

# FINAL JI DETERMINATION REPORT

GPN S.A.

# GPN GRAND QUEVILLY N8 N<sub>2</sub>O ABATEMENT PROJECT

Report No: 8000373119 - 09/265

Date: 2010-04-28

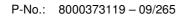
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			Project No. 800037		- 09/265		
Project type:			Organisatio				
☐ JI Track 1 (Pro ☐ JI Track 2	mestiq	ue)	TÜV NO	ORD .	II/CDM Certification Program		
Client:				Client ref.:			
GPN S.A.				Patrick	Le Ca	lvé	
Summary:				☑ positive determination opinion □ negative determination opinion			
the project: "GPN Gran France and of the UNF and reporting. UNFC	GPN S.A. has commissioned the TÜV NORD JI/CDM Certification Program (CP) as a Third Party to determina the project: "GPN Grand Quevilly N8 N <sub>2</sub> O abatement" with regard to the relevant requirements of the host count France and of the UNFCCC for JI project activities, as well as criteria for consistent project operations, monitorir 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 approved and publishe					gy: "Ca	talytic reduction of $N_2O$ at nitric acid plants",	
						documents related to baseline and monitoring it evidence to determinate the fulfilment of the	
In detail the conclusion	is can l	be summ	arised as f	ollows:			
- The project is in line	with al	relevant	host coun	try criteria	(France	) and all relevant UNFCCC requirements for JI.	
- The project additiona	ality is s	sufficientl	y justified i	n the PDD,	, the mo	nitoring plan is transparent and adequate.	
- The calculation of the project emission reductions is carried out in a transparent and conservative that the calculated emission reductions of 795,579 tCO <sub>2</sub> e are most likely to be achieved within t period.							
The conclusions of this report show, that the project, as it was described in the project documentation						scribed in the project documentation, is in line	
with all criteria applicable for the determination PDD.							
Report No.: Subject Group:							
8000373119 – 09/265 Climate Prot			ection	Ind	exing terms		
Report title:							
GPN Grand Que	villy N	18 N <sub>2</sub> O	abatem	ient	Pr	ojet Domestique	
project.					JI	– Track 1	
					De	etermination PDD	
Work carried out by:							
Mr. Rainer Winter Mr. Ulrich Walter Mr. Stefan Magenheim Mr. Khalid Doukkali					$\boxtimes$	No distribution without permission from the client or responsible organisational unit	
Technical review by: Final approval by:							
Mr. Eric Krupp Mr. Eric Krupp							
					Limited distribution		
Date of this revision: 2010-04-28	Rev. No <b>1</b>	Rev. No.: Number of 82		pages:		Unrestricted distribution	
					l		



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 <sub>4</sub>	Methane
CL	Clarification Request
CO <sub>2</sub>	Carbon dioxide
CO <sub>2e</sub>	Carbon dioxide equivalent
СР	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 <sub>2</sub> O	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

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

#### GPN Grand Quevilly N8 N<sub>2</sub>O abatement "

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.

Item	Data					
Project title	"GPN Grand Quevilly N8 N <sub>2</sub> O Abatement Project "					
Project size	$\boxtimes$	Large	Scale Small Scale			
Project Scope		1	Energy Industries (renewable- /non-renewable sources)			
(according to UNFCCC		2	Energy distribution			
sectoral scope numbers for		3 Energy demand				
JI)		4	Manufacturing industries			
	$\boxtimes$	5	5 Chemical industry			
		6	Construction			
		7	Transport			
		8	Mining/Mineral production Metal production			
		9				
		10	Fugitive emissions from fuels (solid, oil and gas)			
		11	Fugitive emissions from production and consumption of halocarbons and hexafluoride			

#### Table 2-1: Project Characteristics



Item	Data			
	12 Solvents use			
	13 Waste handling and disposal			
	14 Land-use, land-use change and forestry			
	15 Agriculture			
Applied Methodology	Project specific methodology (Projet Domestique Methodology)			
Track	1			
Crediting period	2009-12-01 – 2012-12-31			
Start of crediting period <sup>1</sup>	2009-12-01			

# 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 Partie	s and project participants
---------------------------	----------------------------

Characteristic	Party	Project Participant
Host party	France	GPN 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:

No.	Project Location
Host Country	France
Region	North West (Haute Normandie), Département: Seine- Maritime, Commune : Le Grand Quevilly (near Rouen)
Project location address	30, rue de l'lindustrielle - BP 204
-,	76121 Grand Quevilly Cadex
Plant Coordinates	Latitude: 49°25'2.31"N
	Longitude: 1 °1'28.38"E

# 2.4 Technical Project Description

The project involves the installation of a tertiary  $N_2O$  reduction catalyst of the nitric acid production plant of GPN N8. 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 a tertiary catalyst installed in the same tail

<sup>&</sup>lt;sup>1</sup> As per the published PDD (version 2)



gas reactor as the separate De-NOX catalyst. The nitrous oxide would otherwise be emitted within the tail gas of the nitric acid plant to the atmosphere.

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

Parameter	Unit	Value
Ammonia Oxidation Reactor		
Manufacturer	-	GPN S.A.
Diameter	mm	6000
Start of commercial production	-	July 2009
Operating conditions as per		
specifications (trip point values)		
- Temperature (min/max):	C	840 – 900
- Pressure (min/max):	MPa	0.15 – 0.5
- Ammonia to Air ratio (max)	Vol%	11
Ammonia Oxidation Catalyst		
Manufacturer	-	Johnson Matthey
Composition:	-	Pt/Rd/Pd
Absorber		
Design capacity per day	t/d (100 %)	1,500
Annual operation (design)	days	350
Tertiary Catalyst		
Manufacturer	-	GPN S.A.
Design efficiency N <sub>2</sub> O reduction	%	95
Design efficiency NO <sub>x</sub> reduction	%	>80
Capacities of substituted plants		
Oissel	t/a (metric)	297,500
N5	t/a (metric)	119,000
N6	t/a (metric)	119,000
N <sub>2</sub> O Analyzer (stack)		
Manufacturer	-	FT Fine Tech
Туре	-	ANAFIN 5000 ORBITAL AIT
Measurement Principle	-	FTIR
Stack volume flow rate		
measurement		
Manufacturer	-	Sick Maihak GmbH
Туре	-	FLOWSIC 100
Measurement Principle	-	Ultrasonic



# 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<sup>/PDD/</sup> 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

Торіс	Time
Assignment of determination	2009-07-03
Submission of PDD for global stakeholder commenting process	2009-08-03
On-site visit	2009-07-27 to
	2009-07-31
Draft reporting finalised	2009-08-28
Final reporting finalised	2010-04-28
Technical review on final reporting finalised	2010-04-28

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# 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 4 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.

	Name	Company	Function <sup>1)</sup>	Qualification Status <sup>2)</sup>	Sectoral competence	Technical competence	Host country Competence	Controlling competence
⊠ Mr. □ Ms.	R. Winter	TÜV NORD CERT, Germany	TL	SA	$\boxtimes$	$\boxtimes$		$\boxtimes$
⊠ Mr. □ Ms.	U. Walter	TÜV NORD CERT, Germany	ТМ	TE		$\boxtimes$		
⊠ Mr. □ Ms.	S. Magenheim	TÜV NORD Systems, Germany	ТМ	TE		$\boxtimes$		
⊠ Mr. □ Ms.	K. Doukkali	TÜV NORD CERT, Germany	ТМ	TE		$\boxtimes$	$\boxtimes$	
⊠ Mr. □ Ms.	E. Krupp	TÜV NORD CERT, Germany	TR, FA	SA	$\boxtimes$	$\boxtimes$		$\boxtimes$

 Table 3-2:
 Involved Personnel

<sup>1)</sup> TL : Team Leader; TM : Team Member, TR: Technical review; FA: Final approval

<sup>2)</sup> GHG Auditor Status: A : Assessor; E : Expert; SA: Senior Assessor; T : Trainee; TE Technical Expert

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# 3.4 Consideration of Public Stakeholder Comments

The draft PDD, as received from the project participants, was made publicly available on TÜV NORD Website <u>www.global-warming.de</u> during a 30 days period from 2009-08-03 to 2009-09-03.

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 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.

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 assessmen t 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.

The determination protocol as described in Figure 1.

Figure 1: Determination protocol tables

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

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# **3.6 Review of Documents**

The published PDD (version 2) 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.

Interviewed Persons / Entities	Interview topics
Project proponent representatives (GPN) Project consultant (N.serve) Maintenance staff of AMS (SPIE)	<ul> <li>Chronological description of the project activity with documents of key steps of the implementation.</li> <li>Implementation status</li> <li>Technical details of the project realization, project feasibility, designing, operational life time, monitoring of the project</li> <li>Host Government Approval</li> <li>Approval procedures and status</li> <li>Monitoring and measurement equipment and system.</li> <li>Financial aspects</li> <li>Crediting period</li> <li>Project activity starting date</li> <li>ERU allocation / ownership</li> <li>Baseline assumptions</li> <li>Additionality</li> <li>Monitoring</li> <li>Roles &amp; responsibilities of the project participants w.r.t. project management, monitoring and reporting</li> <li>National Legislation</li> <li>Editorial issues of the PDD</li> </ul>

Table 3-3	Interviewed n	persons and	interview topics
	intervieweu p		

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



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# 3.8 **Project comparison**

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

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

# 3.9 **Resolution of Clarification and Corrective Action Requests**

#### 3.9.1 Definition

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

- mistakes have been made in assumptions, application of the methodology or the project documentation which will have a direct influence the project results,
- the requirements deemed relevant for determination of the project with certain characteristics have not been met or
- there is a risk that the project would not be registered by the UNFCCC or that emission reductions would not be able to be verified and certified.

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

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

# 3.9.2 Draft Determination PDD

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



# 3.9.3 Final Determination PDD

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

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

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

# 3.10 Technical review

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

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

#### 3.11 Final approval

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

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



# 4 DETERMINATION FINDINGS

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

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

Determination topic <sup>1)</sup>	No. of CAR	No. of CL	No. of FAR
<ul> <li>General description of project activity (A)</li> <li>Project boundaries</li> <li>Participation requirements</li> <li>Technology to be employed</li> <li>Contribution to sustainable development</li> </ul>	2	3	-
<ul> <li>Project baseline (B)</li> <li>Baseline Methodology</li> <li>Baseline scenario determination</li> <li>Additionality determination</li> <li>Calculation of GHG emission reductions Project emissions Baseline emissions</li> <li>Leakage</li> </ul>	2	4	-
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	-	2	1
Estimation of greenhouse gas emission reductions (E)	1	2	-
Environmental impacts (F)	-	-	-
Stakeholder Comments (G)	-	-	-
SUM	6	11	1

- The letters in brackets refer to the determination protocol



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

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

Finding:	A1				
Classification	🖂 CAR		🗌 FAR		
<b>Description of finding</b> Describe the finding in unam- biguous style; address the context (e.g. section)	No letters of approval	have been provided so	far.		
<b>Corrective Action #1</b> This section shall be filled by the PP. It shall address the cor- rective action taken in details.	report is available. determination report issuance request.	The LoA can only be obtained once a preliminary determination report is available. The French DFP requires a preliminary determination report to be submitted for processing the LoA issuance request.			
<b>DOE Assessment #1</b> The assessment shall encom- pass all open issues in annex A- 1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.	<ul> <li>Ministère de l'Écologie de la Mer (French Development)<sup>/mist/</sup> on 2 team on 2010-04-28.</li> <li>The issuing autho Designated Focal I</li> <li>The LoA states Gi GmbH as project p</li> <li>The project title</li> </ul>	PN S.A. and N.serve E participants as given in t is clearly referenced i hissions de $N_2O$ de l	eloppement durable et gy and Sustainable of to the determination NFCCC JI website as invironmental services he PDD. in French: "Projet de		
<b>Conclusion</b> <i>Tick the appropriate checkbox</i>	<ul> <li>To be checked durin</li> <li>Appropriate action w</li> <li>Project documentation</li> <li>Additional action shot</li> </ul>	g the first periodic verifica vas taken on was corrected correspo			

Finding:		A2	
Classification		🖂 CL	🗌 FAR
<b>Description of finding</b> Describe the finding in unam- biguous style; address the context (e.g. section)	1500  t HNO/d and the stated value of 1.650 t reflects the 110 %		
<b>Corrective Action #1</b> This section shall be filled by the PP. It shall address the cor- rective action taken in details.	nominal capacity of th	ne plant being 1500 tHl page 1); the resulting	DD now reflecting the NO3 (100% conc.) per changes to annual



Finding:	A2
<b>DOE Assessment #1</b> The assessment shall encom- pass 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 PDD states clearly a capacity of production of $HNO_3$ of 1,500 t per day.
<b>Conclusion</b> <i>Tick the appropriate checkbox</i>	<ul> <li>To be checked during the first periodic verification</li> <li>Appropriate action was taken</li> <li>Project documentation was corrected correspondingly</li> <li>Additional action should be taken</li> <li>The project complies with the requirements</li> </ul>

Finding:		A3		
Classification	🗌 CAR	🖂 CL	🗌 FAR	
Description of finding				
Describe the finding in unam- biguous style; address the context (e.g. section)	On page 43/44 the firs	On page 43/44 the first column should be translated to English.		
Corrective Action #1				
This section shall be filled by the PP. It shall address the cor- rective action taken in details.	Has been amended in	Has been amended in the PDD.		
DOE Assessment #1				
The assessment shall encom- pass 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 first column was translated in English.			
Conclusion	To be checked during the first periodic verification			
Tick the appropriate checkbox	Appropriate action was taken			
	Project documentation	on was corrected correspo	ondingly	
	Additional action sho	ould be taken		
	The project complies	with the requirements		

Finding:	Α4		
Classification	🗌 CAR	🖂 CL	🗌 FAR
Description of finding			
Describe the finding in unam- biguous style; address the context (e.g. section)	The coordinates of the plant location are missing in the PDD.		
Corrective Action #1			
This section shall be filled by the PP. It shall address the cor- rective action taken in details.	Coordinates have been added in section A.4.1.4.		



Finding:	Α4
<b>DOE Assessment #1</b> The assessment shall encom- pass 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 coordinates are included in the corresponding section of the PDD
<b>Conclusion</b> <i>Tick the appropriate checkbox</i>	<ul> <li>To be checked during the first periodic verification</li> <li>Appropriate action was taken</li> <li>Project documentation was corrected correspondingly</li> <li>Additional action should be taken</li> <li>The project complies with the requirements</li> </ul>

Finding:	A5		
Classification	🖂 CAR		🗌 FAR
<b>Description of finding</b> Describe the finding in unam- biguous style; address the context (e.g. section)	The information regarding the name of the organisation given in Annex 1 is not in line with A.3. The name given in A.3. is GPN S.A., in Annex 1 is GPN N8 Nitric acid plant (France)		
Corrective Action #1			
This section shall be filled by the PP. It shall address the cor- rective action taken in details.	A revised PDD was send per email on 2009-09-16.		
DOE Assessment #1			
The assessment shall encom- pass 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 name of the Orga the information given i		mentioned according
Conclusion	To be checked durin	g the first periodic verifica	tion
Tick the appropriate checkbox	Appropriate action w	as taken	
	Project documentation	on was corrected correspo	ondingly
	Additional action sho	ould be taken	
	The project complies	with the requirements	

Finding:		B1	
Classification	🖂 CAR		🗌 FAR
<b>Description of finding</b> Describe the finding in unam- biguous style; address the context (e.g. section)	The discussion of the	alternatives c) and d)	is missing in chapter



Finding:	B1		
<b>Corrective Action #1</b> This section shall be filled by the PP. It shall address the cor- rective action taken in details.	A discussion of these scenarios has been included in section B.4 (Step 1).		
<b>DOE Assessment #1</b> The assessment shall encom- pass 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 discussion of the scenarios c) and d) are now included in the PDD. Both scenarios were discussed sufficiently.		
<b>Conclusion</b> Tick the appropriate checkbox	<ul> <li>To be checked during the first periodic verification</li> <li>Appropriate action was taken</li> <li>Project documentation was corrected correspondingly</li> <li>Additional action should be taken</li> <li>The project complies with the requirements</li> </ul>		

Finding:	B2			
Classification		🖂 CL	🗌 FAR	
<b>Description of finding</b> Describe the finding in unam- biguous style; address the context (e.g. section)	The discussion of leakage is not completely in line with the methodology. Furthermore the additional pressure loss due to the increased amount of catalyst should be discussed in this section.			
<b>Corrective Action #1</b> This section shall be filled by the PP. It shall address the cor- rective action taken in details.	Amendments have been made to sections B.5 (under the barrier analysis, technical barriers, footnote 29) and B.6.1; also reference to steam being "exported to other plants on the site" has been deleted, because surplus steam is used for energy production instead of being fed into other production processes directly. Also, it was clarified that the applied methodology does not require any further leakage assessment if the tail gas temperature level is below 170 °C which is the case at the N8 plant (see chapter 9 of the methodology). Although the tail gas temperature would already suffice for justifying the omission of a leakage assessment, the project proponent has decided to additionally address the fact that a heat recovery system is installed, in order to further confirm that no leakage assessment is required.			
<b>DOE Assessment #1</b> The assessment shall encom- pass 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. After correcting the P		of leakage is in line with o leakage assessment is	
<b>Conclusion</b> Tick the appropriate checkbox	Appropriate action w Project documentation Additional action sho	on was corrected corre	spondingly	



Finding:	B3		
Classification	🗌 CAR	🖂 CL	🗌 FAR
<b>Description of finding</b> Describe the finding in unam- biguous style; address the context (e.g. section)	will be issued for en business as usual	e clarified how it can be nission levels which de scenario which is de -04. (2,47kgN <sub>2</sub> O/tHNO <sub>3</sub>	o not go beyond the fined by the Arrete
<b>Corrective Action #1</b> This section shall be filled by the PP. It shall address the cor- rective action taken in details.		een addressed in the se of the abatement syste	
<b>DOE Assessment #1</b> The assessment shall encom- pass all open issues in annex A- 1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.	was set by local aur emission factor determ Furthermore it must satisfaction of the resp emission levels that e case is 2.47kgN <sub>2</sub> O/tHN It must therefore be	PDD, that in the case w thorities, this limit rep nined by the French DFI be proven during th bonsible AIE that no EF exceed the new regulate $NO_3$ , proven at each verific vels for the past year	laces the benchmark P. We verification to the RUs will be claimed for ory limit, which in this eation that the plant's
<b>Conclusion</b> Tick the appropriate checkbox	<ul> <li>Appropriate action w</li> <li>Project documentation</li> <li>Additional action shows</li> </ul>	on was corrected correspo	

Finding:	B4		
Classification	🖂 CAR		🗌 FAR
<b>Description of finding</b> Describe the finding in unam- biguous style; address the context (e.g. section)		e for Oissel needs R calculation has to be	
<b>Corrective Action #1</b> This section shall be filled by the PP. It shall address the cor- rective action taken in details.	during the on-site dete dated 3 <sup>rd</sup> March 2005. The nominal daily ca assuming 350 days of of production output pe	ermination visit, namely pacity is 850 tHNO₃ ( annual production this	the findings obtained the Arrete Prefectoral 100% conc.) per day; allows 297,500 tHNO <sub>3</sub> ns A.4.3 and B.6.3



Finding:	B4
<b>DOE Assessment #1</b> The assessment shall encom- pass 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 was corrected according to the annual production value
<b>Conclusion</b> <i>Tick the appropriate checkbox</i>	<ul> <li>To be checked during the first periodic verification</li> <li>Appropriate action was taken</li> <li>Project documentation was corrected correspondingly</li> <li>Additional action should be taken</li> <li>The project complies with the requirements</li> </ul>

Finding:	B5		
Classification		🖂 CL	🗌 FAR
<b>Description of finding</b> Describe the finding in unam- biguous style; address the context (e.g. section)	•	the list provided during rresponding evidences.	the on-site visit needs
<b>Corrective Action #1</b> This section shall be filled by the PP. It shall address the cor- rective action taken in details.	Technical data where	provided per e-mail on	2009-09-21.
<b>DOE Assessment #1</b> The assessment shall encom- pass all open issues in annex A- 1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.	technical specification	and trip points. The da	by the PP to prove the ate of plant starting up cate of GPN and
<b>Conclusion</b> Tick the appropriate checkbox	<ul> <li>Appropriate action w</li> <li>Project documentation</li> <li>Additional action shot</li> </ul>	on was corrected correspo	

Finding:	B6		
Classification	🗌 CAR 🛛 🖾 CL 🖂 FAR		
Description of finding			
Describe the finding in unam- biguous 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 cor- rective action taken in details.	The Investment Cost Sheet was sent per e-mail on 2009-08-07.		
DOE Assessment #1	OK		
The assessment shall encom-			



<b>F</b> ire dire av	
Finding:	B6
pass all open issues in annex A- 1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.	<ul> <li>A clear, viewable and unprotected investment cost sheet with copies of relevant order, invoices were provided to TUEV NORD on 2010-01-25:</li> <li>Investment Excel sheet: "GPN N8 100125</li> </ul>
	<ul> <li>The main types of costs are:</li> <li>Costs for catalyst investment</li> <li>QAL2 audit (2009, 2012)</li> <li>QAL 3 (maintenance, calibrations etc) (ongoing)</li> <li>Annual Surveillance Test (2010, 2011)</li> <li>Determination (once)</li> <li>First Verification</li> <li>Subsequent Verifications (x 5)</li> </ul>
	<ul> <li>The results of the assessment of the financial sheets are following:</li> <li>The numbers mentioned in the cost sheets are proved by evidences provided on the on-site visit or during the determination process.</li> <li>Since the contract between Heraeus and GPN includes a guaranteed performance (95 guaranteed) over the full crediting period, a technical lifetime assessment of the project/the installation should not be undertaken.</li> <li>Taxation (VAT) is excluded from the calculation.</li> <li>The input values are referenced and proved with contracts, invalues are referenced.</li> </ul>
	<ul> <li>invoices or technical offers.</li> <li>Between 2009 and 2012, the project costs are summarised to 3,166,565 EUR, the revenues in the same period from the ERUs issued are 7,160,211.</li> <li>The tax savings caused by less N<sub>2</sub>O-emission are 204,331 EUR between 2009 and 2012. It could be shown, that it is not possible to compensate the costs of the project activity only with profits from the a.m. N<sub>2</sub>O-tax savings.</li> </ul>
	The figures included in the Data Cost Sheet are assessed as appropriate, conservative and realistic, the calculation is comprehensible. On a basis of an ERU price of 9 € a return of invest is given at 2010. Since no benchmark is predefined (according to the methodology), a further assessment of the IRR is not required. The Annex 3 of the Determination Report includes a detailed assessment of financial parameters.
<b>Conclusion</b> <i>Tick the appropriate checkbox</i>	<ul> <li>To be checked during the first periodic verification</li> <li>Appropriate action was taken</li> <li>Project documentation was corrected correspondingly</li> <li>Additional action should be taken</li> <li>The project complies with the requirements</li> </ul>



Finding:		C1	
Classification	🖂 CAR		🗌 FAR
<b>Description of finding</b> Describe the finding in unam- biguous style; address the context (e.g. section)	Apart form the procedural aspects section C.1. should also reflect the technical aspects of the project implementation.		
Corrective Action #1			
This section shall be filled by the PP. It shall address the cor- rective action taken in details.	A clarifying sentence has been added to section C.1.1.		
DOE Assessment #1			
The assessment shall encom- pass 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 start-up of the N8 in section C.1.1	B-plant with an installed	l catalyst is referenced
Conclusion	To be checked durin	g the first periodic verifica	ation
Tick the appropriate checkbox	Appropriate action w	as taken	
	Project documentation	on was corrected correspo	ondingly
	Additional action should be taken		
	The project complies	with the requirements	

Finding:	D1		
Classification	🗌 CAR	🖂 CL	🗌 FAR
<b>Description of finding</b> Describe the finding in unam- biguous style; address the context (e.g. section)	EN 14181 will be follo like AFNOR XP X43-3	should be made clear in wed completely or if ot 305, which are in line w oplied for this project ac	her eligible standards, rith the methodological
<b>Corrective Action #1</b> This section shall be filled by the PP. It shall address the cor- rective action taken in details.			
<b>DOE Assessment #1</b> The assessment shall encom- pass all open issues in annex A- 1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.	compliance with the D If the AMS can not	t, according to the IN 14181 is not require fulfil the requirement ved by an independer litation.	d by the methodology. s of the QAL 1, the
<b>Conclusion</b> <i>Tick the appropriate checkbox</i>	Appropriate action w Project documentation Additional action sho	on was corrected correspo	



Finding:	D2		
Classification		🖂 CL	🗌 FAR
<b>Description of finding</b> Describe the finding in unam- biguous style; address the context (e.g. section)	I he monitoring plan should include the monitoring of the regulatory		
<b>Corrective Action #1</b> This section shall be filled by the PP. It shall address the cor- rective action taken in details.			
<b>DOE Assessment #1</b> The assessment shall encom- pass 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 Parameter:"Emissions cap for $N_2O$ from nitric acid production set by government/local regulation" was added to the Table 11:		
<b>Conclusion</b> Tick the appropriate checkbox	<ul> <li>To be checked during the first periodic verification</li> <li>Appropriate action was taken</li> <li>Project documentation was corrected correspondingly</li> <li>Additional action should be taken</li> <li>The project complies with the requirements</li> </ul>		

Finding:	D3		
Classification	🗌 CAR		🛛 FAR
<b>Description of finding</b> Describe the finding in unam- biguous style; address the context (e.g. section)	start of the crediting period (e.g. Location of the sampling point.		
<b>Corrective Action #1</b> This section shall be filled by the PP. It shall address the cor- rective action taken in details.			
<b>DOE Assessment #1</b> The assessment shall encom- pass all open issues in annex A- 1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.	These issues need to be clarified before start of the crediting period by the Project Proponents.		
<b>Conclusion</b> <i>Tick the appropriate checkbox</i>	<ul> <li>To be checked during the first periodic verification</li> <li>Appropriate action was taken</li> <li>Project documentation was corrected correspondingly</li> <li>Additional action should be taken</li> <li>The project complies with the requirements</li> </ul>		



Finding:	E1			
Classification	□ CAR			
<b>Description of finding</b> Describe the finding in unam- biguous style; address the context (e.g. section)	•	strument correction factors of the second structure of the second se	actors needs further e calibration curve.	
<b>Corrective Action #1</b> This section shall be filled by the PP. It shall address the cor- rective action taken in details.	by N.serve monitoring expert Martin Stilkenbaeumer and the TUEV			
	SRM method as per E accredited testing hou the calibration curve a The results of these verification process.	N 14181 will be carried use to ensure the AM and test the variability SRM are available to a The AMS calibration fu	urements using a the d out at the plant by an S' suitability, establish of the measurements. the AIE as part of the unction as well as the ed. The results will be	
	to the resulting hourly	on function or correction vaverage values for N prior to the final ca		



Finding:	E1		
<b>DOE Assessment #1</b> The assessment shall encom- pass all open issues in annex A- 1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.	calibration curve of the QAL2 audit for all components of the AMS		
<b>Conclusion</b> <i>Tick the appropriate checkbox</i>	<ul> <li>To be checked during the first periodic verification</li> <li>Appropriate action was taken</li> <li>Project documentation was corrected correspondingly</li> <li>Additional action should be taken</li> <li>The project complies with the requirements</li> </ul>		

Finding:		E2	
Classification	🖂 CAR		🗌 FAR
<b>Description of finding</b> Describe the finding in unam- biguous style; address the context (e.g. section)	The application of the 90 % issuance factor is not in line with the		
<b>Corrective Action #1</b> This section shall be filled by the PP. It shall address the cor- rective action taken in details.			
<b>DOE Assessment #1</b> The assessment shall encom- pass 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 issurance factor was applied to the calculation of ERUs in the difference factor by the PDD.		
<b>Conclusion</b> <i>Tick the appropriate checkbox</i>	<ul> <li>To be checked during the first periodic verification</li> <li>Appropriate action was taken</li> <li>Project documentation was corrected correspondingly</li> <li>Additional action should be taken</li> <li>The project complies with the requirements</li> </ul>		

Finding:	E3		
Classification	🗌 CAR	🖂 CL	🗌 FAR
<b>Description of finding</b> Describe the finding in unam- biguous style; address the context (e.g. section)	<b>g</b> $m_{n-1}$ In the formula on page 24 it should be made clear that only the Nitric acid production substituted can be accounted for.		de clear that only the unted for.



Finding:	E3	
<b>Corrective Action #1</b> This section shall be filled by the PP. It shall address the cor- rective action taken in details.	This has been taken into account by making an addition to the mentioned formula (section B.6.1).	
<b>DOE Assessment #1</b> The assessment shall encom- pass 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 parameter NAP <sub>n</sub> refers to the 'Substituted' nitric acid production during the Verification Period (tHNO <sub>3</sub> )	
<b>Conclusion</b> Tick the appropriate checkbox	<ul> <li>To be checked during the first periodic verification</li> <li>Appropriate action was taken</li> <li>Project documentation was corrected correspondingly</li> <li>Additional action should be taken</li> <li>The project complies with the requirements</li> </ul>	



# 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 validation protocol (Annex 1).

# 5.1 General Description of the Project Activity

#### 5.1.1 Participation

#### LOA

The DFP of France issued a LoA after submission of the Draft Determination Report.

#### **Project Participants**

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

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

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

#### 5.1.2 Contribution to Sustainable Development

The contribution of the project activity to sustainable development of the host country has been confirmed by referencing the project activity in a specific "Méthode pour les Projets Domestiques "<sup>/mist/,/B-1/</sup> for JI Track 1 projects, which refers directly to the applied tertiary N<sub>2</sub>O abatement technology.

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

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#### 5.1.3 PDD Editorial Aspects

The PDD is in line with the structure and guidance specified in the decree set from March 2<sup>nd</sup> 2007 issued by the "Ministère de l'écologie et du développement durable" /B-5/.

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

# 5.1.4 Technology to be Employed

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

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

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

#### 5.1.5 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<sub>2</sub>O at nitric acid plants"<sup>/B-2/</sup>, published by the Ministère de l'Écologie, de l'Énergie, du Développement durable et de la Mer (French Ministry of Ecology and Sustainable Development)<sup>/mist/</sup>.

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 N8) and the description of the emission sources and GHGs that are included in the project boundary for the purpose of calculating project and baseline emissions for this project activity.

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

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.

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

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

#### 5.2.4 Calculation of GHG Emission Reductions

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

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

#### **Baseline Emissions:**



The baseline methodology takes into account

• a decree of the MEEDDAT, setting the benchmark Emission Factors (EF<sub>BM</sub>) for the calculation of the reduction of N<sub>2</sub>O-Emission in future years

2009	2010	2011	2012	
2.5	2.5	2.5	1.85	kg N₂O/t HNO₃ (100%)

and

 a plant specific regulatory limit of 2.47 kg N<sub>2</sub>O/t HNO<sub>3</sub> (100%), introduced by the DRIRE.

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

 These values/years are:

 Year:
 2009
 2010
 2011
 2012

 Value:
 2.47
 2.47
 1.85
 kg N<sub>2</sub>O/t HNO3 (100%)

#### Project Emissions:

Taking into account a 95 % efficiency of the tertiary N<sub>2</sub>O abatement catalyst and an Emission Factor of 7 kg N<sub>2</sub>O/tHNO<sub>3</sub> (according to the IPCC default value for medium pressure plants <sup>/bref/</sup>), the resulting Project Emission Factor was calculated to 0.35kg N<sub>2</sub>O/tHNO<sub>3</sub>.

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

#### 5.2.5 Additionality Determination

#### Prior consideration of the clean development mechanism

The start of the plant N8 was July 2009. At this date the plant operation started with a fully operational tertiary catalyst, and so this date is fixed as the starting date of the Track 1 JI project activity. After successful completion of this campaign, GPN decided to undertake a Track 1 JI project activity.

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<sup>/B-1, B-2/</sup>. A financial



barrier assessment, according to the Arrêté du 2 mars 2007 of the «Ministère de l'écologie et du développement durable» was included in the consideration.

#### Alternatives

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

#### Investment Analysis

The PP provided an investment-sheet with all relevant types of costs occurred in the project activity<sup>/INVN8/</sup>. 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 investment
- QAL2 audit (2010)
- QAL 3 (maintenance, calibrations etc) (ongoing)
- Annual Surveillance Test (2011, 2012)
- Determination (once)
- First Verification
- Subsequent Verifications (x 5)

The PP decided not to add the costs for the AMS to the investment costs, since the plant had apparently intended to install this monitoring equipment in the plant anyway (since it is a new plant). These costs can therefore not be associated with the JI project

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 tertiary  $N_2O$  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.

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 CDM 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.

# 5.2.6 Monitoring Methodology

The data measurement, storage, assessment and processing was discussed with the plant operator GPN 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 N2O at nitric acid plants<sup>/B-2/</sup>.

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

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#### 5.2.7 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 of the annex 1.

#### 5.2.8 Project Management Planning

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

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

#### 5.2.9 Crediting Period

The project starting date is 2009-07 and the duration of the crediting period extends from 2009-12-01 to 2012-12-31, which is deemed realistic and appropriate.

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

#### 5.2.10 Environmental Impacts

The Host Country France does not require an Environmental Impact Assessment (EIA) for the project. 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.

#### 5.2.11 Comments by Local Stakeholders

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

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



#### 5.2.12 Issues for verification

It must be proven at each verification, that the plant's average emission levels for the past year did not exceed this regulatory limit.

The suitability of the AMS to fulfil the requirements of the QAL 1 need to be proved by an independent laboratory with EN ISO/IEC 17025.

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## 6 DETERMINATION OPINION

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

"GPN Grand Quevilly N8 N<sub>2</sub>O abatement"

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 N2O 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 795,579 tCO<sub>2</sub>e 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.

Essen, 2010-04-28

6/t

Mr Rainer Winter, TÜV NORD JI/CDM CP Determination Team Leader Essen, 2010-04-28

Eric <sup>r</sup>krupp Final Approval Person TÜV NORD JI/CDM CP



# 7 REFERENCES

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

	Document
/ <b>AN2ON8</b> /	Decree of the DRIRE from 04/04/2009 setting the limits for N <sub>2</sub> O-emissions for the N8-plant to 2.47 kg/tHNO <sub>3</sub> .
/APS/	Prescriptions Complementaires (Plant permission (decree) of N5, N6, N7 indicates the plant capacity of $HNO_3$
/CAPN8/	Units characteristics sheet of plant N8 showing the design capacity of Nitric Acid.
/CATN8/	Calculation of catalyst quantity and costs from GPN 2009-07-01
/CSPIE/	Contrat de maintenance courante electricite mesures et regulation analyseurs pysico-chimiques barrieres automatiques usine de Grand- Quevilly (Contact between GPN and the laboratory SPIE regarding maintenance of the AMS of plant N7 and N8)
/CSPIEA5/	Annex 5 to /CSPIE/: "Définition des travaux de maintenance courante électricité, mesures et regulation, analysators physio-chimiques et barriers (Definition of the measures of maintenance the AMS)
/DDA/	Demande d'Autorisation d'Exploiter (Plant permission (decree) of N8 from 15/12/2006 indicates the 100 % plant capacity of 1,500 tonnes HNO <sub>3</sub> /year).
/DGVN8/	Technical description of the gas velocity monitor of plant N 8, FLOWSIC 100
/DN8B/	Drawing of the Ammonia-Boiler of Plant N8
/DVOLN8/	Technical description of the $HNO_3$ -volume flow meter of plant N 8, Micro Motion ELITE
/EDN8/	Etude des Dangers pour la demande dáutorisation déxploiter (Hazard analysis, referring to the shut down of the N5 and N6 plant)
/EfNOxN8/	Efficiency chart of $NO_x$ -destruction by the tertiary catalyst in plant N8
/INVN8/	Investment Cost Sheet



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	Document			
/ISO 14001/	ISO 14001:2004 Certificate, valid until 20/12/2009, issued by AFAQ at 01/05/2007.			
/ISO 9001/	ISO 9001:2000 Certificate, valid until 16/01/2011, issued by AFAQ at 04/02/2008.			
/NAPFS/	Flow Sheet of Nitric Acid Production Plant N8, Rev. 1 from 08/2007 (DocNo.: 1A0010-PFD-0010-0001).			
/NAPFS-SS/	<ul> <li>Flow Sheets of Nitric Acid Production Plant N8 as Screenshots of the poperation panel of the process controlling system which consist</li> <li>Burner, Gas Cooling</li> <li>Nitric Acid Production</li> <li>Tail Gas Treatment</li> <li>Tail Gas Treatment Emission</li> </ul>			
/ <b>PIN8</b> /	Flow Sheet of plant N8			
/QP/	5-yearly plan for risk assessment study (N7 and N8)			
/RCN8/	Protocol of the loading of the DeNox, N <sub>2</sub> O-Catalytic Reactor of plant N8 from 2009-06-16.			
/POGVN8/	Product overview of the gas velocity measurement device of plant N 8, FLOWSIC			
/RTSN8/	Range Trip settings of plant N8			
/SUCN8/	Start-up Certificate, Starting up date: 2009-07-15, signed: 2009-07-02			
/TRIP-N8/	Trip values (temperature, pressure) of the Plant N8.			
/TRIP2-N8/	Trip values (Ammonia/Air-Ratio) of the Plant N8.			

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

Reference	Document
/ <b>B-1</b> /	Méthode pour les Projets Domestiques Réduction catalytique du N <sub>2</sub> O dans des usines d'acide nitrique (Projet Domestique Methodology: Catalytic reduction of N <sub>2</sub> O at nitric acid plants)



Reference	Document
/ <b>B-2</b> /	Projet Domestique Methodology Catalytic reduction of N <sub>2</sub> O 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 <sub>2</sub> O 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>B-6</b> /	Reference Document on Best Available Techniques for the Manufacture of Large Volume Inorganic Chemicals - Ammonia, Acids and Fertilisers



#### 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			
/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/M ethodologies-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://cdm.ji.int	UNFCCC			

 Table 7-4:
 List of interviewed persons

Reference	Mol <sup>1</sup>		Name	Organisation / Function			
/IM01/	V	⊠ Mr. □ Ms	Patrick le Calvé	GPN, Technical manager			
/IM01/	V	⊠ Mr. □ Ms	Jean-Claude Lansou	GPN, Production South Plant Manager			
/IM01/	V	🛛 Mr.	Nicolas Aubertîe	GPN, Head of Electrical			



Reference	Mol <sup>1</sup>		Name	Organisation / Function		
		🗌 Ms		Instrumentation Department		
/IM01/	V	⊠ Mr. □ Ms	Gabriel Gombart	GPN, Sustainable Management		
/IM01/	V	⊠ Mr. □ Ms	Emmanuel de Trogoff	GPN, Licensing Process Engineer		
/IM01/	V	☐ Mr. ⊠ Ms	Rebecca Cardani-Strange	N.serve, Project manager		
/IM01/	V	⊠ Mr. □ Ms	Christopher Brandt	N.serve, CDM/JI Head of Project Management and Legal Counsel		
/IM01/	V	⊠ Mr. □ Ms	Fabrice Relmaunay	SPIE, Maintenance Personal fo AMS		

<sup>1)</sup> Means of Interview: (Telephone, E-Mail, Visit)



# 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

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# **ANNEX 1: DETERMINATION PROTOCOL**

#### Table A-1: Requirements Checklist

<b>Checklist Item</b> (incl. guidance for the determination team)	<b>Determination Team Comments</b> (Means and results of assessment)	Ref.	Draft Concl.	Final Concl.
A. General Description of Project Activity				
<b>A.1. Approval</b> 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 GPN S.A. The Project Participant of Germany is N.serve Environmental Services GmbH (Germany)	/PDD/		ОК
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/ /unfccc/		ОК
A.1.3. Has the project provided written approvals of all parties involved?	The Letters of Approval can be applied only after the issuance of the positive determination opinion. Nevertheless, a corresponding CAR was raised.	/PDD/	CAR A1	ОК



<b>Checklist Item</b> (incl. guidance for the determination team)	Determination Team Comments (Means and results of assessment)	Ref.	Draft Concl.	Final Concl.
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	ОК
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	ОК
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	ОК
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 in line with A.3		CAR A5	ОК
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	ОК
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	ОК
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 applicable PDD form been applied?	Since this is a JI Track 1 project activity, the PDD form is related to the methodology of the "Projet Domestique".	/PDD/ /B-1/		ОК



	<b>Checklist Item</b> (incl. guidance for the determination team)	Determination Team Comments (Means and results of assessment)	Ref.	Draft Concl.	Final Concl.
		A Project Design Document in accordance 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" has been used.	/B-4/		
A.2.2.	Has the PDD been duly filled in accordance	The PDD is in line with the "Example illustrating the	/PDD/		OK
	with the latest guidance(s)?	application of this methodology"(Annex 1) of the Projet Domestique Methodology: "Catalytic reduction of N <sub>2</sub> O at nitric	/B-1/		
		acid plants".	/B-4/		
		The PDD has in general been filled in accordance with the structure and guidance given in the methodology, but minor editorial issues have been discussed with the PPs during the site visit. The following findings have been raised and issued as <b>CAR</b> , <b>CLs</b> as listed below:			
		On page 43/44 (Annex 1 of the PDD) the first column should be translated to English since it is written in French.	/PDD/	CL A3	ОК
		The coordinates of the plant location are missing in the PDD.	/PDD/	CL A4	ОК
		The information regarding the name of the organisation given in Annex 1 is not in line with A.3. The name given in A.3. is GPN S.A., in Annex 1 is GPN N8 Nitric acid plant (France)	/PDD/	CAR A5	ОК



<b>Checklist Item</b> (incl. guidance for the determination team)	<b>Determination Team Comments</b> (Means and results of assessment)	Ref.	Draft Concl.	Final Concl.
<b>A.3. Technology to be employed</b> 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 <sub>2</sub> O emissions from the production of nitric acid at GPN's N8 nitric acid plant will be reduced by installation of a tertiary N <sub>2</sub> O 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 project activity description is assessed as clear, accurate, complete and sufficient; the PDD is in line with provided evidences and physical implementation of the project activity. The details including the technical specification of the state of the art catalyst technology for the abatement of N <sub>2</sub> O have been provided in the PDD in a detailed and appropriate manner. During the on-site visit the determination team has inspected the facilities of the HNO <sub>3</sub> -production site and it could be verified that the physical implementation of the PDD. The applicability of the type of abatement catalyst under appropriate plant conditions is suitable to decompose N <sub>2</sub> O	/PDD/ /NAPFS/		



	<b>Checklist Item</b> (incl. guidance for the determination team)	Determination Team Comments (Means and results of assessment)	Ref.	Draft Concl.	Final Concl.
		and the installed AMS fulfils the requirement of the methodology regarding the monitoring of the project emissions.			
		Nevertheless, the following CL was raised:			
		The capacity of the plant is stated as 1.650 metric tonnes of $HNO_3$ per day. It needs to be clarified that the nitric acid production capacity is 1.500 t $HNO_3/d$ and the stated value of 1650 reflects the 110 % value.	/PDD/	CL A2	ОК
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?	See A 3.1.			
A.3.3.	In case the project involves alteration of the existing installation or process, is a clear description available regarding the differences between the project and the pre-project situation?	Within the project, $N_2O$ emissions from the production of nitric acid at GPN's N8 nitric acid plant will be reduced by installation of a tertiary $N_2O$ abatement catalyst. The $N_2O$ devices were already installed before start of the plant in the tail gas of the ammonia burner (DeNox-Unit) in order to assess the technical feasibility. Previous to this test, no $N_2O$ abatement-technology was used so that the pre-project situation does not include any $N_2O$ abatement measures.	PDD		ОК

		1			
	<b>Checklist Item</b> (incl. guidance for the determination team)	Determination Team Comments (Means and results of assessment)	Ref.	Draft Concl.	Final Concl.
A.3.4.	Does the project design engineering reflect current good practices?	Yes. The project involves the installation of a tertiary catalyst in the tail gas stream of the nitric acid production process 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/		ОК
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?		/PDD/ /B-6/		ОК
A.4.	Small scale project activity				
	sessed whether the project qualifies as small- I 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 emission reduction of 795,579 $tCO_2e$ between 2009 and 2012 exceeds the limit of 60,000 $tCO_2e$ annually.	/PDD/		OK
A.4.2.	Does the project apply one of the approved	See A.4.1.			





<b>Checklist Item</b> (incl. guidance for the determination team)	Determination Team Comments (Means and results of assessment)	Ref.	Draft Concl.	Final Concl.
small scale categories and any methodology and tool referred therein?				
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 <sub>2</sub> O dans des usines d'acide nitrique (Projet	/PDD/		OK
	Domestique Methodology: Catalytic reduction of N <sub>2</sub> O at nitric	/B-1/		
	acid plants)	/B-2/		
	Version: 1	/B-4/		
	Type:			
	<ul> <li>I: CDM Approved Methodology – latest version</li> <li>II: CDM Approved Methodology – older version</li> </ul>			
	III: National Methodology			
	IV: Combination of Approved Methodologies			
	V: Project specific Methodology			



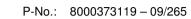
	<b>Checklist Item</b> (incl. guidance for the determination team)	Determination Team Comments (Means and results of assessment)	Ref.	Draft Concl.	Final Concl.
B.1.2.	In case of methodology types I and II: Is the applied CDM methodology identical with the version available on UNFCCC website or -in case of a country or project-specific methodology- is the methodology approved by the Host Country?	The proposed project activity applies the French Projet 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.	/PDD/ /mist/		ОК
B.1.3.	Are all applicability criteria in the methodology, the applied tools or any other methodology component referred to therein fulfilled?	<ul> <li>Yes, the applicability criteria in the methodology, the applied tools and other methodology components are in line with:</li> <li>French guidelines for the implementation of JI-Projects</li> <li>Local decrees regarding the limiting of N<sub>2</sub>O-emissions</li> <li>The methodology is applicable to project activities using secondary and tertiary N<sub>2</sub>O abatement technology.</li> </ul>	/PDD/ /B-2/ /B-5/ /AN2ON 8/		ОК
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-2/ /AN2ON 8/		ОК



(	<b>Checklist Item</b> (incl. guidance for the determination team)	<b>Determination Team Comments</b> (Means and results of assessment)	Ref.	Draft Concl.	Final Concl.
Project E	<b>Project Boundaries</b> Boundaries are the limits and borders defining a emission reduction project				
	Are the project's spatial boundaries (geographical) clearly defined?	The project boundary includes the nitric acid plant from the inlets to the ammonia burner to the outlet of the stack. All $NO_X$ and $N_2O$ abatement-devices and the AMS in the stack are included. According to the methodology, only the emissions of $N_2O$ as tail gas emission have to be considered in the project boundary. This is -according to the methodology- clearly described in	/PDD/ /NAPFS- SS/		ОК
		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.			
p	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/		ОК
v	n case the methodology allows to choose whether a source and/or gas is to be included, s the choice sufficiently explained and	See B.2.2	/PDD/		ОК



<b>Checklist Item</b> (incl. guidance for the determination team)	Determination Team Comments (Means and results of assessment)	Ref.	Draft Concl.	Final Concl.
justified?				
<b>B.3. Baseline Identification</b> 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. Considerably less (in comparison to the project activity) of catalyst material would be needed to achieve compliance with the local decree.	/PDD/ /AN2ON 8/		OK
B.3.2. What possible baseline scenarios have been considered?	<ul> <li>Following alternative to the project activity has been identified:</li> <li>Continuation of the <i>Status Quo</i>, where only a sufficient amount of tertiary catalyst material is installed to ensure compliance with any applicable legal N<sub>2</sub>O regulations (Business as Usual).</li> <li>Separation and utilisation of N<sub>2</sub>O</li> </ul>	/PDD/		ОК
B.3.3. In case alternatives have to be considered, are all scenarios supplemental to those provided in the methodology reasonable in the context of the project activity?	No additional scenarios have been considered.			

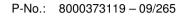




	<b>Checklist Item</b> (incl. guidance for the determination team)	<b>Determination Team Comments</b> (Means and results of assessment)	Ref.	Draft Concl.	Final Concl.
B.3.4.	Is the list of alternatives complete?	No, several reference scenarios listed in the methodology have not been investigated. To clarify this, CAR B1 was raised.	/PDD/	CAR B1	ОК
B.3.5.	Has the baseline scenario been determined according to the methodology?	See B.3.5.			
B.3.6.	Has the baseline scenario been determined using conservative assumptions where possible?	Yes, e.g. the baseline emissions have been calculated applying the regulatory values/baseline value as presented in B.5.4.	/PDD/		ОК
B.3.7.	Does the baseline scenario sufficiently take into account relevant national and/or sectoral policies, macro-economic trends and political aspirations?	Yes, as explained above, the legal requirements have been taken into account.	/PDD/ /AN2ON 8/		ОК
B.3.8.	Is the baseline scenario determination compatible with the available data and are all literature and sources clearly referenced?	The baseline scenario determination is compatible with the available data and literature sources are clearly referenced. The PDD provides references to all relevant literature sources (sources were submitted for determination, too) and data.	/PDD/		ОК



<b>Checklist Item</b> (incl. guidance for the determination team)	<b>Determination Team Comments</b> (Means and results of assessment)	Ref.	Draft Concl.	Final Concl.
<b>B.4. Additionality Determination</b> The assessment of additionality will be validated with focus on whether the project itself is not a likely baseline scenario.				
B.4.1. Methodology				
B.4.1.1. Did the additionality justification follow the requirements of the applied methodology and/or methodological tools?	The additionality has been proved according to the methodology, which includes a scheme for the assessment of the reference scenario and additionality of the project activity.	/PDD/ /B-1/ /B-2/		ОК
B.4.2. Consideration of JI before project start				
B.4.2.1. Is the project starting date reported in accordance with the glossary of JI terms??	The start of the plant N8 was July 2009. At this date, the plant operation started with a fully operational tertiary catalyst in the tail gas unit. This date is fixed as the starting date of the project.	/PDD/ /SUCN8/		OK
B.4.2.2. In case the project start date is before commencing of determination, was the incentive from JI seriously considered and	Yes, the PDD explains, that without the sale of the ERUs generated by the project activities there would be no incentive to justify the additional costs associated with the	/PDD/ /INVN8/		OK





(	<b>Checklist Item</b> (incl. guidance for the determination team)	Determination Team Comments (Means and results of assessment)	Ref.	Draft Concl.	Final Concl.
	are details given in the PDD?	implementation of the additional N <sub>2</sub> O abatement system under project activity.			
B.4.2.3.	How and when was the decision to proceed with the project?	The project will proceed, which means the complete amount of catalyst will remain in the plant, if the project activity is registered.	/PDD/		OK
B.4.2.4.	Is the project start date consistent with the available evidences?	No, the starting date was communicated during the on-site visit. The evidence which approves the date of the start up of the plant is still outstanding. Thus, CL B5 was raised.	/PDD/	CL-B5	OK
B.4.2.5.	Was the decision to proceed with the project taken by a person entity which has the authority to do so?	Yes, the decision to proceed with the project has been taken by the decision board of GPN S.A.	/PDD/		OK
B.4.2.6.	How was the JI involved in the decision be making process?	JI was considered in the early stage of the project. For this reason, GPN contracted N.serve to develop the JI-project activity.	/PDD/		OK
B.4.2.7.	Can the JI involvement in the decision assessed as serious?	Yes (see above)	/PDD/		ОК
<b>B.4.3. Identification of alternatives Step 1</b> (in case of SSC projects pl. skip steps 1 and 2)					
B.4.3.1.	Have all realistic alternatives been identified to the project?	<ul><li>No, several scenarios like the</li><li>installation of a non selective catalytic reductions</li></ul>	/PDD/	CAR B1	OK



<b>Checklist Item</b> (incl. guidance for the determination team)	Determination Team Comments (Means and results of assessment)	Ref.	Draft Concl.	Final Concl.
	<ul> <li>implementation of a primary, secondary or tertiary N2O destruction technology</li> </ul>			
	have not been taken into consideration. However these scenarios are discussed later in step 2 of the PDD. To correct this, CAR B1 was raised.			
B.4.3.2. Contains the list of alternatives at least the status-quo situation and the project not undertaken as a JI project?	Yes, the mentioned alternatives, i.e. status-quo and the project activity not undertaken as a JI project are included in the list of alternatives.	/PDD/		ОК
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/		ОК
<b>B.4.4. Investment analysis Step 2</b> 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. The investment requirements, caused by the implementation of the project activity, should be depicted in an investment cost sheet.	/PDD/	CL B6	ОК
	Since this financial calculation sheet was not available at the site visit, a corresponding CL B6 was raised.			



(	<b>Checklist Item</b> incl. guidance for the determination team)	Determination Team Comments (Means and results of assessment)	Ref.	Draft Concl.	Final Concl.
B.4.4.2.	Is a clear, viewable and unprotected Excel spreadsheet available for the investment calculation?	No, see B.4.4.1.		<del>CL B6</del>	ОК
B.4.4.3.	Does the period chosen for the investment analysis reflect the technical lifetime of the project activity or in case a shorter period is chosen, is the fair value of the project activity's assets at the end of the investment analysis period (as a cash inflow) included?	No, see B.4.4.1.	-	CL-B6	ОК
B.4.4.4.	Is the fair value calculated in accordance with local accounting regulations (where available) or international best practice?	N/A	-	-	_
B.4.4.5.	Is the book value as well as the expectation of the potential profit or loss included in the fair value calculation?	N/A	-	-	-
B.4.4.6.	Are depreciation and other non-cash related items added back to net profits for the purpose to calculate the financial indicator?	N/A	-	-	-
B.4.4.7.	Is taxation excluded in the investment analysis or is the benchmark intended for post tax comparisons?	N/A	-	-	-
B.4.4.8.	Were the input values used in the investment analysis valid and applicable at the time of	N/A	-	-	-



<b>Checklist Item</b> (incl. guidance for the determination team)	Determination Team Comments (Means and results of assessment)	Ref.	Draft Concl.	Final Concl.
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	-	-	-
B.4.4.10. In case of equity IRR: Is the part of the investment costs, which is financed by equity considered as net cash outflow and is the part financed by debt excluded in net cash outflow?	N/A	-	-	-
B.4.4.11. Is the type of benchmark chosen appropriate for the type of IRR calculated (e.g. local commercial lending rates or weighted average costs of capital for project IRR; required/expected returns on equity for equity IRR)?	N/A	-	-	-
B.4.4.12. Is the benchmark value suitable for the project activity?	N/A	-	-	-
B.4.4.13. Is it ensured that the project cannot be developed by other developers than the PP?	N/A	-	-	-
B.4.4.14. Was the benchmark consistently used in the past for similar projects with similar risks?	N/A	-	-	-



<b>Checklist Item</b> (incl. guidance for the determination team)	Determination Team Comments (Means and results of assessment)	Ref.	Draft Concl.	Final Concl.
B.4.4.15. Was sensitivity analysis appropriately done by the project participants?	N/A	-	-	-
B.4.5. Barrier analysis Step 3 or SSC additionality assessment				
B.4.5.1. Are there any barriers given whose issues have a clear and definable impact on the profitability of the project?	N/A	-	-	-
B.4.5.2. How is it justified and evidenced that the barriers given in the PDD are real?	N/A	-	-	-
B.4.5.3. How is it justified that one or a set of real barriers prevent(s) the implementation of the project activity?	N/A	-	-	-
<b>B.4.6. Common practice analysis Step 4</b> (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?	N/A	-	-	-
B.4.6.2. To what extent similar projects have been undertaken in the relevant region?	N/A	-	-	-
B.4.6.3. In case similar projects are identified, are there any key differences between the proposed project and existing or ongoing	N/A	-	-	_



<b>Checklist Item</b> (incl. guidance for the determination team)	Determination Team Comments (Means and results of assessment)	Ref.	Draft Concl.	Final Concl.
projects and what kind of differences are observed?				
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/		ОК
B.5.2. Are the equations applied correctly according to the applied approved methodology?	Yes, formulas applied are in accordance with the methodology. Since the project activity is combined with a shut down of the N5 and N6 N <sub>2</sub> O-plants, it should be clarified in the formula for ERU-calculation that only the Nitric acid production substituted can be accounted for. 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. The calculation of estimated emission reductions has been	/PDD/ /B-1/ /B-2/ /B-3/	CL-3 CAR B2 CAR B3 CAR B4 CAR E2	



<b>Checklist Item</b> (incl. guidance for the determination team)	Determination Team Comments (Means and results of assessment)	Ref.	Draft Concl.	Final Concl.
	carried out in the section B.6.2. of the PDD. The calculations as presented in this section strictly follow the algorithm of the monitoring plan.			
	However, following CARs and CL were raised:			
	CAR E2:			
	The Arrêté of 2 March 2007 stipulates that: "the total amount of issued Emission Reduction Units equates to 90% of the GHG emissions effectively avoided due to the implementation of the project activity". Since the PDD does not regard this restriction in the calculation of ERUs, clarification is needed.			
	CAR B4:			
	Since there is a capacity substitution included in the project activity (the plants Oissel, N5 and N6 are shut down), the capacities of the closed plants needs to be checked and clarified. The capacity of the Oissel plant has to be revised.			
	CL B3:			
	In the PDD has to be clarified how it can be assured that no ERUs will be issued for emission levels which do not go beyond the business as usual scenario which is defined by the Arrete Prefectoral of 2009-03-04, since the validation period should be 6 month while the emission level is calculated as a 12 month average (2.47 kg $N_2O/t$ HNO <sub>3</sub> - within 12 months).			



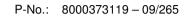
<b>Checklist Item</b> (incl. guidance for the determination team)	Determination Team Comments (Means and results of assessment)	Ref.	Draft Concl.	Final Concl.
	<ul> <li>CL B2</li> <li>The considering of leakage are discussed in the methodology. Leakage should be considered in case of: <ul> <li>increased temperature of tail gas (over 170 °C) whereas</li> <li>no heat recovery is applicated in the tale gas stream.</li> </ul> </li> </ul>			
	Both preconditions are not fulfilled, so no leakage caused by heat-energy loss exists. Nevertheless, as in B.5.2 mentioned, a CL B2 was raised, because an additional pressure loss occurs, caused by the increased catalyst-bed in the tail-gas.			
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 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/		ОК
B.5.4. Have conservative assumptions been used when calculating the emission reductions?	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 <sub>2</sub> O-Emission in future years.	/PDD/ /AN2ON 8/	CAR B3	ОК
	<u>These values/years are:</u> 2009 2010 2011 2012	/mist/		



<b>Checklist Item</b> (incl. guidance for the determination team)	Determination Team Comments (Means and results of assessment)	Ref.	Draft Concl.	Final Concl.
	2.5 2.5 2.5 1.85 kg N <sub>2</sub> O/t HNO <sub>3</sub> (100%)			
	In addition to that, the DRIRE introduced a plant specific regulatory limit of 2.47 kg $N_2O/t$ HNO <sub>3</sub> (100%).			
	The baseline for ERU calculation takes into account the lowest available values, so that the baseline values future calculation of emission reduction are:			
	<u>These values/years are:</u> 2009 2010 2011 2012 2.47 2.47 2.47 1.85 kg N₂O/t HNO₃ (100%)			
	These values represent the reference case.			
	A CL B3 was raised to clarify this approach in the PDD.			
	The project-emissions are calculated ex-ante with following assumptions:			
	- 7 kg $N_2O$ /tHNO <sub>3</sub> (Default value of the IPCC)			
	- 95 % efficiency of the tertiary $N_2O$ abatement catalyst			
	- The Project Emission Factor is results to 0,35 kg			



	<b>Checklist Item</b> (incl. guidance for the determination team)	Determination Team Comments (Means and results of assessment)	Ref.	Draft Concl.	Final Concl.
		N <sub>2</sub> O/tHNO <sub>3</sub> Since monitored emission data of the relevant crediting period are used for calculation of ERUs, no further consideration of the ex-ante-calculated project-emissions is necessary.			
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. Nevertheless, a CL D2 (Monitoring plan) was raised to secure, that the regulatory framework needs to be followed up during the crediting period.	/PDD/	CL D2	ОК
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 <ul> <li>in line with the methodology and</li> <li>checked to be reasonable.</li> </ul>	/PDD/		ОК
lt is approp	<b>Monitoring of Emission Reductions</b> assessed whether the monitoring plan is riate for the project activity and in line with the 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 "Project Domestiques". The parameters required by this methodology is contained in the monitoring plan.	/PDD/	CL D2	ОК





	<b>Checklist Item</b> (incl. guidance for the determination team)	Determination Team Comments (Means and results of assessment)	Ref.	Draft Concl.	Final Concl.
		Nevertheless, a CL D2 was raised to include the follow up of the regulatory framework in the monitoring plan.			
B.6.2.	In case different approaches can be chosen acc. to the methodology, is the selection of parameters justified and correct?	N/A	-	-	-
B.6.3.	Are the means of monitoring of all parameters contained in the monitoring plan in accordance with the requirements of the applied methodology?	Yes	/PDD/		ОК
B.6.4.	Are all parameters appropriately labelled?	Yes	/PDD/		ОК
B.6.5.	Is it likely that the monitoring arrangements described in the PDD can properly be implemented in the context of the project activity?	Yes	/PDD/		ОК
B.6.6.	Are the means of implementation of the monitoring plan, including QA/QC procedures sufficient to ensure that emission reductions can be reported without material misstatement?	The monitoring plan presented in chapter B.7. is comprehensive and provides QA/QC procedures to insure the appropriate reporting of emissions and emission reductions. This includes quality measures related to the AMS according to the EN 14181.	/PDD/	CL D1 FAR D3	ОК
		Following CL, FAR were raised: CL D1:			



	<b>Checklist Item</b> (incl. guidance for the determination team)	Determination Team Comments (Means and results of assessment)	Ref.	Draft Concl.	Final Concl.
		It should be made clear in the PDD whether the EN 14181 will be followed completely or if other eligible standards, like AFNOR XP X43-305, which are in line with the methodological requirements will be applied for this project activity.			
		FAR D3:			
		The AMS needs further improvements / clarifications before the start of the crediting period (e.g. Location of the sampling point, Test gas specifications, QAL1, QAL 2, uncertainty assessment).			
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.	/PDD/		ОК
B.6.8.	Does the monitoring plan provide for the	Baseline emissions:	/PDD/		ОК
	collection and archiving of all relevant data necessary for determining baseline emissions, project emissions, and leakage within the project boundary during the crediting period?	It was ruled by the national authorities, that baseline emissions should be calculated applying a "Benchmark Emission Factor ( $EF_{BM}$ ), or if lower, regulatory limits of local authorities (see B.4.3.).			
		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			



<b>Checklist Item</b> (incl. guidance for the determination team)	Determination Team Comments (Means and results of assessment)	Ref.	Draft Concl.	Final Concl.
	the monitoring plan.			
	Project emissions:			
	According to the methodology, the monitoring plan provides all relevant data necessary for estimation or measurement of the GHG emissions within the project boundary.			
	Leakage:			
	According to the methodology, leakage shall not be monitored. Caused by an increased amount of catalyst, a constant pressure loss in the tail gas reactor occurs, but will not be monitored over the crediting period.			
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.	/PDD/		ОК
	The violation of these limits will lead to a reduction of ERUs for the relevant period			
B.6.10. Is the measurement method clearly stated for each indicator to be monitored and also deemed appropriate?	Yes, the monitoring plan provides clear measurement methods for project emissions in chapter B.6.2 of the PDD.	/PDD/		ОК
B.6.11. Is the measurement equipment described and	The measurement of project emissions is described	/PDD/		ОК
deemed appropriate?	appropriate in the PDD and in documents provided during the site visit. Several documents regarding QS/QA of the AMS where provided.	/DVOLN 8/		

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<b>Checklist Item</b> (incl. guidance for the determination team)	<b>Determination Team Comments</b> (Means and results of assessment)	Ref.	Draft Concl.	Final Concl.
		/EDN8/		
		/ISO 14001/		
		/ISO 9001/		
		/QAL1/		
		/POGVN 8		
B.6.12. Is the measurement accuracy addressed and deemed appropriate? Are procedures in place on how to deal with erroneous measurements?	The description of the measurement device (AMS) for project emissions ( $N_2O$ ) needs further clarifications until the start of the crediting period.	/PDD/	FAR D3 CL E1	ОК
	A FAR D3 was raised to request for improvement of the technical description of the AMS e.g.:		<del>UL EI</del>	
	<ul> <li>Location of the sampling point,</li> </ul>			
	Test gas specifications,			
	• QAL1, QAL 2,			
	uncertainty assessment			
	Since the concept of instrument correction factors needs further explanation in the PDD esp. with regard to the calibration curve, CL E1 was raised.			



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<b>Checklist Item</b> (incl. guidance for the determination team)	Determination Team Comments (Means and results of assessment)	Ref.	Draft Concl.	Final Concl.
B.6.13. Is the measurement interval identified and deemed appropriate?	The AMS is working as an online- and permanent- measurement device.	/PDD/		ОК
B.6.14. Is the registration, monitoring, measurement and reporting procedure defined?	The procedures are defined in chapter B.7.2. of the PDD to a sufficient extent. The data of the AMS for the calculation of project emission will be transferred to central data acquisition system of the company and evaluated by N.serve according to the regulations of the methodology.	/PDD/		ОК
B.6.15. Are procedures identified for maintenance of monitoring equipment and installations? Are the calibration intervals being observed?	The measurement equipment (AMS) for project emissions $(N_2O)$ will be maintained using a QA/QS programme which refers to the EN 14181 and through internal measures for quality assurance related to ISO 9001 and 14001. Although several CARS were raised related to the QS/QA measures, the measurement equipment can be described as appropriate.	/PDD/		ОК
B.6.16. Are procedures identified for day-to-day records handling (including what records to keep, storage area of records and how to process performance documentation)	See B.6.8.	/PDD/		ОК



	<b>Checklist Item</b> (incl. guidance for the determination team)	<b>Determination Team Comments</b> (Means and results of assessment)	Ref.	Draft Concl.	Final Concl.
B.7.	<b>Project Management Planning</b> 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 against ISO 9001 and 14001 requirements. An external laboratory has been contracted for maintenance of the AMS. The determination of the raw $N_2O$ -data sets will be carried out by N.serve.	/PDD/ /ISO 14001/ /ISO 9001/		ОК
B.7.2.	Are procedures identified for training of monitoring personnel?	Specific training measures are not intended, but specific activities related to the JI-project will be carried out by experienced and qualified companies as described above.	/PDD/		ОК
B.7.3.	Are procedures identified for review of reported results/data?	Yes, all monitoring related data will be sent to N.serve for revision, plausibility check and calculation of the project emissions.	/PDD/		ОК
B.7.4.	Is the authority and responsibility of overall project management clearly described?	Yes, see above.	/PDD/		OK
B.7.5.	Are procedures identified for training of monitoring personnel?	N/A	/PDD/ /IM01/		OK



	<b>Checklist Item</b> (incl. guidance for the determination team)	Determination Team Comments (Means and results of assessment)	Ref.	Draft Concl.	Final Concl.
C. D	uration of the Project/ Crediting Period				
	sessed whether the temporary boundaries of the tare clearly defined.				
C.1.	Is the project's starting date and the project duration clearly defined and evidenced?	Yes, project starting date is July 2009 which is described in B.4.2.1., but not evidenced yet, a CL B5 was raised in this context. The Crediting period will start after the registration of the project at the NFP. This is envisaged at December 2009.	/PDD/	CL B5 CAR C1	ОК
		However, CAR C1 was raised, because section C.1. should also reflect the technical aspects of the project implementation.			
C.2.	Is the project's operational lifetime clearly defined and evidenced?	The operational lifetime (efficiently of the catalyst) is estimated at 3 years, but during the annual downtime for maintenance, an exchange can be carried out, if necessary.	/PDD/		ОК
C.3.	Is the start of the crediting period clearly defined and reasonable?	The start of crediting period is 01.12.2009.	/PDD/		ОК
Docun	nvironmental Impacts nentation on the analysis of the environmental ts will be assessed, and if deemed significant, an				



	<b>Checklist Item</b> (incl. guidance for the determination team)	Determination Team Comments (Means and results of assessment)	Ref.	Draft Concl.	Final Concl.
EIA sh	nould be provided to the DOE.				
D.1.	Has an analysis of the environmental impacts of the project activity been sufficiently	The environmental impacts are sufficiently described in the PDD under Section D.: Environmental Impacts.	/PDD/		ОК
	described?	Apart from the reduction of emissions of $N_2O$ , there will be no significant further positive or negative impacts on the environment occur.			
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.	/B-5/		ОК
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 decree was raised from the local government to limit the emission of $N_2O$ for this type of plants.	/AN2ON 8/		OK
E. S	takeholder Comments				
have b	OE should ensure that stakeholder comments been invited with appropriate media and that due nt has been taken of any comments received.				



	<b>Checklist Item</b> (incl. guidance for the determination team)	Determination Team Comments (Means and results of assessment)	Ref.	Draft Concl.	Final Concl.
E.1.	Have relevant stakeholders been invited to consultation?	A global stakeholder consultation was carried out on the TÜV NORD website <u>www.global-warming.de</u> for 30 days as of 2009-08-03. No comments were received. The 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.	/PDD/		ОК
E.2.	Have appropriate media been used to invite comments by local stakeholders?	See E.1.	/PDD/		ОК
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/		ОК
E.4.	Is an appropriate summary of the stakeholder comments received provided in the PDD?	See E.1.	/PDD/		ОК
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

					DOE Assessment		
Baseline Alternatives identified	Inline with the Metho- dology?	Eli- mina- ted	Reasons for elimination / non- elimination from list of alternatives	Evi- dence used	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 №2 destruction technology installed.	$\boxtimes$	$\boxtimes$	The scenario not to install any N <sub>2</sub> O abatement technology is not in complience with the "Arrêté Préféctoral" which limits the N <sub>2</sub> O emissions to 2.47 kg N <sub>2</sub> O/t HNO3 (100%).	/PDD/ /AN2ON 8/		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 2.47kg N <sub>2</sub> O/tHNO <sub>3</sub> .	
a) Continuation of the Status Quo (Business as Usual Scenario). The continuation of the business as usual scenario, where: ii) only sufficient tertiary catalyst is installed to			The scenario which includes the option to install only just enough tertiary catalyst material in the de-N <sub>2</sub> O bed to achieve compliance with the local 'Arrêté Préféctoral' on N <sub>2</sub> O emissions will not lead to an emission reduction beyond the 2.47kg	/PDD/ /AN2ON 8/ /B-1/		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.	

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						DOE Assessment
Baseline Alternatives identified	Inline with the Metho- dology?	Eli- mina- ted	Reasons for elimination / non- elimination from list of alternatives	Evi- dence used	Appro- priate- ness of elimi- nation	Assessment of determination team (results and means of assessment)
ensure compliance with any applicable legal N2O regulations.			N <sub>2</sub> O/tHNO <sub>3</sub> and the project activity will not take place.			
<ul> <li>B) Alternative uses of N₂O, such as:</li> <li>Recycling of N₂O for feedstock</li> <li>External use of N₂O</li> </ul>	$\boxtimes$	$\boxtimes$	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/	$\boxtimes$	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)	$\boxtimes$	$\boxtimes$	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/	$\boxtimes$	Since there is an efficient $N_2O$ -abatement system available existing, there is no need to choose a not-state-of-the-art-technology.
d) Implementation of a primary, secondary or tertiary N <sub>2</sub> O destruction technology in the absence of the registration of the project activity as a Projet Domestique.		$\boxtimes$	Primary catalyst: For the specific reduction of N <sub>2</sub> O emissions, producers only consider installation of the already widely-tested and well- proven secondary and tertiary catalyst technologies in order to minimise the influence on the HNO <sub>3</sub> -production process. Implementation <i>in the absence of</i>	/PDD/ /BREF/		The tertiary abatement technologies are state-of-the art technologies and will not lead to any negative influence on the $HNO_3$ -production process.

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						DOE Assessment
Baseline Alternatives identified	Inline with the Metho- dology?	Eli- mina- ted	Reasons for elimination / non- elimination from list of alternatives	Evi- dence used	Appro- priate- ness of elimi- nation	Assessment of determination team (results and means of assessment)
			<u>the registration of the project</u> <u>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

	Value		Source of		DOE ASSESSMENT			
Parameter	Value applied	Unit	Information (please indicate document and page)	Reference	Correctness of value applied	Appropriateness of information source	Comment	
		EUR				The information sources are checked to be appropriate	The parameter "Project revenues" of the cost analysis is related to following figures:	
				- Project document ation	The values		• Expected HNO <sub>3</sub> production (t)	
	7,160,211 (2009 – 2012 period)		GPN N8 100125				Benchmark emissions (tCO <sub>2</sub> e)	
Project revenues			(Excel sheet)				<ul> <li>Project Emissions (tCO<sub>2</sub>e)</li> </ul>	
							• 10% deduction	
							is correct calculated and assessed. There are no emission taxes regarding $N_2O$ -emission included as an additional income.	
Tax savings	204,331 (2009 – 2012 period)	EUR	GPN N8 100125 (Excel sheet)	- Project document ation	The values are correct	The information sources are checked to be appropriate	A special environmental tax is payable in accordance with article 45 of the 'Loi de Finances 1999' and article 266 nonies of the 'Code des Douanes'. The law stipulates a tax of 64.84 EU per tonne $N_2O$ emitted. The tax	



	Malaa		Source of			DC	DE ASSESSMENT
Parameter	Value applied Unit		Information (please indicate document and page)	Reference	Correctness of value applied	Appropriateness of information source	Comment
							savings were not added to the project revenues but used as an argument, that the project activity can not be financed with these tax savings and without support of the ERU issuing.
							The parameter "Secondary Catalyst Costs" of the cost analysis includes the costs for
							<ul> <li>Costs for catalyst (150 €/kg):</li> </ul>
	2,775,009		GPN N8 100125	- Project document	The values	The information sources are checked during on site visit to be appropriate	<ul> <li>Amount of 4,500 kg catalyst without the project activity</li> </ul>
Secondary Catalyst							<ul> <li>Amount of 13,750 kg catalyst with the project activity</li> </ul>
costs	(2009 – 2012 period)	EUR	(Excel sheet)	ation - /CON1/	are correct		• The catalyst will be changed in year 2012 because of low efficiency. The PP calculated the costs for two complete fillings. The accounting of the complete catalyst costs in the last year of the projects is accepted by the determination team, because the simple cost model does not take into account any depreciation rates cased by lifetime analysis of the components.
Miscellaneous -Additional steam production due to higher δρ	147,565 (2009 – 2012	EUR	GPN N8 100125 (Excel sheet)	ation	The values are correct	The information sources are checked during on site visit to be	The parameter "Additional steam production due to higher $\delta p$ " of the cost analysis includes the costs for
(differential	period)			- /CON1/		appropriate	Additional steam production due to higher



	Malaas	Source of			DOE ASSESSMENT				
Parameter	Value applied Unit		Information (please indicate document and page)	Reference	Correctness of value applied	Appropriateness of information source	Comment		
pressure)							δp. The PP calculates 0.25t/hr and 22.79€/t. The costs of 22.79 €/t are not evidenced but steam are checked by the determination team as realistic.		
	244.000	244,000 (2009 – EUR		- Project document			The parameter "JI Project operating costs" of the cost analysis includes the costs for		
					The values		• QAL2 audit (2009, 2012)		
						The information	<ul> <li>QAL 3 (maintenance, calibrations etc) (ongoing)</li> </ul>		
JI Project operating	(2009 –		GPN N8 100125			sources are checked during	• Annual Surveillance Test (2010, 2011)		
costs	2012 period)		(Excel sheet)	ation	are correct	on site visit to be	Determination (once)		
	1 /					appropriate	First Verification		
							• Subsequent Verifications (x 5)		
							and is correct calculated and assessed. The determination team valuating these costs as customary and correct.		

Final Determination Report: "GPN Grand Quevilly N8 N<sub>2</sub>O abatement project." TÜV NORD CERT GmbH JI/CDM Certification Program

P-No.: 8000373119 - 09/265



## 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	Description of Barrier	Evidence used	Assessment of determination team		
			Appropriat		
(invest, tech, other)			eness of information	Explanation of final result	
			source		



## ANNEX 5: OUTCOME OF THE GSCP

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

$\square$	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)

<sup>1</sup>) 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.