to JI-activities in the European community (http://ji.unfccc.int/JI_Projects/ProjectInfo.html) . All projects are already implemented/ in preparation of first verification.	/unfccc/		OK
B.4.6.3. In case similar projects are identified, are there any key differences between the proposed project and existing or ongoing projects and what kind of differences is observed?	No, all projects are in the same scope and using the same technology for N_2O-abatement resp. emission reduction. All projects are referring to the same Methodology	/PDD/ /unfccc/		OK

Checklist Item (incl. guidance for the determination team)	Determination Team Comments (Means and results of assessment)	Ref.	Draft Concl.	Final Concl.
B.5. Calculation of GHG Emission Reductions *It is assessed whether the calculations of project emissions, baseline emissions, leakage emissions are stated according to the methodology and whether the argumentation for the choice of default factors and values – where applicable – is justified. Furthermore calculation of emission reductions shall be assessed.*				
B.5.1. Are the emission reductions real, measurable and give long-term benefits related to the mitigation of climate change?	The emission reductions are real, measurable and give long-term benefits related to the mitigation of climate change.	/PDD/ /B-1/		OK
B.5.2. Are the equations applied correctly according to the applied approved methodology?	Yes, the equations applied for calculation are correctly applied according to the approved methodology, but some amendments were necessary in the context of the project (see findings below). The formulae to calculate the project and baseline emissions are presented in the section B.6.1. of the PDD in a clear and transparent manner according to the methodology. Some issues were raised in the context of data processing. The calculation of estimated emission reductions has been carried out in the section B.6.2. of the PDD. The considering of leakage is discussed in the methodology. In accordance with the methodology, no leakage calculation	/PDD/ /B-1/ /XLS/	~~CAR D4~~	OK

Checklist Item (incl. guidance for the determination team)	**Determination Team Comments** (Means and results of assessment)	**Ref.**	**Draft Concl.**	**Final Concl.**
	is required, because the technology used is a secondary catalyst. Data processing: The description of the application of instrument correction factors / elimination of implausible values in section D.1.2.2. should be described as implemented in the project activity. The statistical analysis acc. to the methodology should be included in section D.1.2.2. CAR D4: The inclusion of the SNM-production in the plant operation has a significant effect on the project emission calculation: EF_N is given in kg N_2O/t HNO_3 and side reactions, which waste nitrous process gas will lead to a reduction of the HNO_3-output. This special case has to be considered in the equitation used for ERU-calculation.			
B.5.3. In case the methodology allows for different methodological choices, are the equations applied properly justified and have they been used reflecting the other methodological choices (i.e. baseline identification)?	The methodology provides a clear procedure for calculation of the emission reductions. There are no provisions for choices between different methodological approaches.	/PDD/ /B-1/		OK
B.5.4. Have conservative assumptions been used when calculating the project emissions?	Yes. The Walloon government issued a project confirmation letter setting benchmark values (EF_{BM}) for the calculation of the reduction of N_2O-Emission in future years. These values/years are:	/PDD/ /B-1/ /BENCH/		OK

Checklist Item (incl. guidance for the determination team)	Determination Team Comments (Means and results of assessment)	Ref.	Draft Concl.	Final Concl.
	2010 2011 2012 2.5 2.5 1.85 kg N_2O/t HNO_3 (100%)	/XLS/		
B.5.5. Are all data and parameters which remain fixed throughout the crediting period correct, applicable to the project and will lead to a conservative estimation of emission reductions?	Yes, the regulatory limits and benchmark values are fixed over the crediting period. Since the project takes into account a low baseline emission factor instead of historical emission data, the calculation of emission reductions can be rated as conservative.	/PDD/		OK
B.5.6. Is the choice of the value for the data and parameters which have to be monitored reasonable?	Yes, the choice of data is • in line with the methodology and • checked to be reasonable.	/PDD/		OK
B.6. Monitoring of Emission Reductions *It is assessed whether the monitoring plan is appropriate for the project activity and in line with the applied methodology.*				
B.6.1. Are all monitoring parameters required by the applied methodology contained in the monitoring plan?	A methodology AM0034 includes a comprehensive list of parameters monitored during the crediting period. Since a benchmark value will be applied, only project emissions will be monitored: • $NCSG_n$: N_2O concentration in the stack gas • VSG_n: Volume flow rate of the stack gas • OH_n: Operation hours	/PDD/ /B-1/ /MO2/	~~CAR A2~~ ~~CAR D4~~	OK

Checklist Item (incl. guidance for the determination team)	**Determination Team Comments** (Means and results of assessment)	**Ref.**	**Draft Concl.**	**Final Concl.**
	• TSG: Temperature of stack gas • PSG: Pressure of stack gas Following parameter (trip-points) are recorded on-site and are available for plausibility check during verification on-site: • AFR: Ammonia flow rate to the AOR • AIFR: Ammonia to air ratio • OT_h: Oxidation temperature • OP_n: Operation pressure Additional parameter were added to the monitoring plan in order to include the SNM-plant in the project boundary (see Chapter 5.2.8) The plant PCS (process control system) generates a status signal, which is logically included in several trip and safety points of plant parameter. In case of abnormal situations, the plant will be shut down by closing the ammonia inlet valve and the signal changes (0>I, I>0. This plant status signal will be evaluated to determine whether the plant is in operation or not. CAR A2: Section D.1., point 6.: “The data acquisition system”. This section should clearly describe the generation and logging of the status signal of the plant.			

Checklist Item (incl. guidance for the determination team)	Determination Team Comments (Means and results of assessment)	Ref.	Draft Concl.	Final Concl.
	CAR D4: Since the Uhde 3 plant consists of an additional SNM-plant unit, the parameter used for determinating the NAP-Equivalents shall be included in the PDD in the relevant section.			
B.6.2. In case different approaches can be chosen acc. to the methodology, is the selection of parameters justified and correct?	N/A	-	-	-
B.6.3. Are the means of monitoring of all parameters contained in the monitoring plan in accordance with the requirements of the applied methodology?	Yes, process parameter were monitored and recorded through the plant-PCS. Emission data (NCSG) is currently monitored in an existing ABB-analyser, during the start up of the project, this Analyser will be exchanged by a Dr. Foedisch MCA 04 AMS. The PP added some parameter to monitor the output of the SNM-plant. (CAR D4)	/PDD/ /SCREEN/	~~CAR D4~~ FAR D2	OK
B.6.4. Are all parameters appropriately labelled?	Yes, the parameters are labelled according to the methodology.	/PDD/		OK
B.6.5. Is it likely that the monitoring arrangements described in the PDD can properly be implemented in the context of the project activity?	No, since the AMS was not commissioned and not installed during on site visit, and existing analysers not checked against the DIN EN 14181, QAL2 a FAR D2 was raised to check the correct implementation during first verification. FAR D2: Since the PP will use the already installed ABB analysers for	/PDD/		OK

Checklist Item (incl. guidance for the determination team)	Determination Team Comments (Means and results of assessment)	Ref.	Draft Concl.	Final Concl.
	measuring the N_2O emissions during first time of the project, the verifier should check the • suitability of the analysers, sampling points and sampling pipes proved in a corresponding QAL 2 test • consideration of longer measurement frequency in the monitoring report.			
B.6.6. Are the means of implementation of the monitoring plan, including QA/QC procedures sufficient to ensure that emission reductions can be reported without material misstatement?	The PP implemented several QA/QS procedures in the course of improvement of the internal ISO 9001/PROC1/ - /PROC5/. Emission data will be determined through analysers, which are in compliance with the European Standard DIN EN 14181: "Stationary source emissions – Quality assurance of automated measuring systems as required by the methodology referenced in the PDD. Remark: Since the existing ABB analyser cannot be proven to fulfil the requirements of QAL1, the suitability of this analyser for the project activity will be proven during the QAL2 audit by comparison with a Standard Reference Method. The determination team issued a FAR D2 (see above) to prove the suitability to the verifier.	/PDD/ /CERT/ /PROC1/ /PROC2/ /PROC3 3/ /PROC4/ /PROC5 3/	FAR D2	OK
B.6.7. Will all monitored data required for verification and issuance be kept for two years after the end of the crediting period or the last issuance of CERs, for this project activity, whichever	Yes, all monitored data required for verification and issuance will be stored in a central data system of the company and kept for two years after the project end. This is stated in the PDD under B.7.2.	/PDD/		OK

Checklist Item (incl. guidance for the determination team)	Determination Team Comments (Means and results of assessment)	Ref.	Draft Concl.	Final Concl.
occurs later?				
B.6.8. AIEs the monitoring plan provide for the collection and archiving of all relevant data necessary for determining baseline emissions, project emissions, and leakage within the project boundary during the crediting period?	Baseline emissions: As per the national authorities, baseline emissions should be calculated applying a "Benchmark Emission Factor (EF_{BM}), or if lower, regulatory limits of local authorities (see B.5.4.). Therefore, the acquisition of data of N_2O-emissions in order to determine the baseline emissions is not necessary. However, the monitoring of trip point values and data related to the amount of produced HNO_3 are completely included in the monitoring plan. Project emissions: According to the methodology, the monitoring plan provides all relevant data necessary for measurement of the project emissions within the project boundary. Leakage: According to the methodology, leakage shall not be monitored. Caused by an increased amount of catalyst, a constant pressure loss occurs, but will not be monitored over the crediting period.	/PDD/ /B-1/ /BENCH/		OK
B.6.9. Are the choices of GHG indicators reasonable and conservative?	Yes, e.g. the reference value (benchmark emissions factor) that will be applied to calculate the emissions reductions from a specific verification period was determined according to Walloon government decision and Methodology.	/PDD/	~~CAR A2~~	OK

Checklist Item (incl. guidance for the determination team)	**Determination Team Comments** (Means and results of assessment)	**Ref.**	**Draft Concl.**	**Final Concl.**
	The violation of these limits will lead to a reduction of ERUs for the relevant period. The PP was requested to include an overview of emission sources included or excluded from the project boundary in the PDD, section B.3. (CAR A2) .			
B.6.10. Is the measurement method clearly stated for each indicator to be monitored and also deemed appropriate?	The monitoring plan of the PDD which reflect the necessities of the methodology provides measurement methods for project emissions in chapter B.6.2 of the PDD. But the use of the ABB analysers for the first time of project periods was not mentioned and should be included in the monitoring plan (CAR D1).	/PDD/	~~CAR D1~~	OK
B.6.11. Is the measurement equipment described and deemed appropriate?	The requirements for main equipment for measurement of project emissions is described in the PDD and in documents provided during the site visit. The PP will use an existing AMS in the first course of the project, which suitability is not approved at the moment. FAR D2 was raised to check this during first verification. The determination of NAP (HNO_3-output) will be measured with existing devices. Quality procedures, technical specifications were provided during on site visit. A cross check procedure using density values generated in the plant-laboratory are not implemented at the moment. A corresponding FAR was raised (FAR D3).	/PDD/	FAR D2 FAR D3	OK

Checklist Item (incl. guidance for the determination team)	**Determination Team Comments** (Means and results of assessment)	**Ref.**	**Draft Concl.**	**Final Concl.**
B.6.12. Is the measurement accuracy addressed and deemed appropriate? Are procedures in place on how to deal with erroneous measurements?	The accuracy of plant parameters will be determinated through internal QA/QS-procedures using cross checks. Some findings were raised to improve these procedures until start of the project activity. The accuracy of the AMS will be determinated annually through QAL2 or AST test. For determination and elimination of erroneous values (of the AMS) the PP implemented –according to the methodology- a plausibility check before entering the data in the data base.	/PDD/ (PROC1/ - /PROC5 3/	FAR D2 FAR D3	OK
B.6.13. Is the measurement interval identified and deemed appropriate?	The AMS for project emissions is working as an online- and permanent-measurement device. The methodology required a storage interval of 2 seconds but the PP requested a deviation (see. B.1.2.) to implement a 5 second interval in order to reduce redundant data sets. The determination team deemed this new interval as appropriate. The measuring frequency of the existing ABB analyser is at 2 minutes which has to be described in the PDD (CAR D1)	/PDD/	~~CAR D1~~	OK
B.6.14. Are the registration, monitoring, measurement and reporting procedure defined?	The data of the AMS for the calculation of project emissions will be transferred to central data acquisition system of the company (Honeywell PHD) and evaluated by N.serve according to the regulations of the methodology.	/PDD/		OK
B.6.15. Are procedures identified for maintenance of monitoring equipment and installations? Are the calibration intervals being observed?	The AMS is included in the quality procedures which are established for proper operation of the plant. Additional measures are related to the European Norm	/PDD/ /14181/	FAR D3	OK

Checklist Item (incl. guidance for the determination team)	**Determination Team Comments** (Means and results of assessment)	**Ref.**	**Draft Concl.**	**Final Concl.**

	EN14181 (2004) “Stationary source emissions - Quality assurance of automated measuring systems” will be implemented after commissioning of the new analyser:.
	• **Three quality assurance levels of EN 14181**:
	  • QAL 1: performance approval
	  To prove, that the AMS is suitable for purpose and in line with the European norm. The PP provides a QAL1 Certificate 0000025929 dated 2010-03-10 according to DIN EN 14181:2004 issued by TÜV Rheinland
	  • QAL 2: commissioning and validation of an AMS
	  An accredited laboratory (acc. ISO 17025) carries out specific testing procedures to verify that the AMS installation meets the accuracy requirements laid down by EN 14181. The performance of the complete installation was compared against a series of measurements made with approved Standard Reference Methods.
	  • QAL 3: ongoing operation and maintenance
	  The PP implemented a quality assurance system to prove the ongoing compliance of the AMS with the norm. The maintenance activities are monitored and controlled as part of an overall quality assurance programme.			

Checklist Item (incl. guidance for the determination team)	**Determination Team Comments** (Means and results of assessment)	**Ref.**	**Draft Concl.**	**Final Concl.**
	• AST: Annual Surveillance Test The PP verifies the continuing validity of the calibration function on yearly basis. The requirements and responsibilities for carrying out the AST tests are the same as for QAL 2. Since QAL2 was carried out in 2010, the AST is not necessary in 2010. Since the new analyser was not installed at time of determination, the determination team was not able to check the QA/QS procedures related to ensure the proper functionality of the analyser. FAR D3 was raised: The PP should • provide calibration and maintenance records of all monitoring and measuring devices of the project. Each record should include: • Tracking Number. This tracking number is also on the equipment. • Equipment Description, type, Manufacturer and Model Location - Calibration requirements • Calibration interval with justification for the interval • Calibration Procedure • Calibration History • Calibration Due. • implement a procedure for calibration/maintenance of the Dr. Foedisch AMS including measures for the case that the error exceeds the allowed limits.			

Checklist Item (incl. guidance for the determination team)	**Determination Team Comments** (Means and results of assessment)	**Ref.**	**Draft Concl.**	**Final Concl.**
B.6.16. Are procedures identified for day-to-day records handling (including what records to keep, storage area of records and how to process performance documentation)	Process data will send via I/O cards to the process control system (PCS). They will be stored in a Honeywell PHD plant history database. The processing of the raw N_2O-data sets will be carried out by N.serve who is responsible for this part of the project.	/PDD/		OK

Checklist Item (incl. guidance for the determination team)	Determination Team Comments (Means and results of assessment)	Ref.	Draft Concl.	Final Concl.
B.7. Project Management Planning *It is checked that project implementation is properly prepared for and that critical arrangements are addressed.*				
B.7.1. Is the authority and responsibility of overall project management clearly described?	Yes, the operational structure of the QMS of the plant is certified according to ISO 9001:2008, 14001:2004 and OHSAS 18001:2007. Several quality documents regarding maintenance of monitoring equipment and emission determination were provided to the determination team. The PP presented an organisational chart of the plant and project management to the determination team. The determination team raised the FAR D3 to improve the quality management system of the project. This includes the request for • developing an ISO document showing relevant responsibilities/ procedures/demands/documents of the project (project book).	/PDD/ /PROC1/ - /PROC52/ /O/ /ORG/	FAR D3	OK
B.7.2. Are procedures identified for training of monitoring personnel?	Specific training measures are planned and made after commissioning of new measurement instruments. Currently the PP implemented training for staff involved in maintenance of the analysers.	/PDD/ /TRAIN/		OK
B.7.3. Are procedures identified for review of reported results/data?	Yes, all monitoring related data will be sent to N.serve for revision, plausibility check and calculation of the project emissions. N.serve is involved in many other N_2O-based	/PDD/		OK

Checklist Item (incl. guidance for the determination team)	Determination Team Comments (Means and results of assessment)	Ref.	Draft Concl.	Final Concl.
	projects and can provide experiences in data handling and processing.			
B.7.4. Is the authority and responsibility of overall project management clearly described?	Yes, see above.	/PDD/		OK
C. Duration of the Project/ Crediting Period *It is assessed whether the temporary boundaries of the project are clearly defined.*				
C.1. Is the project's starting date and the project duration clearly defined and evidenced?	The projects starting date was on 2010-09-02 according to the internal schedule of the plant	/PDD/ /N2ODATA3/		OK
C.2. Is the project's operational lifetime clearly defined and evidenced?	The operational lifetime (efficiently of the catalyst) is estimated at 3 years, which is guaranteed by the catalyst supplier.	/PDD/		OK
C.3. Is the start of the crediting period clearly defined and reasonable?	The PP assumes that the starting date of the crediting period will be the starting date of the project which was on 2010-09-02. The exact rules and procedures for implementation a JI Track 1 project in Wallonia were still to be finalised and only a confirmation letter was issued by the Walloon government. The starting date of the crediting period will be included in the LoA which can be expected after provision of the draft determination report. At this moment, the determination team	/PDD/ /N2ODATA3/ /MAIL2/	~~/CAR A1/~~	OK

Checklist Item (incl. guidance for the determination team)	Determination Team Comments (Means and results of assessment)	Ref.	Draft Concl.	Final Concl.
	considers a starting date of the crediting period on 2010-09-02 in his determination process.			
D. Environmental Impacts *Documentation on the analysis of the environmental impacts will be assessed, and if deemed significant, an EIA should be provided to the AIE.*				
D.1. Has an analysis of the environmental impacts of the project activity been sufficiently described?	The environmental impacts are described in the PDD under Section D.: Environmental Impacts. The PP states that apart from the reduction of emissions of N_2O, there will be no significant further positive or negative impacts on the environment.	/PDD/		OK
D.2. Are there any Host Party requirements for an Environmental Impact Assessment (EIA), and if yes, is an EIA approved?	It is unclear, if the host country government (Belgium) AIEs request an EIA. CL F1: The PP should clarify the necessity of an EIA.	/PDD/	~~CL F1~~	OK
D.3. Will the project create any adverse environmental effects?	See D.1.	-	-	-
D.4. Are transboundary environmental impacts considered in the analysis?	See D.1.	-	-	-
D.5. Have identified environmental impacts been addressed in the project design?	N/A	-	-	-

Checklist Item (incl. guidance for the determination team)	Determination Team Comments (Means and results of assessment)	Ref.	Draft Concl.	Final Concl.
D.6. AIEs the project comply with environmental legislation in the host country?	Yes, the project fully complies with environmental legislation of Belgium.	/2370/ /550K3/ /PERM3/ /PERM23/ /PERM23N/ /IPCC/		OK
E. Stakeholder Comments *The AIE should ensure that stakeholder comments have been invited with appropriate media and that due account has been taken of any comments received.*				
E.1. Have relevant stakeholders been invited to consultation?	A global stakeholder consultation was carried out on the TÜV NORD website www.global-warming.de during a 30 days period from 2010-11-15 to 2010-12-15. No comments were received. A local stakeholder process has not been carried out. This is considered to be appropriate for this kind of project activities as no affected local stakeholders could be identified. A local stakeholder process was not requested by Belgian authorities.	/PDD/ /gw/		OK

Checklist Item (incl. guidance for the determination team)		Determination Team Comments (Means and results of assessment)	Ref.	Draft Concl.	Final Concl.
E.2.	Have appropriate media been used to invite comments by local stakeholders?	See E.1.	/PDD/		OK
E.3.	If a stakeholder consultation process is required by regulations/laws in the host country, has the stakeholder consultation process been carried out in accordance with such regulations/laws?	See E.1.	/PDD/		OK
E.4.	Is an appropriate summary of the stakeholder comments received provided in the PDD?	No comments were received during the period of 30 days of the global stakeholder process.	/PDD/		OK
E.5.	Has due account been taken of any stakeholder comments received?	See E.1.	/PDD/		OK

ANNEX 2: ASSESSMENT OF BASELINE IDENTIFICATION

Table A-2: Assessment of Baseline Identification

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

Baseline Alternatives identified	In line with the Metho-dology?	Eli-mina-ted	Reasons for elimination / non-elimination from list of alternatives	Evi-dence used	AIE Assessment	
					Appro-priate-ness of elimi-nation	Assessment of determination team (results and means of assessment)
a) Continuation of the Status Quo (Business as Usual Scenario). The continuation of the business as usual scenario, where there is no N_2O destruction technology installed.	☒	☐	**The scenario not to install any N_2O abatement technology is in compliance with the legal situation during the crediting period. This alternative will be not removed from list of alternatives.**	**/PDD/ /2370/ /PERM3/ /550K3/ /IPCC/**	☐	The determination team follows the justification for the elimination of scenario a), since the site permission AIEs not force the implementation of any abatement facilities.
b) Alternative uses of N_2O, such as: - Recycling of N_2O for feedstock - External use of N_2O	☒	☒	**The use of N_2O as a feedstock for the production of nitric acid is technically not feasible, because it is not possible to produce nitric acid from N_2O at the quantities found in the tail gas of nitric acid plants.**	**/PDD/ /BREF/**	☒	Due to low concentrations of N_2O in the exhaust of the plant, the recycling is not a technically suitable and economically attractive alternative.

Baseline Alternatives identified	In line with the Metho-dology?	Eli-mina-ted	Reasons for elimination / non-elimination from list of alternatives	Evi-dence used	AIE Assessment	
					Appro-priate-ness of elimi-nation	Assessment of determination team (results and means of assessment)
c) Installation of NCSR (Non Specific Catalytic Reduction)	☒	☒	**The application of a Non Specific Catalytic Reduction Unit causes high investment and operation costs due to permanent demand of a reduction agent. This technology produces emissions of CO, CO_2 and remaining hydrocarbons.**	**/PDD/ /BREF/**	☒	Since there is an efficient N_2O-abatement system available on market, there is no need to choose a not-state-of-the-art-technology which causes higher costs conducted with less efficiency.
d) Implementation of a primary, secondary or tertiary N_2O destruction technology in the absence of the registration of the project activity.	☒	☒	**Since there is no financial benefit to reduce the N_2O-emission in the absence of legal restrictions, the implementation of a catalyst technology in absence of the project activity will not take place.**	**/PDD/**	☒	The determination team follows the justification of the PP, that there is no incentive to implement an abatement technology in a comparable extent in absence of the project activity

ANNEX 3: ASSESSMENT OF FINANCIAL PARAMETERS

Table A-3: Assessment of Financial Parameters

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

Parameter	Value applied	Unit	Source of Information (please indicate document and page)	Reference	AIE ASSESSMENT		
					Correctness of value applied	Appropriateness of information source	Comment

ANNEX 4: ASSESSMENT OF BARRIER ANALYSIS

Table A-4: Assessment of Barrier Analysis

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

Kind of Barrier (invest, tech, other)	Description of Barrier	Evidence used	Assessment of determination team	
			Appropriateness of information source	Explanation of final result

Investment	None of the N_2O destruction technology options (including NSCR) are expected to generate any financial or economic benefits other than JI-related income. Their operation AIEs not create any marketable products or by-products. However, any operator willing to install and thereafter operate such technology faces significant investment and additional operating costs	/PDD/ Check of legal frame conditions of the country	The sources are appropriate to prove, that there are no financial benefits which can be generated by the reduction of N_2O or other GHG emissions.	The PP could prove, that the project activity faces an investment barrier since the implementation of the project activity can only be financed through the benefit of the JI. There is no incentive beyond the JI for plant operator to implement an abatement technology which reduced N_2O-emissions.
Techno-logical	It is unlikely that any plant operator would install such technologies on a voluntary basis without the incentive of any regulatory requirements (emissions caps) or financial benefits (such as revenues from the sale of ERUs).	/PDD/ /BREF/	The BREF documents show clearly, that the imple-mentation of an additional N_2O abatement technology in an exis-ting plant is coupled with com-prehensive construc-tion works.	The PP could prove, that the project activity faces a technological barrier.

Other (common practice)	Before the implementation of JI projects within Europe, secondary catalyst technology had only been operated in some European countries on an industrial trial basis. Researching this technology made sense due to the prospective revenues obtainable under the Kyoto Protocol's Clean Development Mechanism (CDM) by employing it in nitric acid plants located in developing nations on a voluntary basis.	/PDD/	/EFMA/	Common practice in the relevant regions/industrial scopes is the inclusion of N_2O abatement projects in emission trading projects. There is no incentive to invest in the technology without revenues through tradable emission reduction units.

ANNEX 5: OUTCOME OF THE GSCP

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

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

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

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

ANNEX 6: APPLICATION OF NON APPROVED METHODOLOGIES REQUIREMENTS CHECKLIST

Table A-6: Non approved Methodologies Requirement Checklist

☒	An approved CDM or country specific methodology was applied.
☐	A non approved methodology was applied.

Checklist Item	Determination Team Comments (Means and results of assessment)	Ref.	Draft Concl.	Final Concl.

ANNEX 7: STATEMENTS OF COMPETENCE OF TEAM MEMBERS

TÜV NORD

CERTIFICATE OF APPOINTMENT

Ms. Sabine Meyer

born on 1976-07-05

satisfies the requirements as specified in the TÜV NORD JI/CDM CP directives and is hereby appointed as

TÜV NORD JI/CDM Assessor

The present appointment will terminate on 2013-10-27
Certification registration No. 10 10 06 – 197 rev1

Essen, 2010-10-28

Head of TÜV NORD JI/CDM Certification Program
of TÜV NORD CERT GmbH

TÜV NORD

CERTIFICATE OF APPOINTMENT

Ms. Alexandra Nebel

born on 1980-07-25

satisfies the requirements as specified in the TÜV NORD JI/CDM CP directives and is hereby appointed as

TÜV NORD JI/CDM Lead Assessor

The present appointment will terminate on 2012-11-19
Certification registration No. 09 11 08 – 95 rev2

Essen, 2009-11-20

Head of TÜV NORD JI/CDM Certification Program
of TÜV NORD CERT GmbH

TÜV NORD

CERTIFICATE OF APPOINTMENT

Mr. Ulrich Walter

born on 1984-10-12

satisfies the requirements as specified in the TÜV NORD JI/CDM CP directives and is hereby appointed as

TÜV NORD JI/CDM Assessor

The present appointment will terminate on 2013-05-24
Certification registration No. 10 05 08 – 149 rev1

Essen, 2010-05-25

Head of TÜV NORD JI/CDM Certification Program
of TÜV NORD CERT GmbH

TÜV NORD

CERTIFICATE OF APPOINTMENT

Mr. Dipl-Ing. Rainer Winter

born on 1963-02-21

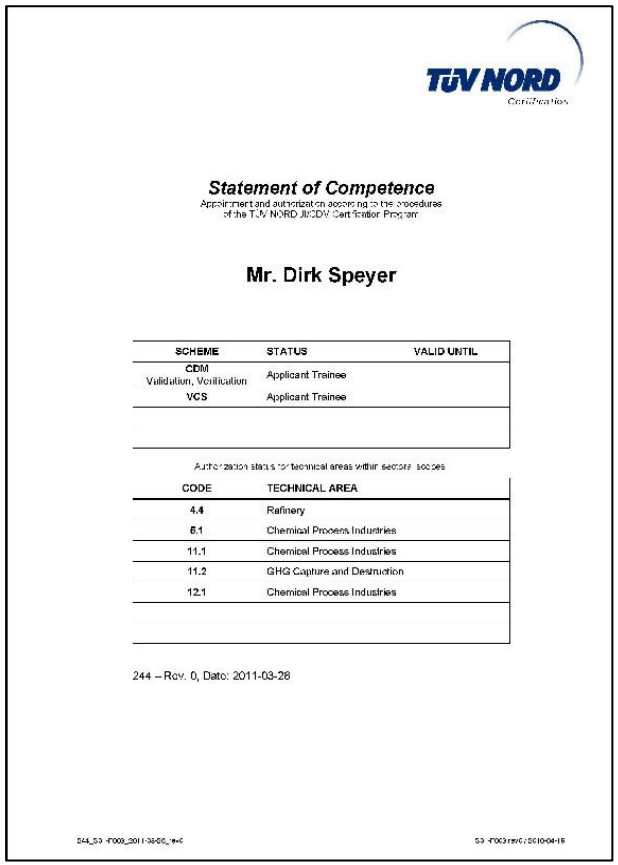
satisfies the requirements as specified in the TÜV NORD JI/CDM CP directives and is hereby re-appointed as

TÜV NORD JI/CDM Senior Assessor

The present appointment will terminate on 2013-07-03
Certification registration No. 04 02 154-03
Initial appointment Assessor: 2004-03-31
Senior Assessor: 2007-07-07

Essen, 2010-07-04

Deputy of TÜV NORD JI/CDM Certification Program
of TÜV NORD CERT GmbH



TÜV NORD Certification

Statement of Competence

Appointment and authorization according to the procedures of the TÜV NORD JI/CDM Certification Program

Mr. Dirk Speyer

SCHEME	STATUS	VALID UNTIL
CDM Validation, Verification	Applicant Trainee	
VCS	Applicant Trainee	

Authorization status for technical areas within sectoral scopes

CODE	TECHNICAL AREA
4.4	Refinery
5.1	Chemical Process Industries
11.1	Chemical Process Industries
11.2	GHG Capture and Destruction
12.1	Chemical Process Industries

244 – Rev. 0, Date: 2011-03-28

TÜV NORD

CERTIFICATE OF APPOINTMENT

Mr. Dipl.-Ing. Eric Krupp

born on 1971-08-25

satisfies the requirements as specified in the TÜV NORD JI/CDM CP directives and is hereby re-appointed as

TÜV NORD JI/CDM Senior Assessor

The present appointment will terminate on 2013-07-05
Certification registration No. 06 05 01 – 017
Initial appointment on 2007-07-06

Essen, 2010-11-29

Head of TÜV NORD JI/CDM Certification Program
of TÜV NORD CERT GmbH