FINAL
JI DETERMINATION REPORT

PEC RHIN S.A.

PEC RHIN N_2O ABATEMENT PROJECT

Report No: 8000382322 – 10/147

Date: 2011-03-03

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Date of first issue: 2010-06-21	Project No.: Report No: 8000382322 – 10/147
Project Type: ☒ JI Track 1 (Projet Domestique) ☐ JI Track 2	Organisational unit: TÜV NORD JI/CDM Certification Program
Client: Pec Rhin S.A.	Client ref.: Jean-Marc Bastian
Summary:	☒ positive determination opinion ☐ negative determination opinion

Pec Rhin S.A. has commissioned the TÜV NORD JI/CDM Certification Program (CP) as a Third Party to determinate the project: "Pec Rhin N_2O abatement project" with regard to the relevant requirements of the host country France 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 Projet Domestique Methodology: "Catalytic reduction of N_2O at nitric acid plants", approved and published by the MEEDDAT in July 2009.

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 (France) 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 316,296 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.

The LoA was issued after registration of the project at the DFP, CAR A1 was closed after submission of the LoA to the DOE.

Report No.: 8000382322-10/147	Subject Group: Climate Protection	
Report title: Pec Rhin N_2O abatement project		
Work carried out by: Mrs. Alex Nebel Mr. Ulrich Walter Mrs. Sabine Meyer		
Technical review by:	Final approval by	
Mr. Rainer Winter Mr. Evgeni Sud	Mr. Eric Krupp	
Date of this revision: 2011-03-03	Rev. No.: 1	Number of pages: 84

Indexing terms

Projet Domestique
JI – Track 1
Determination PDD

Abbreviations

AMS	Automated Monitoring System
BAT	Best available technology
BAU	Business as usual
CA	Corrective Action
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CH_4	Methane
CL	Clarification Request
CO_2	Carbon dioxide
CO_{2e}	Carbon dioxide equivalent
CP	Certification Program
DFP	Designated Focal Point
DRIRE	Directions Régionales de l'Industrie de la Recherche et de l'Environnement
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
MEEDDAT	Ministère de l'Ecologie, de l'Energie, du Développement durable et de la Mer, France
N_2O	Nitrous Oxide
NCV	Net Calorific Value of Fuel
PDD	Project Design Document
QC/QA	Quality control/Quality assurance
UNFCCC	United Nations Framework Convention on Climate Change
VVM	Validation and Verification Manual

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1 OBJECTIVE / SCOPE

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

"Pec Rhin N_2O abatement project"

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

Item	Data		
	☐	13	Waste handling and disposal
	☐	14	Afforestation and Reforestation
	☐	15	Agriculture
Applied Methodology	*Project specific methodology (Projet Domestique Methodology)*		
Track	*1*		
Crediting period	☐ Renewable Crediting Period (7 y) ☒ Fixed Crediting Period (10 y) 2010-08-01 - 2012-12-31 as per PDD Version 2 submitted for registration 2011-09-01 - 2012-12-31 as per LoA which was issued after submission of the draft version of the determination report		
Start of crediting period[1]	2010-09-01		

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	France	Pec Rhin S.A.
Other involved party/ies	Germany	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	France
Region	North Eastern (Alsace), Département: Haut Rhin
Project location address	Usine de Pec Rhin S.A, Zone industrielle Mulhouse Rhin, 68490 Ottmarsheim, France
Plant coordinates	Plant tail gas stack: Lat: 47°47'30.27"N Long: 7°31'20.90"E Ammonia burner: Lat: 47°47'30.49"N Long: 7°31'19.91"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 production plant of Pec Rhin. 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	-	OSCHATZ
Diameter	mm	3960
Start of commercial production	-	2005 (1970 first installation)
Operating conditions as per specifications (trip point values)		
- Temperature (min/max):	℃	740 - 920
- Pressure (max):	Bar abs	4.6
- Ammonia to Air ratio (max)	Vol.-%	>11.8
Ammonia Oxidation Catalyst		
Manufacturer	-	Johnson Matthey Plc
Type	-	Eco-Cat-Pack
Composition:	-	Pt/Rh/Pd
Absorber		
Design capacity per day (100 %)	t/d	1,100
Design capacity per day (legal)	t/d	1,100
Annual production (design)	t/year	393,800
Annual production (practice)	t/year	345,000
Secondary Catalyst		
Start of operation	-	Expected 15th June
Manufacturer	-	YARA, supplied Johnson Matthey Plc
Type	-	YARA abatement catalyst
Composition:	-	Cobalt with CeO_2 as support material
Design efficiency N_2O reduction	%	85-95
N_2O Analyzer (stack)		
Manufacturer	-	If the installed analyser (Thermo Nicolet 6700 FT-IR) will pass the QAL2 test and appropriateness for project issues is certified, this analyser will be used. Otherwise a new QAL1 certified analyser will be installed before project start.
Type	-	
Measurement Principle	-	
Stack volume flow rate measurement		
Manufacturer	-	Endress+Hauser
Type	-	Deltatop measuring probe with Deltabar difference pressure meter (purchased but not installed at date of on-

Parameter	Unit	Value
		site audit)
Measurement Principle	-	Difference pressure (dynamic 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	2010-03-18
Submission of PDD for global stakeholder commenting process	2010-04-14
On-site visit	2010-04-19 to 2010-04-20
Draft reporting finalised	2010-04-29
Final reporting finalised	2010-05-21 (draft status) 2011-03-03 (final status)
Technical review on final reporting finalised	2010-06-21

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	A	☒		☐	☒
☐ Mr. ☒ Ms.	S. Meyer	TN Cert	TM	T	☐		☒	☐
☒ Mr. ☐ Ms.	U. Walter	TN Cert	TM	T	☐	Q	☐	☐
☒ Mr. ☐ Ms.	Evgeni Sud	TN Cert	TR[3]	E	☒		☐	☐
☒ 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; FA: Final approval

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

[3] No team member

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

3.4 Consideration of Public Stakeholder Comments

The draft PDD, as received from the project participants, has been made publicly available on TÜV NORD Website www.global-warming.de during a 30 days period from 2010-04-15 to 2010-05-15.

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 (version 01) 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 (Projet Domestique).

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 (Pec Rhin)	- Chronological description of the project activity with documents of key steps of the implementation.

Interviewed Persons / Entities	Interview topics
Project consultant (N.serve) Maintenance staff for measurement equipment (Cegelec)	- Implementation status - 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	2	2	-
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)	1	-	-
Monitoring Methodology (D) - Monitoring of Project emissions Baseline emissions Leakage Sustainable development indicators / environmental impacts Project management planning	1	6	1
Estimation of greenhouse gas emission reductions (E)			
Environmental impacts (F)			
Stakeholder Comments (G)			
SUM	**6**	**9**	**1**

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.		
DOE Assessment #1 *The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.*			
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)*	The difference of the budgeted capacity of 2010 (330.000 tonnes HNO_3/a) to 2011 and 2012 should be explained and mentioned in the PDD.		
Corrective Action #1 *This section shall be filled by the PP. It shall address the corrective action taken in details.*	The difference in production capacity between 2010 and all subsequent years is mentioned and explained in section B.6.3 of the PDD, directly underneath table 6.		
DOE Assessment #1 *The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.*	The PP explained, that the expected total production figure for the whole of 2010 is only 330,000 tHNO_3, as opposed to 345,000 for the subsequent years, since the plant will be shut down for one month in May/June. OK.		
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)*	The information in Annex 1 has to be consistent to A.3.		
Corrective Action #1 *This section shall be filled by the PP. It shall address the corrective action taken in details.*	The information in Annex 1 is now consistent with the table in section A.3.		
DOE Assessment #1 *The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.*	The names of the project participants • Pec Rhin S.A. • N.serve Environmental Services GmbH are listed as per official documents and consistent with table in section A.3. OK		
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:	A4		
Classification	☐ CAR	☒ CL	☐ FAR
Description of finding *Describe the finding in unambiguous style; address the context (e.g. section)*	Replacement of burners in 2005 and of hoods in 2007 should be mentioned in the PDD.		
Corrective Action #1 *This section shall be filled by the PP. It shall address the corrective action taken in details.*	The replacement of the burners and hoods is now explained in the first paragraph of section A.4.2 of the PDD.		
DOE Assessment #1 *The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.*	Additional information was given to explain the replacement of burners in recent years. The reason for replacement was not repairable leaks between body and hoods of the old boilers. An increase of capacity has not taken place. OK		
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

Finding:	B1
Description of finding *Describe the finding in unambiguous style; address the context (e.g. section)*	The Investment Cost Sheet is still pending
Corrective Action #1 *This section shall be filled by the PP. It shall address the corrective action taken in details.*	The Investment Cost Sheet was provided on 2010-05-04.

DOE Assessment #1
The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.
	• A clear, viewable and unprotected Excel spreadsheet was available for the investment calculation/EXCEL/.
	• The technical live time of the project activity corresponds to the crediting period since the lifetime of the catalyst is guaranteed over the period which is technical appropriate.
	• Taxation (pre-taxes) was not included in the calculation.
	• The main input value of financial analysis are
	  ○ investment costs for catalyst (negotiated with supplier before project start) and
	  ○ revenues from ERUs issued (estimated for time after first completed verification)

Corrective Action #2 *This section shall be filled by the PP. It shall address the corrective action taken in details.*	The sheet doesn't use actual N_2O-taxes.
DOE Assessment #2 *The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.*	The PP includes updated values from the official web page of the French customs/douane/ which are 67.01 € per tN_2O. OK
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)*	Available emission and production data from recent years and not the empirical correlation factor as 160 (ppmv N_2O/kg N_2O*tHNO_3) should be used to calculate the historical emission factor.		
Corrective Action #1 *This section shall be filled by the PP. It shall address the corrective action taken in details.*	The historical pre-project emissions factor is now calculated using N_2O emissions and production data from 2008 and not using the empirical correlation factor of 160ppmv stated in the IPPC BAT ref document of 2006.		

Finding:	B2
DOE Assessment #1 *The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.*	The PP calculated the pre-project emission factor (5.41 kg $N_2O/tHNO_3$) using data provided in official emission declaration (Annual emissions summary table 2008/LAB08, REA08/) to local authorities. The determination team checked that data from 2009 are not representative since the amount of produced nitric acid was lower due to the financial crisis of the recent year. OK
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 PP intents not to use the guaranteed (as in the published PDD) but the maximum abatement efficiency of the YARA catalyst to calculate the estimation of emission reductions from 90 to 95 %. 90 % was estimated at the date of preparing the PDD without experiences from other projects. 95 % is the basis of the contract between the plant and Johnson Matthey and –basing on actual experiences from other projects- it is most likely, that the maximum efficiency will be achieved in the project activity. The PP is requested to provide supporting information to substantiate the approach.		
Corrective Action #1 *This section shall be filled by the PP. It shall address the corrective action taken in details.*	The PP provided • the confidential project proposal between Johnson Matthey and Pec Rhin stating 95 % N_2O reduction across the ammonia burner, based on a 3 year installation* • ER-calculation of a comparable plant (Sept. 2009 – Jan. 2010), running with the same abatement catalyst, showing an abatement efficiency of 95.09 % (1186 ppm N_2O pre project, 58 ppm N_2O current average/YARA/. • CDM Monitoring Report No. 2 by N.serve: "Project for the catalytic reduction of N_2O emissions with a secondary catalyst inside the ammonia reactor of the N1 & N2 nitric acid plants at Haifa Chemicals Ltd., Israel."/MON/ • Verification/Certification Report by DNV: "Project for the catalytic reduction of N_2O emissions with a secondary catalyst inside the ammonia reactor of the N1 & N2 nitric acid plants at Haifa Chemicals Ltd., Israel."/VER/ • Statement from Johnson Matthey with estimation of an efficiency of around 95 % during the production campaign, based on collected experiences during operation of similar European plants ./JMEFF/		

Finding:	B3
DOE Assessment #1 *The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.*	OK. The determination team checked the substantiating documents /JMEFF/, /MON/, /VER/, /YARA/ regarding efficiency estimation of the abatement catalyst and came to the conclusion, that an N_2O-abatement efficiency of 95% in the PecRhin plant is realistic and technical feasible.
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:	C1		
Classification	☒ CAR	☐ CL	☐ FAR
Description of finding *Describe the finding in unambiguous style; address the context (e.g. section)*	The project starting date should be clearly referenced in the PDD.		
Corrective Action #1 *This section shall be filled by the PP. It shall address the corrective action taken in details.*	The project starting date has now been added to section A.4.2, under 'Catalyst technology'		
DOE Assessment #1 *The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.*	The PP stated, that the starting date of the project is expected to be the 15/06/2010 (or the date when the plant restarts production with the catalyst installed, following the planned May shutdown). This is in line with evidences /EMAIL/, /JM/, /LETTER/ and statements presented during on-site visit on the plant site. OK		
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
Description of finding *Describe the finding in unambiguous style; address the context (e.g. section)*	Table 10 in section B.7.1 should include the measurement frequency for all relevant parameters.		
Corrective Action #1 *This section shall be filled by the PP. It shall address the corrective action taken in details.*	Table 10 in section B.7.1 now includes the measurements frequencies for the relevant parameters.		

Finding:	D1
DOE Assessment #1 *The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.*	Data are included in Table 10 of section B.7.1. Consistency with local conditions should be checked during first verification. This was included in FAR D 5.
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)*	The measurement/calculation and cross check of the parameter NAP_n (P.5) in Table 10 in section B.7.1 should be described in detail in section B.6.1. Also the separation of the output of Nitric Acid into two streams (60 % and 69 %) and the calculation of the total output should be explained.		
Corrective Action #1 *This section shall be filled by the PP. It shall address the corrective action taken in details.*	The measurement and calculation of NAP is now explained in more detail in section B.6.1 under the section 'Measurement of NAP'.		
DOE Assessment #1 *The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.*	A paragraph "measurement of NAP" was included in the section "Estimation of Verification Period specific project emissions" to describe the automatic calculation of 100% HNO_3 in the PI system and manual cross check in the lab. OK		
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
Description of finding *Describe the finding in unambiguous style; address the context (e.g. section)*	Since the methodology requires full compliance with EN 14181 or an appropriate French standard, the PP should reference the chosen standard for QA/QC of the AMS.		
Corrective Action #1 *This section shall be filled by the PP. It shall address the corrective action taken in details.*	It is stated in section B.7.2 (point 3) of the PDD that a QAL2 will be conducted in accordance with EN14181 for both the analyser and the flow meter.		

Finding:	D3
DOE Assessment #1 *The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.*	The quality of measurements of the AMS will be assured using standard 14181. The implementation of relevant procedures should be inspected during verification. A corresponding CAR was raised.
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)*	It should be clarified, how operation hours OH_n will be recorded/calculated and OH in which the plant operates outside the trip points are excluded from the ER-calculation.		
Corrective Action #1 *This section shall be filled by the PP. It shall address the corrective action taken in details.*	It is now explained in more detail in section B.6.1 of the PDD, under 'Measurement during standard plant operation', how the plant's operational hours will be defined.		
DOE Assessment #1 *The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.*	The PP explains in the PDD that the plant's operational status can be determined by the status of the signal 'UN1000', which indicates whether or not the plant is shut down. This signal will show '0' if for any reason the plant should: • exceed any one of its pre-defined trip point parameters, • if the ammonia valve should close, or • if the plant is stopped on purpose. The determination team checked P&I schemes, logic charts and the PI-system and can confirm, that status signal UN1000 can be used as indicator, if the plant is in operation or not. OK		
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

Finding:	D5
Description of finding *Describe the finding in unambiguous style; address the context (e.g. section)*	The verifier has to check the appropriateness of • the AMS (with regard to e.g. location of the sampling point, QAL1, QAL 2, uncertainty assessment). • the gas volume flow meter since these devices are not installed at the date of on site visit, • the implemented QA/QS procedures in accordance with ISO 9001 or a related standard • measurements frequencies for the relevant parameters • ISO 9001 accreditation and scope of contract of the external contractor 'Cegelec'.
Corrective Action #1 *This section shall be filled by the PP. It shall address the corrective action taken in details.*	These devices will be installed during the shutdown in May/June 2010 and can be checked during the first verification.
DOE Assessment #1 *The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.*	
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:	D6		
Classification	☒ CAR	☐ CL	☐ FAR
Description of finding *Describe the finding in unambiguous style; address the context (e.g. section)*	Since ISO 9001 is not implemented at the plant, the PDD should not reference to this standard.		
Corrective Action #1 *This section shall be filled by the PP. It shall address the corrective action taken in details.*	The reference to ISO 9001 in section B.7.2 (under 'AMS calibration and QA/QC procedures') has now been removed.		
DOE Assessment #1 *The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.*	The PP now explains in the PDD that the only quality assurance standard the plant is reefing to is the "Product Stewardship' standard", established by the European Fertilizer Manufacturers Association (EFMA). OK		
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:	D7		
Classification	☐ CAR	☒ CL	☐ FAR
Description of finding *Describe the finding in unambiguous style; address the context (e.g. section)*	The responsibilities of plant management and QA/QC should be provided under B.7.2. This should include departments and responsible persons and external contractors involved in the project activity.		
Corrective Action #1 *This section shall be filled by the PP. It shall address the corrective action taken in details.*	Details on the responsibilities of all people involved in the project, and their names, have now been included in section B.7.2 of the monitoring plan (point 1).		
DOE Assessment #1 *The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.*	The PP provided organisational sheets showing responsibilities in plant and JI-project management. This information was included in the PDD. OK		
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:	D8		
Classification	☐ CAR	☒ CL	☐ FAR
Description of finding *Describe the finding in unambiguous style; address the context (e.g. section)*	The PDD should reflect in • the description of the project activity • the measurement/calculation of NAP and • the description of the monitoring plan the fact, that NAP is taken from the absorption tower in two lines (concentrations of 60 and 69 % HNO_3) and measured separately.		
Corrective Action #1 *This section shall be filled by the PP. It shall address the corrective action taken in details.*	The measurement of NAP from two streams of different concentrations is now described in sections A.2, B.6.1 and B.7.2 of the PDD.		
DOE Assessment #1 *The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.*	The PDD reflects the fact that two output streams of HNO_3 (NAP) need to be monitored in order to calculate the EF. OK		
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

A Letter of Approval (LoA) has been provided from the French DFP after submission of the draft determination report. After registration of the project[2] and presentation of the LoA to the DOE, the final determination report was prepared on 2011-03-03.

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 is the Pec Rhin S.A. (France) and N.serve Environmental Services GmbH (Germany).

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 structure and guidance specified in the decree set from March 2nd 2007 issued by the "Ministère de l'écologie et du développement durable" /B-5/ and with the annex 1 („Example illustrating the application of this methodology") of the "Projet Domestique" Methodology: Catalytic reduction of N_2O at nitric acid plants/B-1/.

For an in depth evaluation of these topics, please refer to section A.3 of the table A-1 of the annex 1.

[2] http://ji.unfccc.int/UserManagement/FileStorage/BLM2U1ZPXGTICFEQD05N96R4HWAV3O

5.1.3 Technology to be Employed

Within the project, N_2O emissions from the production of nitric acid at Pec Rhin nitric acid 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 France 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 to a valid version of a French methodology for Projets Domestiques "Catalytic reduction of N_2O at nitric acid plants"/B-1, /B-2/, developed and published by the Ministère de l'Écologie, de l'Énergie, du Dévelopement durable et de la Mer (French Ministry of Ecology and Sustainable Development)/mist/.

The project activity meets all applicability conditions of the applied methodology. 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 Nitric Acid Plant Pec Rhin).

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 (para 3 of the methodology) has been applied correctly and is transparently and sufficiently documented in the PDD.

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

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

For an in depth evaluation of these topics, please refer to the section B.3 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 description of baseline identification in the PDD is transparent and verifiable. The procedure to arrive to the baseline is in line with the applied project specific methodology. All plausible alternatives have been identified. Only alternatives were excluded which are assessed not to be plausible alternatives. Within the financial analysis it could be demonstrated that the identified most plausible alternative (i.e. baseline scenario) is financially more attractive than the project scenario.

The baseline emission calculation takes into account

- A specific benchmark Emission Factors (EF_{BM}), set in the baseline methodology:

  These values/years are:

  Year: 2010 2011 2012

  Value: 2.5 2.5 1.85 [kg N_2O/t HNO_3 (100%)]

- A plant-specific arrêté préféctoral from 13th August 2008, introduced by the local prefecture (Directions des Collectivités Locales et de l'Environnement, Bureau des Installations Classées), which limits N_2O emissions at the Pec Rhin plant to 7.7 kg N_2O/tHNO_3 (100%) and of 3 kg N_2O/tHNO_3 from 1st January 2011 onwards.
- According to Article 27 of the "Arrêté Ministériel du 02/02/98 relatif aux prélèvements et à la consommation d'eau ainsi qu'aux émissions de toute nature des installations classées pour la protection de l'environnement"/AM/, there is an emission limit of 7kgN_2O/tHNO_3 applying to nitric acid plants commissioned after February 1998. Since the plant is commissioned after 1998, this limit is not applicable.

Since the applicable regulatory N_2O emissions limit (7.7 kg N_2O/t$HNO_{3)}$ will be higher than the benchmark value, these arrêté préféctoral values will not be taken into account for calculating the ERUs.

The baseline emission factor is determinated as follows:

<u>These values/years are:</u>

Year: 2010 2011 2012

Value: 2.5 2.5 1.85 [kg N_2O/t HNO_3 (100%)]

Project Emissions:

Taking into account an 84.12 % efficiency of the secondary N_2O abatement catalyst and an Emission Factor of 5.41 kg $N_2O/tHNO_3$ (N_2O concentration in the stack measured over a period of 12 months from December 2007 to December 2008), the resulting Project Emission Factor was calculated to 0,8591 kg $N_2O/tHNO_3$.

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

5.2.5 Calculation of GHG Emission Reductions

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

5.2.6 Additionality Determination

Prior consideration of JI

The starting date of the project is conducted with the installation of the catalyst and the proper implementation of the AMS and will be 15th of June. This date is after the determination of the PDD.

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

Application of Methodology / Methodological Tools

The discussion of additionality in the PDD was justified and conducted according to the step-by-step- approach of the Projet Domestique Methodology/B-1, B-2/. A financial barrier assessment, according to the Arrêté du 2 mars 2007 /B-5/of the «Ministère de l'écologie et du développement durable» was included in the consideration.

A universal 'Benchmark Emissions Factor' (EF_{BM}) was applied for all French nitric acid plants eligible to undertake Projets Domestiques, regardless of their size, their technical characteristics and their past and present emissions levels.

The project specific baseline methodology provides an algorithm for identification and justification of the baseline. Data sources and assumptions as provided within the developed methodology draw upon the main provisions of the Projet Domestique Methodology: "Catalytic reduction of N_2O at nitric acid plants", stipulated by the French Designated Focal Point (Le Ministère de l'Écologie, de l'Énergie, du Développement Durable et de l'Aménagement du Territoire (MEEDDAT).

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 taking into account a future emission limit of 3 kg $N_2O/tHNO_3$,have been identified as plausible and realistic alternatives.

Investment Analysis

The PP provided an investment-sheet with all relevant types of costs occurred in the project activity[INV]. The basis of this cost assessment is a comparison of costs incurred in absence of the project (to fulfil the legal requirements) against the costs of the project activity.

The main types of costs are:

- Costs for catalyst (difference between project activity and amount to fulfil legal obligations
- Modification of N_2O analyser/relocation of sampling points
- Sampling gases, new HNO_3 flow meters & DCS modifications
- Flow, temp & pressure measurements, plus sampling ports
- QAL2 audit (2010)
- QAL 3 (maintenance, calibrations etc) (ongoing)
- Annual Surveillance Test (2011, 2012)
- Determination (once)
- First Verification (2010)
- Subsequent Verifications (2011 and 2012, total x4)

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

It can be confirmed, that none of the N_2O destruction technology options are expected to generate any significant financial or economic benefits other than JI

related income. Therefore, the "Business As Usual" scenario, the installation of just enough secondary N_2O abatement catalyst to comply with the applicable N_2O regulation, is considered not to face any significant investment barriers.

Barrier Analysis

The PP has justified the additionality on the basis of

a) Investment barriers

b) Technological barriers

c) Other barriers

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

Investment analysis

Investment analysis shows that the project scenario is not the most attractive alternative or economically feasible without benefits from ERU sales. All parameters applied within the investment analysis have been assessed as plausible.

Barrier analysis

A detailed barrier analysis has been carried out by PP

The Determination team analysed: In the course of the determination a sufficient confidence could be gained that an effort has been spent by the project participant to overcome the identified barriers. The justification of the barriers supported by evidence and substantiated. Furthermore the determination team is of the opinion that argumentation as provided by the project participant in this context is convincing.

However the identified barriers could not be assessed as a sufficient to prevent the implementation of this alternative.

Common practice analysis

The common practice analysis provided in the PDD is accurate. The information and data sources used are appropriately references and could be proved in the course of determination.

A sufficient confidence could be gained that the proposed project type (i.e.. technology and/or practice) has not diffused in the relevant sector and geographical area and the time the project started.

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

Summary

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

The 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.

5.2.7 Monitoring Methodology

The project specific methodology "Catalytic reduction of N_2O at nitric acid plants" was provided by the DFP requires the collection of N_2O emissions data and – in so far as pre-defined trip point values for the plant exist – the monitoring of ammonia and air flow into the ammonia burner during the project's lifetime. The standard of the monitoring equipment and procedures and monitoring methodology are defined I para 6 of the methodology

The data measurement, storage, assessment and processing was discussed with the plant operator Pec Rhin and N.serve, who will process the monitoring data and it can be confirmed, that the monitoring plan is in line with the methodology Projet Domestique Methodology: Catalytic reduction of N_2O at nitric acid plants[/B-2/].

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 monitoring plan covers all monitoring parameters as stipulated in the applied monitoring procedure of the methodology. The monitoring plan can be implemented and the validation 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.

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 activity will only become eligible to receive ERUs on receipt of the official government LoA, or at the latest two months after submission of the Project Dossier applying for a LoA. For Pec Rhin, the registration documents were provided to the DFP in June 2010 and start of the crediting period is 2010-09-01.

The duration of the crediting period extends from beginning of September 2010 to 2012-12-31, which is according to the LoA/LOA/.

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

5.2.11 Environmental Impacts

The Host Country France does 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 www.global-warming.de for 30 days/gw/, in line with the applicable requirements.

Lokal

As the JI project does 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

The verifier has to check the appropriateness of

- the AMS (with regard to e.g. location of the sampling point, QAL1, QAL 2, uncertainty assessment).
- the gas volume flow meter

since these devices are not installed at the date of on site visit,

- the implemented QA/QS procedures in accordance with ISO 9001 or a related standard
- measurements frequencies for the relevant parameters
- ISO 9001 accreditation and scope of contract of the external contractor 'Cegelec'.

The procedure of processing of the monitoring data needs to be checked by the verifier at the first verification.

6 DETERMINATION OPINION

Pec Rhin S.A. has commissioned the TÜV NORD JI/CDM Certification Program (CP) as a Third Party to determinate the project:

"Pec Rhin N_2O abatement project"

with regard to the relevant requirements of the host country France 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 Projet Domestique Methodology: "Catalytic reduction of N_2O at nitric acid plants", approved and published by the MEEDDAT in July 2009.

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 (France) 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 316,296 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 was closed on 2011-01-11 after submission of the LoA to the DOE.

Essen, 2011-03-03

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

Essen, 2011-03-03

Final Approval Person
TÜV NORD JI/CDM CP
Final Approval

7 REFERENCES

Table 7-1: Documents provided by the project participant

	Document
/**3KG**/	Emailed proposal from JM for Pec Rhin (to achieve 3 kg N_2O/tHNO_3)
/**ABSORB**/	P&I-Flow sheet with instrumentation of the absorption tower
/**AM**/	"Arrêté Ministériel du 02/02/98 relatif aux prélèvements et à la consommation d'eau ainsi qu'aux émissions de toute nature des installations classées pour la protection de l'environnement", setting an emission limit of 7 kgN_2O/tHNO_3 applying to nitric acid plants commissioned after February 1998
/**ANOx**/	Analyse de l'entrée et de la sortie de Nox
/**AP**/	Plant-specific 'arrêté préféctoral from 13th August 2008, introduced by the local prefecture (Directions des Collectivités Locales et de l'Environnement, Bureau des Installations Classées),
/**BENCH**/	Folder from EFMA regarding implementation of N_2O emission benchmarks.
/**CC**/	Certificat de conformité que le □urant□□ est conforme aux spécifications indiquées par le constructeur (Conformity Certificate of existing gas-analyser from Thermo Electron Company)
/**CCAGN**/	Certificat de calibration de l'analyseur de gaz nicolet (AMS) (Certificate of calibration of AMS)
/**CCP**/	Certificat de calibration du filtre polystyrene (Sample ID N 565) (Certificate of calibration of the polystyrene filter (Sample ID N 565)
/**CCRD**/	Cahier des charges rejets domestiques HNO_3 (Implementation plan for measurement of HNO_3 related emissions)
/**COND**/	Technical specification of the conductivity meter (HNO_3-conc-meadurement)
/**COST**/	"PecRhin cos vc revenues.xls" Excel sheet (simple cost analysis)
/**DB**/	Base de données (Database of monitoring data)
/**EFMAC**/	Association européenne de la fabrication d'engrais (European Fertilizer Manufacture Association)
/**EIA**/	Email from the DFP regarding Environmental Impact Assessment

	Document
/**EMAIL**/	Commande des toiles (Order of gauzes)
/**EPD**/	Equipe projet domestique (Organisation of staff of the JI Project)
/**FI**/	Training carried out during installation
/**FIHNO3**/	Technical specification of the HNO_3-Flow meter
/**FO**/	Formation des operateurs salle de controle (Training for operators)
/**FT1021**/	Certificat de calibration du transmetteur du debit (Calibration certificate of flow meter)
/**FT1022**/	Certificat de calibration du transmetteur du debit (Calibration certificate of flow meter)
/**IT**/	Informations techniques sur le debit (Technical information of flow meter)
/**JM**/	Johnson Matthey Project Proposal dated 2010-03-10.
/**JMEFF**/	Statement from Johnson Matthey with estimation of an efficiency of around 95 % during the production campaign, based on collected experiences during operation of similar European plants
/**LAB08**/	Tableau récapitulatif annuel des dépassements 08 (Annual emissions summary table 2008)
/**LAB09**/	Tableau récapitulatif annuel des dépassements 09 (Annual emissions summary table 2009)
/**LAB10**/	Tableau récapitulatif annuel des dépassements 10 (Annual emissions summary table 2010)
/**LETTER**/	Lettre de PEC-Rhin au Préfet du Haut-Rhin sur un nouveau catalyseur Dé N_2O (Letter from PEC-Rhin to the local authorities (Préfet du Haut-Rhin) about a new catalyst DéNO_2)
/**LOA**/	Letter of Approval issued by the French DFP on 2010-12-30, Reference No.: D10022284.
/**ML**/	Manuel du laboratoire (Manual of the laboratory –density measurement)

	Document
/**MMTR**/	Manuel maintenance travaux neufs (Maintenance manual for N_2O-Analyser)
/**MON**/	CDM Monitoring Report No. 2 by N.serve: "Project for the catalytic reduction of N_2O emissions with a secondary catalyst inside the ammonia reactor of the N1 & N2 nitric acid plants at Haifa Chemicals Ltd., Israel"
/**MPQ**/	Manuel des procedures qualité (Manual for quality prodecures)
/**NM**/	Flow and Layout chart of existing gas analyser
/**O**/	Organigramme (Organisational Chart)
/**OFFRE**/	Offre pour le débit mètre avec temperature et pression proposée par Endress+Hauser (Offer for flow meter with temperature and pressure proposed by Endress+Hauser)
/**OPER**/	Operation manual incl. trip-points for the abatement catalyst (QA/QS-document)
/**P&I**/	Pipes and installation sheet of the plant
/**PEC**/	Produits & Engrais Chimiques du Rhin (PEC-Rhin) (Products from the PecRhin plant)
/**PDD**/	Title of the project activity/PDD: Pec Rhin N_2O abatement project • First (published) version 01 dated 2010-03-23 • Final version 02 dated 2010-05-04
/**PSI**/	Procès du système d'information (Screenshots from the process information system)
/**REA08**/	Auto-controle des rejets dans l'eau et dans l'air 2008 (Declaration of water and air emissions in year 2008)
/**REA09**/	Auto-controle des rejets dans l'eau et dans l'air 2009 (Declaration of water and air emissions in year 2009)
/**SCREEN**/	Screenshot of PI regarding calculation of Nitric Acid concentration to 100 %
/**SCREEN**/	Internal calculation of 100% HNO_3 in the PI-system (Screenshot).
/**SPAN**/	Schéma du procédé acide nitrique (Scheme of the nitric acid production plant including figures)

	Document
/**VER**/	Verification/Certification Report by DNV: "Project for the catalytic reduction of N_2O emissions with a secondary catalyst inside the ammonia reactor of the N1 & N2 nitric acid plants at Haifa Chemicals Ltd., Israel"
/**YARA**/	"Yara plant 1 data.xls" (ER-calculation from Sept. 2009 – Jan. 2010),

Table 7-2: Background investigation and assessment documents

Reference	Document
/**B-1**/	Méthode pour les Projets Domestiques Réduction catalytique du N_2O dans des usines d'acide nitrique (Projet Domestique Methodology: Catalytic reduction of N_2O at nitric acid plants)
/**B-2**/	Projet Domestique Methodology Catalytic reduction of N_2O at nitric acid plants (Translation of /B-1/)
/**B-3**/	European Standard DIN EN 14181: "Stationary source emissions – Quality assurance of automated measuring systems
/**B-4**/	Projet Design Document (PDD): YARA Ambès N_2O abatement project Version: 15th June 2009 (Annex 1 of /B-2/)
/**B-5**/	Arrêté du 2 mars 2007 of the 'Ministère de l'écologie et du développement durable (Implementation of the JI-Guidelines in France)
/**B-6**/	Reference Document on Best Available Techniques for the Manufacture of Large Volume Inorganic Chemicals - Ammonia, Acids and Fertilisers
/**B-7**/	Approved baseline and monitoring methodology AM0034: "Catalytic reduction of N_2O inside the ammonia burner of nitric acid plants", version 3.4
/**B-8**/	Guidance: Developing a CDM or JI project to reduce greenhouse gas emissions, issued by the: • French Ministry for Economy, Industry and Employment • French Ministry for Ecology, Energy, Sustainable Development and Town and Country Planning • French Global Environment Facility
/**B-9**/	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

Table 7-3: Websites used

Reference	Link	Organisation
/bref/	http://eippcb.jrc.ec.europa.eu/reference/	Website of the European Commission, Joint Research Centre, Institute for Prospective Technological Studies (Provision of BAT-Reference documents)
/dfp/	http://www.developpement-durable.gouv.fr/	Ministère de l'Écologie, de l'Énergie, du Développement Durable et de la Mer, en charge des Technologies vertes et des Négociations sur le climat
/dehst/	http://www.dehst.de	German Emissions Trading Authority (DEHSt) at the Federal Environment Agency
/douane/	http://www.douane.gouv.fr/data/file/6146.pdf	Web-file regarding N_2O emission taxation.
/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
/lf/	http://www.legifrance.gouv.fr/	Site of the Legifrance (La service public de la diffusion du droit)
/mist/	http://www.ecologie.gouv.fr/Methodologies-de-projets.html	Ministère de l'Écologie, de l'Énergie, du Développement durable et de la Mer (Ministry of ecology and sustainable development)
/nfg/	http://www.effet-de-serre.gouv.fr/accueil	Mission interministérielle sur l'effet de serre (French Inter-Ministry Mission on the Greenhouse Effect)
/unfccc/	http://ji.unfccc.int	UNFCCC

Table 7-4: List of interviewed persons

Reference	MoI[1]		Name	Organisation / Function
/IM01/	V	☒ Mr. ☐ Ms	Marc Vaupel	PecRhin, General Manager

Reference	MoI[1]		Name	Organisation / Function
/**IM01**/	V	☒ Mr. ☐ Ms	Jean marc Bastian	PecRhin, Plant manager
/**IM01**/	V	☒ Mr. ☐ Ms	Tibergyien Thibaud	PecRhin, Plant staff
/**IM01**/	V	☒ Mr. ☐ Ms	J. Paul Vailin	PecRhin, Head of Electricity Department
/**IM01**/	V	☒ Mr. ☐ Ms	Jean-Pierre Emond	PecRhin, Head of Laboratory
/**IM01**/	V	☐ Mr. ☒ Ms	Delphine Homatter	PecRhin, Resp. for Permissions and communication with authorities
/**IM01**/	V	☒ Mr. ☐ Ms	Bertrand Walle	GPN, JI-project coordinator
/**IM01**/	V	☐ Mr. ☒ Ms	Rebecca Cardani-Strange	N.serve, Project manager
/**IM02**/	V	☒ Mr. ☐ Ms	Cedic Auger	PecRhin, Shift Foreman
/**IM02**/	V	☒ Mr. ☐ Ms	Jean Bigi	Cegelec, Maintenance technican

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

ANNEX

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

ANNEX 1: DETERMINATION PROTOCOL

Table A-1: Requirements Checklist

Checklist Item (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 France (as a Host Party) and Germany. The Project Participant of the Host Country is Pec Rhin S.A. The Project Participant of Germany is N.serve Environmental Services GmbH	/PDD/		OK
A.1.2. Are the parties involved eligible for JI Track 1?	By means of checking the UNFCCC website, it was confirmed that France and Germany are eligible under JI track 1.	/mist/ /dehst/ /unfccc/		OK
A.1.3. Has the project provided written approvals of all parties involved?	The pending letters of approval will be provided only on the basis of the successful conclusion of this determination. Thus this CAR will be closed if the host country issues their LoA.	/PDD/	~~CAR A1~~	OK

	Nevertheless, a corresponding CAR was raised.			
A.1.4. Are the approvals issued from organisations listed as DFPs on the UNFCCC JI website?	Please refer to the comment under A.1.3.		~~CAR A1~~	OK
A.1.5. Do the written approvals confirm that the corresponding party is a Party to the Kyoto Protocol?	Please refer to the comment under A.1.3.		~~CAR A1~~	OK
A.1.6. Do the written approvals refer to the precise project title in the PDD submitted for registration?	Please refer to the comment under A.1.3.		~~CAR A1~~	OK
A.1.7. Is the information regarding the project participants listed in section A3 and in Annex 1 of the PDD internally consistent to each other?	No, the information regarding the name of the organisation given in Annex 1 is not consistent with A.3		~~CAR A3~~	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 A1	OK
A.1.9. Are any other project participants approved but not listed in the PDD?	Please refer to the comment under A.1.3.		CAR A1	OK
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 Project Design Document in accordance with the annex 1 („Example illustrating the application of this methodology") of	/PDD/ /B-1/B-2/ /B-4/		OK

	the Projet Domestique Methodology: "Catalytic reduction of N_2O at nitric acid plants" has been used.			
A.2.2. Has the PDD been duly filled in accordance with the latest guidance(s)?	The PDD is in line with the „Example illustrating the application of this methodology" (Annex 1) of the Projet Domestique Methodology: "Catalytic reduction of N_2O at nitric acid plants". The PDD have in general been filled in accordance with the structure and guidance given in the methodology.	/PDD/ /B-1/ /B-2/ /B-4/		OK
A.3. Technology to be employed *Determination of project technology focuses on the project engineering, choice of technology and competence/ maintenance needs. The DOE should ensure that environmentally safe and sound technology and know-how is used.*				
A.3.1. Does the PDD contain a clear, accurate and complete project description?	Within the project, N_2O emissions from the production of nitric acid at Pec Rhin 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 in line with provided evidences and physical implementation (regarding N2O-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	/PDD/ /CON1/ /P&I/		OK

	been provided in the PDD in a detailed and appropriate manner. The applicability of the type of installed abatement catalyst (YARA abatement catalyst) under appropriate plant conditions is suitable to decompose N_2O.			
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 is in line with the information provided in the PDD. Since the check of the installed AMS regarding compliance with requirements of the project methodology could not carried out at the date of on-site visit, FAR D5 was raised to check the correct implementation according to ISO 14181 standard during verification. CL D8 was raised since the HNO_3-output is separated in two lines (60 and 69% HNO_3), which has to be taken into account in the NAP-calculations. CL A2 was raised because the difference of the budgeted capacity of 2010 (330.000 tonnes HNO_3/a) to 2011 and 2012 was not comprehensible for the determination team and clarification was requested. CL A4 was raised regarding mentioning of replacement of burners in 2005 and of hoods in 2007.	PDD /SPAN/ /P&I/	FAR D5 ~~CL D8~~ ~~CL A2~~ ~~CL A4~~	OK
A.3.3. In case the project involves alteration of the	Within the project, N_2O emissions from the production of nitric	PDD		OK

existing installation or process, is a clear description available regarding the differences between the project and the pre-project situation?	acid at Pec Rhin nitric acid plant will be reduced by installation of 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 does not envisage any N_2O abatement measures.			
A.3.4. Does the project design engineering reflect current good practices?	Yes. The project involves the installation of a secondary catalyst in the ammonia burner 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/ /B-6/		OK
A.3.5. Does the project use state of the art technology or would the technology result in a significantly better performance than any commonly used technologies in the host country?	The employed technology is defined as best available technology acc. to the BREF-Documents of the IPCC.	/PDD/ /B-6/		OK
A.4. Small scale project activity *It is assessed whether the project qualifies as small-scale JI project activity*				
A.4.1. Does the project qualify as a small scale project activity as defined by the JISC	Not applicable, because the project activity is a large scale project since the estimated mean value of emission reduction of 105,432 tCO2/year (316,296 tCO_2e between 2010 and 2012) exceeds the limit of 60,000 tCO_2e annually.	/PDD/		OK

A.4.2. Does 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?	Name: Méthode pour les Projets Domestiques: Réduction catalytique du N_2O dans des usines d'acide nitrique (Projet Domestique Methodology: Catalytic reduction of N_2O at nitric acid plants) from 2009-07. Type: ☐ I: CDM Approved Methodology – latest version ☐ II: CDM Approved Methodology – older version ☒ III: National Methodology ☐ IV: Combination of Approved Methodologies ☐ V: Project specific Methodology	/PDD/ /B-1/ /B-2/ /B-4/ /B-8/		OK
B.1.2. In case of methodology types I and II:	The proposed project activity applies the French Projet	/PDD/		OK

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	Domestique Methodology: "Catalytic reduction of N_2O at nitric acid plants", which was approved and published by the French Ministry of ecology and sustainable development in 2009-07. Since this is a JI Track 1 project and an official methodology from the French DFP was used, Annex 6 must not be filled.	/B-8/		
B.1.3. Are all applicability criteria in the methodology, the applied tools or any other methodology component referred to therein fulfilled?	Yes, the applicability criteria in the methodology, the applied tools and other methodology components are in line with: • French guidelines for the implementation of JI-Projects • Local decrees regarding the limiting of N_2O-emissions The methodology is applicable to project activities using secondary and tertiary N_2O abatement technology.	/PDD/ /B-2/ /B-5/ /B-8/	~~CL A5~~	OK
B.1.4. Is the project in accordance to every other stipulation or requirement mentioned in all sections of the methodology?	Yes, the project meets all stipulations of the methodology. In this context it has to be mentioned, that there has been a close contact between the project proponents and the DFP regarding the development of the project specific methodology.	/PDD/ /B-1/ /B-2/		OK
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	/PDD/		OK

	in the project boundary. This is -according to the methodology- clearly 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.			
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 to choose 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?	The baseline scenario includes the installation of a N_2O-abatement-technology (catalyst) to reduce the N_2O-emissions according to the legal requirements, which limits the N_2O-	/PDD/ /AP/		OK

	emissions to 3 kg N_2O/t HNO_3 from 1st January 2011 onward. Considerably less (in comparison to the project activity) of catalyst material would be needed to achieve compliance with the local decree.			
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 a. there is no N_2O destruction technology installed b. an N_2O abatement catalyst has already been installed for a preliminary technical trial, but the catalyst would either be removed at the end of this trial campaign c. only a sufficient amount of secondary catalyst material is installed to ensure compliance with any applicable legal N_2O regulations (Business as Usual). • Alternative uses of N_2O, such as: a. Recycling of N_2O for feedstock b. External use of N_2O • 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 as a Projet Domestique.	/PDD/		OK
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	No additional scenarios have been considered.	/PDD/		OK

the project activity?				
B.3.4. Has the baseline scenario been determined according to the methodology?	Yes, the baseline scenario was determined according to the methodology. For further information see B.3.5.	/PDD/ /B-1/ /B-2/		OK
B.3.5. Is the list of alternatives complete?	Yes, the list of alternatives is identical with the methodology.	/PDD/ /B-1/ /B-2/		OK
B.3.6. Has the baseline scenario been determined using conservative assumptions where possible?	Yes, e.g. the baseline emissions have been calculated applying the baseline values as presented in B.5.4 which are much lower than the historical emission factor.	/PDD/ /LAB08/		OK
B.3.7. Does the baseline scenario sufficiently take into account relevant national and/or sectoral policies, macro-economic trends and political aspirations?	Yes, as explained above, all legal requirements have been taken into account, it was check by the determination team that the benchmark value is lower than emission limits set by local government.	/PDD/ /B-1/ /B-2/ /AP/		OK
B.3.8. Is the baseline scenario determination compatible with the available data and are all literature and sources clearly referenced?	The baseline scenario determination is compatible with the available data and literature sources are clearly referenced. The PDD provides references to all relevant literature sources (sources were submitted for determination, too) and data. Main source is the Méthode pour les Projets Domestiques, issued and published by the DFP of France.	/PDD/ /B-1/		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 follows the requirements of the applied methodology and/or methodological tools?	The additionality has been assessed according to the methodology, which includes a scheme for the assessment of the reference scenario and additionality of the project activity. Under Step1, the complete list of alternative scenarios to the project activity were identified. Step 2 includes a barrier analysis according to the methodology. Investment, technological and barriers to prevailing practice were assessed. In Step 3, an investment analysis was carried out If the Projet Domestique alleviates the identified barriers that prevent the proposed project activity from occurring, then the proposed project activity can be considered 'additional' to the baseline scenario. The determination team assessed that the project is "additional" according to the requirements of the methodology.	/PDD/ /B-1/ /B-2/		OK
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?	Since a country specific methodology has been applied, the accordance with the JI glossary of terms is not necessary. The starting date of the project is expected to be the	/PDD/		OK

	15/06/2010 (or the date when the plant restarts production with the catalyst installed, following the planned May shutdown).			
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 is expected to be the 15/06/2010, which is later than the determination date. A 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?	Since the project start is estimated in August 2010, this date could not be evidenced at this time, but the PP provided evidences regarding the scheduled work of next months to shut down and restart the plant. The PP provided a confirmation of abatement catalyst supplier to deliver the catalyst before shut down date.	/PDD/ /EMAIL/		OK
B.4.2.5. Was the decision to proceed with the project taken by a person entity which has the authority to do so?	N/A			-
B.4.2.6. How was the JI involved in the decision making process?	It is obviously, 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/ /COST/		-
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?	Yes, the Step 1 includes all realistic scenarios mentioned in the methodology: • Continuation of the *Status Quo*, where a. only a sufficient amount of secondary catalyst material is installed to ensure compliance with any applicable legal N_2O regulations (Business as Usual). • Implementation of the abatement technology in the absence of the registration of the project activity as a Projet Domestique.	/PDD/		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 as a Projet Domestique.	/PDD/		OK
B.4.3.3. Do all identified alternatives comply with applicable regulation?	Yes, the alternatives are complying with the legal obligations, which limit the N_2O-emissions of the plant.	/PDD/		OK
B.4.4. Investment analysis Step 2 *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)?	It was clarified in the PDD that no significant financial or economic benefits other than JI related income can be generated by any of the possible N_2O destruction technologies. According to the methodology, the investment requirements, caused by the implementation of the project activity, should be depicted in an investment cost sheet.	/PDD/ /COST/	~~CAR B1~~	OK

	Since this financial calculation sheet was not available at the site visit, a corresponding CL B1 was raised.			
B.4.4.2. Is a clear, viewable and unprotected Excel spreadsheet available for the investment calculation?	No, see B.4.4.1.		~~CAR B1~~	OK
B.4.4.3. Does the period chosen for the investment analysis reflect the technical lifetime of the project activity or in case a shorter period is chosen, is the fair value of the project activity's assets at the end of the investment analysis period (as a cash inflow) included?	No, see B.4.4.1.	-	~~CAR B1~~	OK
B.4.4.4. Is the fair value calculated in accordance with local accounting regulations (where available) or international best practice?	According to the methodology, a fair value should not be calculated.	/PDD/ /A-1/ /A-2/		OK
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?	According to the methodology, a book value should not be calculated.	/PDD/ /A-1/ /A-2/		OK
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?	According to the methodology, a specific depreciation should not be calculated.	/PDD/ /A-1/ /A-2/		OK
B.4.4.7. Is taxation excluded in the investment analysis or is the benchmark intended for post tax comparisons?	see B.4.4.1.	-	-	-
B.4.4.8. Were the input values used in the investment	No, see B.4.4.1.	-	-	-

analysis valid and applicable at the time of the investment decision?				
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: No project IRR (benchmark) is given in the methodology.	-	-	-
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: No equity IRR (benchmark) is given in the methodology.	-	-	-
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, see above	-	-	-
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?	The identified barriers are: • Investment barriers; • Technological barriers, including : - Technical and operational risks of the alternative scenarios; - Technical efficiency of the alternatives (i.e. destruction of N_2O, abatement efficiency); - Lack of qualified personnel; - Lack of infrastructure for implementing the technology; • Common practice barriers, including : - Technology with which project developers are not familiar; - -There is no other similar project in operation in the relevant geographical area	-	-	-
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 NSCR) are expected to generate any significant financial or economic benefits other than JI related income (Financial barriers) • 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). • In the case where plants are subject to N_2O regulations and the installation of some catalyst is therefore unavoidable, these plant operators would only be willing to incur costs associated with the operation of such technology in order to comply with these regulations. 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?	See above	-	-	-
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?	The shareholder GPN starts three similar projects in France, reducing the N_2O-emission with secondary abatement catalysts in 2009/2010. The chosen technology has been implemented in several other project activities (i.e. Spain, Germany and Sweden) which are comparable/similar to the Pec Rhin project. This project type is already diffused in the region resp. industrial sector (fertilizer industry) but always related to JI-projects. The EFMA published a folder regarding the implementation of benchmarks in near future related to JI projects and future inclusion of N_2O in the ETS.	/PDD/ /BENCH/	~~CL B3~~	OK
B.4.6.2. To what extent similar projects have been	There are at least three similar projects related to JI-activities			OK

undertaken in the relevant region?	in France. All projects are in the phase of determination/registration or in preparation of first verification.			
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 are 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 Projet Domestique Methodology	/PDD/ /B-1/		OK
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. 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. The calculation of estimated emission reductions has been carried out in the section B.6.2. of the PDD. The calculations as presented in this section strictly follow the algorithm of the	/PDD/I /B-1/ /B-2/ /B-3/	~~CL B2~~	OK

	monitoring plan. The considering of leakage is discussed in the methodology. In accordance with the methodology, no leakage calculation is required, because the technology used is a secondary catalyst. A clarification (CL B2) was requested since the historical emission factor should be calculated using N_2O emissions and production data from 2008 and not using the empirical correlation factor of 160 ppmv stated in the IPPC BAT Ref document of 2006.			
B.5.3. In case the methodology allows for different methodological choices, are the equations applied properly justified and have they been used reflecting the other methodological choices (i.e. baseline identification)?	The project specific methodology has been developed for the considered project activity. 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/ /B-2/ /B-3/		OK
B.5.4. Have conservative assumptions been used when calculating the project emissions?	Yes. The baseline methodology takes into account a decree of the MEEDDAT, setting the benchmark Emission Factors (EF_{BM}) for the calculation of the reduction of N_2O-Emission in future years. These values/years are: 2010 2011 2012 2.5 2.5 1.85 kg N_2O/t HNO_3 (100%) In addition to that, a plant-specific arrêté préféctoral from 13th August 2008, introduced by the local prefecture (Directions des Collectivités Locales et de l'Environnement, Bureau des Installations Classées), which limits N_2O emissions at the	/PDD/ /B-1/ /B-2/ /B-4/ /AP/		OK

	Pec Rhin plant to 7.7 kg $N_2O/tHNO_3$ (100%) and of 3 kg $N_2O/tHNO_3$ from 1st January 2011 onwards. Since the regulatory N_2O emission limits will be higher than the benchmark value, these arrêté préféctoral values will not be taken into account for calculating the ERUs, but proves, that the calculations are carried out in a conservative manner.			
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 monitoring methodology and description of a monitoring plan is specified in the methodology of the "Projet Domestiques". The parameters required by this methodology are contained in the monitoring plan. A clarification CL D1 was necessary because table 10 in section B.7.1 should include the measurement frequency for all relevant parameters.	/PDD/ /B-1/	~~CL D1~~	OK

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?	No, one CL were raised. CAR D3: Since the methodology requires full compliance with EN 14181 or an appropriate French standard, the PP should reference the chosen standard for QA/QC of the AMS.	/PDD/	~~CL D3~~	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 installed during on site visit, a FAR D5 was raised to check the correct implementation during first verification. The FAR forwards to the first verification to check the appropriateness of • the AMS (with regard to e.g. location of the sampling point, QAL1, QAL 2, uncertainty assessment). • the gas volume flow meter since these devices are not installed at the date of on site visit, • the implemented QA/QS procedures in accordance with ISO 9001 or a related standard • measurements frequencies for the relevant parameters ISO 9001 accreditation and scope of contract of the external contractor 'Cegelec'.	/PDD/		OK

B.6.6. Are the means of implementation of the monitoring plan, including QA/QC procedures sufficient to ensure that emission reductions can be reported without material misstatement?	Additional information should be given in the monitoring plan presented in chapter B.7. In this context following findings were raised: CL D7: The responsibilities of plant management and QA/QC should be provided under B.7.2. This should include departments and responsible persons and external contractors involved in the project activity. CL D6: Since ISO 9001 is not implemented at the plant-site, the PDD should not reference to this standard. FAR D5 (see above) CL D4: It should be clarified, how operation hours OH_n will be recorded/calculated and OH in which the plant operates outside the trip points are excluded from the ER-calculation. CL D3: Since the methodology requires full compliance with EN 14181 or an appropriate French standard, the PP should reference the chosen standard for QA/QC of the AMS. CL D2: The measurement/calculation and cross check of the parameter NAP_n (P.5) in Table 10 in section B.7.1 should be described in detail in section B.6.1. Also the separation of the output of Nitric Acid into two streams (60 % and 69 %) and the calculation of the total output should be explained.	/PDD/	~~CL D7~~ ~~CL D6~~ FAR D5 ~~CL D4~~ ~~CL D3~~ ~~CL 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 occurs later?	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

B.6.8. Does 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?	<u>Baseline emissions:</u> 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. <u>Project emissions:</u> According to the methodology, the monitoring plan provides all relevant data necessary for measurement of the project emissions within the project boundary. <u>Leakage:</u> According to the methodology, leakage shall not be monitored. Caused by an increased amount of catalyst, a constant pressure loss in the tail gas reactor occurs, but will not be monitored over the crediting period.	/PDD/ /B-1/		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 French Government decision and Methodology. The violation of these limits will lead to a reduction of ERUs for the relevant period. The included and excluded GHG indicators are listed in a table provided by the methodology:	/PDD/		OK

		Source	**Gas**	**Included / excluded**	**Justification / Explanation**			
	Reference scenario	Benchmark emissions level	CO_2	Excluded	N_2O abatement project does not lead to any CO_2 or CH_4 emissions			
			CH_4	Excluded				
			N_2O	Included				
	Project activity	Nitric plant (burner inlet to stack)	CO_2	Excluded	N_2O abatement project does not lead to any CO_2 or CH_4 emissions			
			CH_4	Excluded				
			N_2O	Included				
		Leakage emissions	CO_2	Excluded	No Leakage Emissions are expected			
			CH_4	Excluded				
			N_2O	Excluded				
B.6.10. Is the measurement method clearly stated for each indicator to be monitored and also deemed appropriate?	Yes, the monitoring plan of the PDD which reflect the necessities of the methodology provides clear measurement methods in for project emissions in chapter B.6.2 of the PDD.					/PDD/	~~CL B11~~ ~~CAR B12~~	OK
B.6.11. Is the measurement equipment described and deemed appropriate?	The requirements for main equipment for measurement of project emissions is described appropriate in the PDD and in documents provided during the site visit. Since it is not clear whether the existing AMS can be used for the project, an appropriate assessment could not been carried out.					/PDD/ /OFFRE/ /IT/ /FT1021/	FAR D5	OK

	FAR D5 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. Cross check of density value in the plant-laboratory and implementation of a correction factor in the plant PI-system were inspected.	/FT1022/ /ML/ /PSI/ /SCREEN/ /COND/ /FIHNO3/ /NM/		
B.6.12. Is the measurement accuracy addressed and deemed appropriate? Are procedures in place on how to deal with erroneous measurements?	See FAR D5: As documents/certificates regarding the appropriateness of the AMS for measurement of project emissions could not provided during the site visit, the verifier has to check the suitability of the AMS with regard to e.g.: • location of the sampling point • QAL1, QAL 2 • uncertainty assessment.	/PDD/	FAR D5	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 measurement of other devices was not described sufficiently in the PDD, and CL D1 was raised. Table 10 in section B.7.1 should include the measurement frequency for all relevant parameters	/PDD/	~~CL D1~~	OK
B.6.14. Is the registration, monitoring, measurement	The data of the AMS for the calculation of project emissions	/PDD/		OK

and reporting procedure defined?	will be transferred to central data acquisition system of the company and evaluated by N.serve according to the regulations of the methodology.			
B.6.15. Are procedures identified for maintenance of monitoring equipment and installations? Are the calibration intervals being observed?	The AMS for emission reduction will be maintained using a QA/QC programme which refers to the EN 14181 and through internal measures for quality assurance related to Product Stewardship' standard, established by the European Fertilizer Manufacturers Association (EFMA). The PP provided QA/QS documents regarding maintenance of monitoring equipment regarding this standard. Regarding quality procedures, following CL B7 was made: Reference in B.7.2. (AMS/QAL1) should be made to recent EB decisions to QAL1 requirements since the methodology requires the compliance with EN 14181 or an appropriate French standard.	/PDD/ /MMTR/ /MPQ/ /CCRD/ /CCP/ /CCAGN/ /CC/	~~CL B7~~	OK
B.6.16. Are procedures identified for day-to-day records handling (including what records to keep, storage area of records and how to process performance documentation)	The PP provided a process flow sheet explaining the collecting, processing and storage of data. Process data will send via I/O cards to the ABB freelance process control system (PCS). They will be processed and provided to plant operator via server of the process information system (2-10 sec. cycles). The storage of process data for provision to N.serve will be carried out on a so called "VIKI server" via Ethernet LAN (3 level of data processing).	/PDD/ /DB/ /PSI/		OK

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 Product Stewardship' standard, established by the European Fertilizer Manufacturers Association (EFMA) 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 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/ /EFMAC/ /MMTR/ /MPQ/ /CCRD/ /CCP/ /CCAGN/ /O/ /EPD/		OK
B.7.2. Are procedures identified for training of monitoring personnel?	Specific training measures are planned and made after installation of new measurement instruments. This could be evidenced with specific protocols. The maintenance of meters will be carried out by an external company, which is permanent available on the plant site. A FAR D5 was raised to check the qualification of the company, since no documents were available during on-site visit.	/PDD/ /FI/ /FO/ /OPER/	FAR D5	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 projects and can provide experiences in data handling and	/PDD/		OK

	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 is expected in July 2010 with installation of the catalyst and provision of a suitable AMS as explained during on-site visit. Since this is not clearly referenced in the PDD, CAR C1 was raised. The Crediting period will start most likely after the approval of the project at the DFP in the beginning of September, two months after provision of registration documents to the French DFP.	/PDD/	~~CAR C1~~	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 project activity will only become eligible to receive ERUs on receipt of the official government LoA, or at the latest two months after submission of the Project Dossier applying for a LoA.	/PDD/		OK
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 DOE.				
D.1. Has an analysis of the environmental impacts of the project activity been sufficiently described?	The environmental impacts are sufficiently described in the PDD under Section D.: Environmental Impacts. Apart from the reduction of emissions of N_2O, there will be no significant further positive or negative impacts on the environment.	/PDD/ /EIA/		OK
D.2. Are there any Host Party requirements for an Environmental Impact Assessment (EIA), and if yes, is an EIA approved?	The host government (France) does not request an EIA. The PP provided a statement of the DFP, that an environmental impact assessment is not necessary for the project activity.	/EIA/		OK
D.3. Will the project create any adverse environmental effects?	See D.1.	-	-	-
D.4. Are transboundary environmental impacts considered in the analysis?	See D.1.	-	-	-
D.5. Have identified environmental impacts been addressed in the project design?	N/A	-	-	-
D.6. Does the project comply with environmental legislation in the host country?	Yes, the project fully complies with environmental legislation of France. A plant-specific arrêté préféctoral from 13th August 2008, introduced by the local prefecture (Directions des Collectivités Locales et de l'Environnement, Bureau des Installations Classées), which limits N_2O emissions at the Pec Rhin plant to 7.7 kg $N_2O/tHNO_3$ (100%) and of 3 kg $N_2O/tHNO_3$ from 1st January 2011 onwards, but since the project benchmark (2.5/1.85 kg $N_2O/t\ HNO_3$) is lower than these values, applicable environmental legislations will not be	/AP/ /LETTRE /		OK

	violated. Furthermore, the PP provided a letter addressed to the local government, announcing the implementation of the project activity and installation of the abatement catalyst.			
E. Stakeholder Comments *The DOE should ensure that stakeholder comments have been invited with appropriate media and that due account has been taken of any comments received.*				
E.1. Have relevant stakeholders been invited to consultation?	A global stakeholder consultation was carried out on the TÜV NORD website www.global-warming.de during a 30 days period from 2010-04-15 to 2010-05-15. 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 French authorities.	/PDD/ /gw/		OK
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	DOE Assessment	
					Appro-priate-ness of elimi-nation	Assessment of determination team (results and means of assessment)
a) Continuation of the Status Quo (Business as Usual Scenario). The continuation of the business as usual scenario, where: i) there is no N_2O destruction technology installed.	☒	☒	**The scenario not to install any N_2O abatement technology is not in complience with the "Arrêté Préféctoral" which limits the N_2O emissions to 3 kg N_2O/t HNO_3 (100%) from 2011-01-01 onwards. This alternative has to be removed from list of alternatives.**	**/PDD/ /AP/**	☒	The determination team follows the statements for the elimination of scenario a)i), since the 'Arrêté Préféctoral', which is an official decision of the local government obliges the plant operator to reduce the emission level to the limit of 3.99kg N_2O/tHNO_3.
a) Continuation of the Status Quo (Business as Usual Scenario). The continuation of the business as usual scenario, where: ii) only sufficient secondary catalyst is	☒	☐	**The scenario which includes the option to install only just enough catalyst material in the de-N_2O bed to achieve compliance with the local 'Arrêté Préféctoral' on N_2O emissions will not lead to an emission reduction beyond the 3. N_2O/tHNO_3 and the project**	**/PDD/ /AP/**	☐	The determination team follows the statement for the eligibility of scenario a)ii), since only the reduction of emissions below the limits of the governmental decree will lead to claim for Emission Reduction Units in compliance with the country specific methodology.

Baseline Alternatives identified	In line with the Metho-dology?	Eli-mina-ted	Reasons for elimination / non-elimination from list of alternatives	Evi-dence used	DOE Assessment	
					Appro-priate-ness of elimi-nation	Assessment of determination team (results and means of assessment)
installed to ensure compliance with any applicable legal N_2O regulations.			**activity will not take place. This alternative will be not removed from list of alternatives.**			
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.
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 as a Projet Domestique.	☒	☒	**Since there is no financial benefit to reduce the N_2O-emission below the regulatory limit of 3 kg N_2O/t HNO_3 from 2011 on, the implementation of a catalyst technology in absence of the project activity will not take place.** **<u>Implementation *in the absence of*</u>**	**/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

Baseline Alternatives identified	In line with the Methodology?	Eliminated	Reasons for elimination / non-elimination from list of alternatives	Evidence used	DOE Assessment	
					Appropriateness of elimination	Assessment of determination team (results and means of assessment)
			<u>the registration of the project activity as a Projet Domestique:</u> See alternative a)ii)			

ANNEX 3: ASSESSMENT OF FINANCIAL PARAMETERS

Table A-3: Assessment of Financial Parameters

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

Parameter	Value applied	Unit	Source of Information (please indicate document and page)	Reference	DOE ASSESSMENT		
					Correctness of value applied	Appropriateness of information source	Comment
Project revenues	1,990,514 (2010 – 2012 period)	EUR	PecRhin cost vs. revenues100504.xls (Excel sheet)	- Project documentation	The values are correct	The information sources are checked to be appropriate	The parameter "Project revenues" of the cost analysis is related to following figures: • Expected HNO_3 production (t) • Benchmark emissions (tCO_2e) • Project Emissions (tCO_2e) • 10% deduction of ERUs generated • ERU price of 9 EUR (estimated) is correct calculated and assessed. There are no emission taxes regarding N_2O-emission included as an additional income.
Tax savings	140,926 (2010 – 2012	EUR	PecRhin cost vs. revenues100504.xls (Excel sheet)	- Project documentation	The values are correct	The information sources are checked to be	A special environmental tax is payable in accordance with article 45 of the 'Loi de

Parameter	Value applied	Unit	Source of Information (please indicate document and page)	Reference	DOE ASSESSMENT		
					Correctness of value applied	Appropriateness of information source	Comment
	period)					appropriate	Finances 1999' and article 266 nonies of the 'Code des Douanes'/douane/. The law stipulates a tax of 67.01 EU per tonne N_2O emitted (value of 2010). The tax savings were not added to the project revenues but used as an argument, that the project activity cannot be financed with these tax savings and without support of the ERU issuing.
Catalyst costs	542.150 (2010 – 2012 period)	EUR	PecRhin cost vs. revenues100504.xls (Excel sheet)	- Project documentation	The values are correct	The information sources are checked during on site visit to be appropriate	The parameter "Secondary Catalyst Costs" of the cost analysis includes the costs/JM/ for • leasing > 90 % red.: €1.03/tHNO_3 > 85 % red.: €0,97/tHNO_3 > 80 % red.: €0:937tHNO_3 > 75 % red.: €0,87/tHNO_3 • installing just enough catalyst material to be in complience with the "Arrêté Préféctoral" which limits the N_2O emissions to 3 kg N_2O/t HNO_3 (100%) from 2010-01-01 onwards/3kg/. and is correct calculated and assessed.
Automated monitoring system (AMS) costs	123,000 (2010 – 2012 period)	EUR	PecRhin cost vs. revenues100504.xls (Excel sheet)	- Project documentation	The values are correct	The information sources are checked during on site visit to be appropriate	The parameter "AMS costs" of the cost analysis includes the costs for • Modification of N2O analyser/relocation of sampling points

Parameter	Value applied	Unit	Source of Information (please indicate document and page)	Reference	DOE ASSESSMENT		
					Correctness of value applied	Appropriateness of information source	Comment
							• Sampling gases, new HNO3 flow meters & DCS modifications • Flow, temp & pressure measurements, plus sampling ports and is correct calculated and assessed. The determination team valuating these costs as customary and correct.
JI Project operating costs	191,500 (2010 – 2012 period)	EUR	PecRhin cost vs. revenues100504.xls (Excel sheet)	- Project documentation	The values are correct	The information sources are checked during on site visit to be appropriate	The parameter "JI Project operating costs" of the cost analysis includes the costs for • QAL2 audit (2010) • QAL3 (maintenance, calibrations etc) (ongoing) • Annual Surveillance Test (2011, 2012) • Determination (once) • First Verification • Subsequent Verifications (x 4) and is correct calculated and assessed. The determination team valuating these costs as customary and correct.

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 (minor tax savings caused by lower N_2O-emissions excepted). Their operation does not create any marketable products or by-products. However, any operator willing to install and thereafter operate such technology faces significant investment and additional operating costs	/PDD/ Check of legal frame conditions of the country	The source 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 beyond the legal limit.

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

ANNEX 5: OUTCOME OF THE GSCP

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

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

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

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

ANNEX 6: APPLICATION OF NON APPROVED METHODOLOGIES REQUIREMENTS CHECKLIST

Table A-6: Non approved Methodologies Requirement Checklist

☒	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.