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Determination Report

DETERMINATION OF THE JI TRACK-1 PROJECT: "NITROPOROS NITROUS OXIDE ABATEMENT PROJECT"

REPORT NO. 600500172

30 August 2011

TÜV SÜD Industrie Service GmbH Carbon Management Service Westendstr. 199 - 80686 Munich – GERMANY



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Project Participants	5:			Pro	ject Site(s):		
InterAgro - S.C. Nit	ropo	ros S.R.L.		City Ror	∕ of Fagaras, C mania	ounty of	Brasov,
Project title: Nitrop	oros	s Nitrous Oxide Abat	tement Proj	ect			
Applied methodol ogy / Version:	-	JI specific approact 05.1.0	h based on	AMC	034 / version	Scope(s TA(s): 5	5): 5 5.1 and 5.2
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Version No.:		01		Ver	sion No.:	2	.2
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Estimated Annual	Emi	ission Reduction:		172 firs	2,732 tCO ₂ e (a t commitment	verage ov period)	ver 1,5 years within the
Assessment Tean	n Lea	ader:		Fur	ther Assessm	ent Tear	n Members:
Olena Maslova				Constantin Zaharia			
Summary of the D	eter	mination Opinion:					
 The review of the project design documentation and the subsequent follow-up interviews have provided TÜV SÜD with sufficient evidence to determine the fulfilment of all stated criteria. In our opinion, the project meets all relevant UNFCCC requirements for the JI as well as all the requirements set by host country (Romania) for approving projects under JI track 1. Hence, TÜV SÜD will recommend the project for further approval and registration by the DFP of Romania. The review of the project design documentation and the subsequent follow-up interviews have not provided TÜV SÜD with sufficient evidence to determine the fulfilment of all stated criteria. Hence, TÜV SÜD with sufficient evidence to determine the fulfilment of all stated criteria. Hence, TÜV SÜD will not recommend the project for registration by the DFP of the host country as a JI track-1 project and will inform the project participants and the Romanian DFP on this decision. 							

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Abbreviations

AM	Approved Methodology
AOR	Ammonia Oxidation Reactor
CAR	Corrective Action Request
CL	Clarification Request
DFP	Designated Focal Point
DVM	Determination and Verification Manual
EF	Emission Factor
EIA / EA	Environmental Impact Assessment / Environmental Assessment
ER	Emission Reduction
ERUs	Emission Reduction Unit(s)
FAR	Forward Action Request
GHG	Greenhouse gas(s)
GWP	Global Warming Potential
Heraeus	W.C. Heraeus GmbH
IPCC	Intergovernmental Panel on Climate Change
IRL	Information Reference List
JI	Joint Implementation
JISC	Joint Implementation Supervisory Committee
KP	Kyoto Protocol
MMP	Ministry of Environment and Forestry of Romania
MP	Monitoring Plan
NDIR	Non-Dispersive Infrared Spectroscopy
NGO	Non Governmental Organisation
PDD	Project Design Document
PP	Project Participant
TÜV SÜD	TÜV SÜD Industrie Service GmbH
UNFCCC	United Nations Framework Convention on Climate Change



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1 INTRODUCTION

1.1 Objective

The determination objective is an independent assessment by a Third Party (Accredited Independent Entity, AIE) of a proposed project activity against all defined criteria set for the registration under the Joint Implementation scheme (JI).

The assessment involves the evaluation of the project basis and design identified in the Project Design Document (PDD) using the defined criteria outlined by the registration under the Joint Implementation scheme (JI). Determination is part of the JI project cycle and results in a conclusion by the executing AIE on whether or not a project activity is valid to be submitted for approval to the Designated Focal Point DFP of the host country. The ultimate decision on the registration of a proposed project activity rests with the Parties involved.

The project activity discussed by this determination report has been submitted under the project title: *Nitroporos Nitrous Oxide Abatement Project.*

1.2 Scope

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

- > The Kyoto Protocol, in particular § 6
- Decision 2/CMP1 and Decision 3/CMP.1 (Marrakech Accords)
- Further COP/MOP decisions with reference to the JI (e.g. decisions 9/CMP.1)
- Decisions by the JISC published under <u>http://ji.unfccc.int</u>
- Specific guidance by the JISC published under http://ji.unfccc.int
- Guidelines for Completing the Project Design Document (JI-PDD)
- The applied approved CDM methodology(s)
- > The technical environment of the project (technical scope)
- Internal and national standards on monitoring and QA/QC
- > Technical guideline and information on best practice

The Determination is not meant to provide any consultancy towards the client. However, stated requests for clarifications and/or corrective actions may provide input for improvement of the project design.

Once TÜV SÜD receives an initial PDD version, it is made publicly available on TÜV SÜD's website, which initiates a 30 day global stakeholder consultation process. In case of any request a PDD might be revised and the final PDD will form the basis for the final evaluation as presented in this report. Information on the initial and on the final PDD version is presented on page 1.

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



2 METHODOLOGY

The project assessment applies standard auditing techniques to assess the correctness of the information provided by the PPs. The assessment is based on the latest version of Joint Implementation Determination and Verification Manual. The work starts with appointment of team covering the technical scope(s), sectoral scope(s) and relevant host country experience for evaluating the JI project activity. Once the project is made public available, members of the team carry out the desk review, follow-up actions, resolution of issues identified and finally preparation of the determination report. The prepared determination report and other supporting documents then undergo an internal quality control by the CB "climate and energy" before submission to the DFP of the host country.

In order to ensure transparency, assumptions must be clear and stated explicitly and background material must also be referenced. TÜV SÜD has developed a methodology-specific protocol customized for the project. The protocol demonstrates, in a transparent manner, the project criteria (requirements), discussion on each criterion by the assessment team, and the results from determining the identified criteria.

The determination protocol serves the following purposes:

- To organize the details and provision of clarifications on the requirements of which a JI
 project is expected to meet
- To elucidate how a particular requirement has been determined as well as to document the results of the determination and any adjustments made to the project design document.

The determination protocol consists of three tables. The different columns in these tables are described in the figure below. The completed determination protocol is enclosed in Annex 1 to this report.

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



Determination Protocol Table 2: Resolution of Corrective Action and Clarification Requests					
Clarifications and corrective action requests	Ref. to table 1	Summary of project owner response	Determination team conclusion		
If the conclusions from table 1 are either a Corrective Action, a Clarification or a Forward action Request*, these should be listed in this section. * In the latest revision of this Report Table 2 serves for summurising of Forward Action Requests that require review during the first verification.	Reference to the checklist question number in Table 1 where the issue is explained.	The responses given by the client or other project participants during the communications with the determination team should be summarised in this section.	This section should summarise the discussion on and revision to project documentation together with the determination team's responses and final conclusions. The conclusions should be reflected in Table 1, under "Final PDD".		

If any forward action request (FAR) rose they are stated in table 2. FARs highlight issues related to project implementation that require review during the first verification

Determination Protocol Table 2: Forward action request					
Forward action request Id. of FAR 1	Ref. to table 1	Explanation			
Request has to be substantiated within this column	Reference to the checklist question number in Table 1 where the issue is explained.	If necessary this section should present a detail explanation			

In case of a denial of the project activity more detailed information on this decision will be presented in table 3.

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

2.1 Appointment of the Assessment Team

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

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- Assessment Team Leader (ATL)
- Greenhouse Gas Determiner / Verifier (GHG-DET / GHG-V)
- Greenhouse Gas Determiner, Trainee (T)
- Technical Experts (E)

It is required that the sectorial scope and technical area linked to the methodology as well as host country expertise are covered by the assessment team.

The Determination team was consisting of the following experts (the responsible Assessment Team Leader in written in bold letters):

Name	Qualification	Coverage of technical scope	Coverage of technical area	Host country experience
Olena Maslova	ATL	V	V	M
Constantin Zaharia	GHG-V	V	V	M

Olena Maslova is assessment team leader and GHG auditor (Determiner/Validator/Verifier) in the "Carbon Management Service" department of TÜV SÜD Industrie Service GmbH in Munich, Germany. She is chemical engineer and focal point for projects in Eastern Europe. Due to her further master degree at the university of applied science in the Federal Republic of Germany she is also familiar with Germany's current environmental legislation. Olena Maslova is specializing in the assessment of CDM / JI projects in the sector of chemical industries and waste handling and disposal. In this project she functioned as project manager and lead auditor.

Constantin Zaharia is environmental engineer and is working as GHG Verifier in the supra regional unit of the scope management for industrial gases in the Carbon Management Service Department of TÜD SÜD Industry Service GmbH, Germany. He has several years of experience in JI/CDM projects with special focus on industrial gases

2.2 Review of Documents

A first version of the PDD was submitted to the AIE in late December 2010. The PDD and additional background documents related to the project design and baseline were reviewed to verify the correctness, credibility and interpretation of the presented information, furthermore a cross-check between information provided and information from other sources have been done as initial step of the determination process. A complete list of all documents and proofs reviewed is attached as Annex 2 to this report.

2.3 Follow-up Interviews

On March 15-16, 2011 TÜV SÜD performed interviews and physical site inspection with project stakeholders to confirm relevant information and to resolve issues identified in the first document review. The table below provides a list of all persons interviewed in this context:

Name	Organisation
Mr. Gheorghe Ion	Nitroporos, General Manager
Mr. Costache Marius	Nitroporos, Chief of Technical Department
Mr. Pop-Coman Mihai	Nitroporos, Chief of Technical Department, Nitric Acid Plant
Ms. Rotariu Lucica	Nitroporos, Chief of Environment and Quality Department



Mr. Constantin Neagoe	Nitroporos, Deputy General Manager
Mr. Baciu Dan	Nitroporos, Technical Manager
Ms. Olivia Ticleanu	INTERAGRO, Counsellor
Mr. Ioana Iulian	Nitroporos, Engineer
Ms Sergey Klibus	MGM, Senior Technical Expert
Mr Floare Alexandru	Nitroporos, Engineer

2.4 Cross-check

During the determination process, the team has made reference to the available information related to similar projects or technologies as the proposed JI track-1 project activity. Project documentation has also been reviewed against the approved methodology applied to confirm the appropriateness of formulae and correctness of calculations.

2.5 Resolution of Clarification and Corrective Action Requests

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

The final PDD version 2.2 dated 29/08/2011 serves as the basis for the final assessment presented.

2.6 Internal Quality Control

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

After confirmation by the PP, the determination opinion and relevant documents are to be submitted to the DFP of host country by the client for approval according to the JI track 1 procedure.



3 SUMMARY

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

3.1 Approval

The dedicated project participants are S.C. Nitroporos S.R.L. from Romania, and MGM Worldwide, S.a.r.I from Sweden. The host Party Romania and Investor Party Sweden meet the requirements to participate in the JI.

The Romanian DFP - issued a LoE (IRL8) on 29/09/2009 authorizing S.C. Nitroporos S.R.L as a project participant. TÜV SÜD received this letter directly from the PP and considers the provided letter as authentic. TÜV SÜD confirms that the letter refers precisely to the proposed JI project activity, i.e. the title is in line with the title in the PDD.

Romania and Sweden have its officially published national guidelines and procedures for the approval of JI projects.

The PPs are going to apply for LoAs from the Host and Investor parties on the basis of the TÜV SÜD's determination opinion in accordance with the Host and Investor parties' procedures for approving of JI projects (refer to FAR1).

3.2 Participation

The dedicated project participants are S.C. Nitroporos S.R.L. from Romania, and MGM Worldwide, S.a.r.I from Sweden. The participation of both project proponents as well as their roles in this JI project is confirmed with JI project Master Agreement (IRL 9).

3.3 Project design document

The PDD is compliant with relevant form and guidance as provided by the UNFCCC JISC.

TÜV SÜD concludes that the guidelines for the completion of the PDD in their most recent version have been followed. Relevant information has been provided by the PP in the applying PDD sections. Completeness was assessed through the checklist included to Annex 1.

3.4 **Project description**

The following description of the project as per PDD could be verified during the on-site mission:

S.C. Nitroporos S.R.L. operates a single line dual pressure plant (medium pressure in AOR - 2.5-3.2 bars, high pressure in Absorption tower – 7.0-8.0 bars) plant for the industrial manufacture of nitric acid at City of Fagaras, County of Brasov. The nitric acid plant consists of a weak acid plant (HNO₃ < 70%). The following processes based on the Ostwald process take place:

Ammonia is passed through a pipeline from the ammonia plant to the operating unit and transferred to an evaporation system. The evaporated ammonia is heated and conveyed to the ammonia-air-mixer. The mixture formed, which has an ammonia content of about 10% by volume, is oxidized on the platinum rhodium catalyst to nitrogen oxide in the combustion elements, consisting of three AORs, at a temperature of around 850°C. The NO formed is further oxidized to NO2 with the addition of atmospheric oxygen. The nitrous gases formed are absorbed in water with the formation of weak acid.



The project activity aims at GHG emissions reduction of nitrous oxide, N2O, which is an unwanted by-product by the industrial production of nitric acid and at the same time is a green house gas with GWP of 310.

In particular, the installation of the secondary N_2O abatement catalyst system directly in the ammonia oxidation reactors (AORs) underneath the ammonia oxidation catalyst (Pt-Rh catalyst gauze) is envisaged. A secondary catalyst is employed which has an expected abatement efficiency of about 83% (IRL 29).

In order to implement the project, Nitroporos will be equipped with a state of the art AMS according to DIN EN 14181 for continuous monitoring of the project key parameters.

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

- Review of data and information (see annex 2) using sectoral knowledge and expertise of the assessment team, cross check the same with other sources available in the respective technical literature, official publications, etc.
- The on-site visit has been performed and relevant stakeholders and personnel with knowledge of the project were interviewed, in case of doubt further cross checks through additional interviews have been done.
- Finally information related to similar technologies or projects as the JI project activity have been used if available to confirm the accuracy and completeness of the project description.

In light of the above, TÜV SÜD confirms that the project description as included to the PDD is sufficiently accurate and complete in order to comply with the requirements of the JI Track-1.



3.5 Baseline and monitoring methodology

3.5.1 Applicability of the selected methodology

It should be highlighted here that PPs have defined a project specific methodological approach (JIapproach) in accordance with Appendix B of the JI guidelines using selected elements of approved CDM methodology AM0034 version 05.1.0.

The applicability assessment was carried out for each applicability criterion according to AM0034 version 05.1.0 and included, among other checks, a compliance check of the local project setting with the applicability conditions in regard to baseline setting and eligible project measures. This assessment also included the review of secondary sources to demonstrate the compliance with applicability conditions.

The methodology-specific protocol, included in Annex 1, documents the assessment process. The results of the compliance check as well as relevant evidence are detailed in the protocol and the information reference list.

TÜV SÜD confirms that the chosen baseline and monitoring methodology is applicable to the project activity.

Emission sources, not addressed by the applied methodology and expected to contribute more than 1% of the overall expected average annual emission reductions, have not been identified.

3.5.2 **Project boundary**

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

Project boundary set in PDD is in accordance with CDM methodology AM0034, version 05.1.0.

Conforming to AM0034, Nitroporos plant industrial process covered by the project activity is nitric acid production serving by the existing AORs. The project boundary comprises the complete production process from the inlet to the AORs to the stack, including all compressors and SCR DeNOx unit and covers the shop of non-concentrated nitric acid production with 1 production line.

Description of emission sources including justification of gases included/excluded in/from the project boundaries is provided in appropriate manner, and can be considered as complete and correct.

The most relevant documentation assessed in order to confirm the project boundary is the following: Elementary diagram of non-concentrated nitric acid production in the plant (IRL 10).

The same have been validated during the determination process using standard audit techniques. For further details on TÜV SÜD observations on-site refer to the Annexes 1 and 2.

Hence, TÜV SÜD confirms that the identified boundary and the selected sources and gases as documented in the PDD are justified for the project activity.

3.5.3 Baseline identification

The AM0034 refers to the procedure for identification of the baseline scenario described the version 05.1.0 of the approved methodology AM0028"Catalytic N2O destruction in the tail gas of nitric acid plants". This procedure is applied in the PDD and provides for a step-wise approach to identify the baseline scenario.

The list of plausible alternative scenarios to the project activity is complete and no reasonable alternative scenarios have been excluded.



As a result of the baseline identification procedure provided in the final PDD the baseline scenario has been defined as "status quo"- the continuation of the current situation, where there will be no installation of technology for the destruction or abatement of N_2O .

The information presented in the PDD has been determined by a first document review of all the data, further confirmation based on the on-site visit and a final step by cross checking the information with similar relevant projects and/or technologies. The sources referenced in the PDD have been quoted correctly.

Transparent and documented evidences were provided to assessment team within on-site visit. Based on conservative interpretation of collected audit evidences, TÜV SÜD considers that the identified baseline scenario is reasonable.

TÜV SÜD confirms that all relevant JI requirements, including relevant national and/or sectoral policies and circumstances, have been identified correctly taken into account in the definition of the baseline scenario.

A verifiable description of the baseline scenario has been included to the PDD.

In conclusion TÜV SÜD confirms that:

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

3.5.4 Algorithm and/or formulae used to determine emission reductions

TÜV SÜD has assessed the calculations of project emissions, baseline emissions and emission reductions. There are no leakage emissions. Corresponding calculations were carried out based on calculation spreadsheets as presented via Emissions reductions calculation sheet (IRL 31).

The parameters and equations presented in the PDD and further documentation have been compared with the information and requirements presented in the methodology and respective tools. The equation comparison has been made explicitly following all the formulae presented in the calculation files.

The values presented in the PDD are considered reasonable based on the documentation and references reviewed, as well as, the result of the interviews. Detailed information on the verification of the parameters used in the equations can be found in Annex 1. The algorithms for the determination of the baseline, project, and leakage are discussed in the following sections.

3.5.4.1 Baseline Emissions

As correctly justified and described in the PDD the project is deviating from methodology in determining the baseline emission factor. Baseline campaign approach is not applicable for the purposes of this JI project. Instead, a system of emission factor benchmarks proposed by IPCC is applied: default emission factor for N2O emissions from medium pressure nitric acid plants, i.e., $7 \pm 20\%$ kg



N2O/tHNO3 ("V3_3_Ch3_Chemical_Industry - IPCC", page 3.23, table 3.3), <u>http://www.ipcc-nggip.iges.or.jp/public/2006gl/pdf/3_Volume3/V3_3_Ch3_Chemical_Industry.pdf</u>.

To ensure the conservativeness and to confirm the applicability of a benchmark, actual N_2O emissions will be measured and actual emissions factor will be calculated during the production of minimum 5000 tons of 100% nitric acid before the installation of the secondary catalyst (so called baseline monitoring period). The Romanian DFP- Environmental Ministry- in its letter (IRL 22) officially confirmed the EF_{BL}, calculated with IPPC benchmark as mentioned above. The amount of minimum 5000 tons nitric acid to be produced at the baseline period has been chosen due to low production level during the last years, e.g. 2009 and 2010 (IRL 14) and thus is acceptable.

According to the DFP's official letter, the calculated baseline emission factor, based on the results of the baseline monitoring period (at least 5000 t of nitric acid production) and on IPCC benchmark, will be:

- If EF_{BP} >7.7 kg N2O/tHNO3 EFBL = 7 kg N2O/tHNO3
- If $6.3 < EF_{BP} < 7.7$ kg N2O/tHNO3 *EFBL* = 5.6 kg N2O/tHNO3
- If EF_{BP} <6,3 kg N2O/tHNO3 *EFBL* = 4.5 kg N2O/tHNO3

Where EF_{BP} is the baseline emission factor obtained from the baseline monitoring period.

Permitted ranges of operational parameters are established for the period of measuring the actual N_2O emissions before secondary catalyst installation.

For avoidance of the possibility to modify the operating conditions of the nitric acid plant in such way that increases N2O generation during the baseline campaign, the normal ranges for operating conditions shall be determined as follow:

- For oxidation temperature: historical data are used using OT values of 3 reactors separately and similar during the baseline period, control of OT will be performed for each of 3 reactors separately.
- For oxidation pressure: values from plant design diagram and internal production manual are applied, since no historic data is available.
- For AFR and AIFR: historical data will be applied

The baseline emissions were estimated ex-ante in accordance with formulae set defined in the approved CDM methodology AM0034. For this estimation following conservative assumptions have been made:

- the IPCC lower limit default emission factor for N2O emissions from medium pressure nitric acid plants, i.e., 7 kg N2O/tHNO3 is applied;
- Nitroporos plant road map figures for nitric acid production are applied: 2011 70,000 t/year, 2012 115,000 t/year, 2013 154,000 t/year, 2014 168,000 t/year, 2015 175,000 t/year, 2016-2020 218,000 t/year

The estimated baseline emissions can be confirmed, as the same have been replicated by the audit team using the information provided (IRL 19, IRL 22, IRL 27, IRL 31).

Regarding the cap on baseline campaign length, since the baseline measurement is done over the fixed period that is not linked to gauze replacement schedule, this rule is not applicable for this JI project.

The defined normal operating conditions will be available at the first periodic verification and have to be verified by the verifying AIE.

The TÜV SÜD assessment team considered the approach proposed by PPs is correct, reasonable and applicable to the specific project case on the basis of the reviewed documentation, further references and the result of the interviews.

Detailed information on the verification of the project specific methodology can be found in the Annex 1 to this report.



3.5.4.2 Project emissions

Due to the partial primary gauzes replacement in the ammonia oxidation reactors during the historical nitric acid production, it is not possible to define the production campaign. Thus the campaign approach is not applicable to the project at hand and the project emissions will be obtained based on the verification periods instead of the project campaigns. This is acceptable as the project specific approach.

The project emissions were estimated ex-ante in accordance with formulae set defined in the approved CDM methodology AM0034. For this estimation following conservative assumptions have been made:

- the IPCC upper limit default emission factor for N2O emissions from medium pressure nitric acid plants, i.e., 8,4 kg N2O/tHNO3 is applied for the estimation of the project emissions;
- the guaranteed BASF's secondary catalyst abatement efficiency of 83% is used (IRL 26);
- Nitroporos plant road map figures for nitric acid production are applied: 2011 70,000 t/year, 2012 115,000 t/year, 2013 154,000 t/year, 2014 168,000 t/year, 2015 175,000 t/year, 2016-2020 218,000 t/year

The estimated project emissions can be confirmed, as the same have been replicated by the audit team using the information provided (IRL 19, IRL 22, IRL 27, IRL 31). Detailed information on the verification of the parameters used in the equations can be found in the Annex 1.

3.5.4.3 Leakage

The project specific approach does not deviate in respect of leakage emissions from approved CDM methodology AM0034 version 05.1.0. Hence, no leakages are identified.

3.5.4.4 Emission Reductions

The calculation of the baseline emissions, project emissions, and the emission reductions, respectively, can be considered as correct. The baseline and project emissions are calculated in the PDD in transparent manner and using conservative assumptions.

Therefore based on the calculations in the project documentation it is expected that the project activity will lead to a reduction of GHG emissions of $259,098 \text{ tCO}_2e$ in the period from 2011 until 2012.

In order to set a cap on the annual emissions reductions which can be claimed for by the project, the methodology applied requires an indication of a design (or nameplate) production capacity of the nitric acid plant. By nameplate implies the total yearly capacity (considering 365 days of operation per year) as per the documentation of the plant technology provider.

Since the annual capacity is not specified in the plant design documents, it is established based on the daily design capacity of the plant, which is multiplied by the number of operating days per year. In the PDD the production values after modernization in accordance with design IITPICCh (National Institute for Chemical Engineering) 425.5.0/A developed in 1982 are applied (IRL 11). The plant design documents show the daily design capacity of 750 metric tons of HNO3 after the modernization in 1982 providing the possibility of using 3 or 4 ammonia oxidation reactors (AORs). In order to maintain the same capacity with only 3 AORs, the plant increased the speed of the gases to/out of the reactors: from 30/15 m/s (with 4 AOR) to 20/40 m/s (3 AOR) – IRL (32). And some auxiliary measures for heat recovery boiler: recirculate water from 162.5 m³/h (4 AOR) to 216.66 m³/h (3 AOR) – IRL 32).

To ensure the conservativeness, it is assumed that the plant operates 330 days per year. This gives the annual capacity of 247,500 t.



3.6 Additionality

Simple cost analysis has been used for demonstrating additionality according to the "Tool for the demonstration and assessment of additionality" (Version 05.2) as it is clearly shown that that there is no economical benefit by the reduction of the nitrous oxide concentration other than the JI revenues. The costs associated with the project activity are summerized in Annex 4 of the final PDD.

The approach used in the PDD has been assessed based on a document review and interviews on-site with plant representatives (for details see Annex 2). All audit evidences have been checked using sectorial knowledge and expertise as well as public available information published in the internet.

Based on this determination steps, the AIE can confirm that the documentation assessed is appropriate for this project.

3.7 Monitoring plan

The assessment team has checked all the parameters presented in the MP against the requirements of the methodology. The monitoring plan (MP) presented in the PDD complies with the requirements of the methodology updated to the project case (JI approach). There are following project specific modification:

- The project is not based on measurement of a baseline campaign and determination of a baseline emission factor as it is required by the CDM methodology AM0034. Rather a default value will be used for calculation of the ERUs. The emission factor for the baseline as accepted by DFP in the recommendation letter is 7 kg ± 20% N₂O/tHNO₃. The applicability of the benchmark will be ensured by conducting continuous real time measurements of the N2O emissions during the production of at least 5000 tons of 100% nitric acid. The production figure is considered acceptable taking into account the current production amounts at the plant (27343 t for 2009 and 2010, IRL 14). The permitted ranges of the operating parameters will be monitored and cross checked against the normal ranges in order to ensure the validity of the baseline emissions data during this period.
- To ensure the conservativeness following specific provisions are described in the PDD:
 - If calculated emission factor is equal or higher than 7.7 kg (medium pressure IPCC factor +10%) N₂O/tHNO₃, default medium pressure IPCC emission factor 7kg N₂O/tHNO₃ is used.
 - If calculated emission factor is equal or higher than 6.3 kg N₂O/tHNO₃ (lower limit of medium pressure IPCC factor +10%), then the lower end of the uncertainty range will be used, which is 5.6 kg N₂O/tHNO₃.
 - Otherwise, the lowest default emission factor for nitric acid plants that do not have N_2O abatement system or NSCR of 4.5 kg N_2O /tHNO₃ shall be applied.
- Ammonia oxidation reactors at Nitroporos use 3 layers of platinum gauzes that are replaced consecutively (one or two gauzes per stop). At the end of operational life the oldest gauze(s) layer is replaced by a new one. The other two (or one) gauze layers remain in the reactor and are moved down to lower positions, whereas the new gauze layer is installed at the top. The same procedure is performed at all 3 reactors simultaneously, so 3 or 6 gauze layers are replaced during one maintenance stop (1-2 gauze layers in each reactor). The composition of old and new gauzes in all reactors is the same. The baseline period measurements shall be performed when at least 3 of 9 gauzes are in the first part their life. The project period could start immediately after the end of the baseline period.

Due to this partial primary gauzes replacement in the ammonia oxidation reactors during the historical nitric acid production, it is not possible to define the production campaign.



Thus the campaign approach is not applicable to the project at hand and the following parameters can be omitted: Baseline campaign length (CL_{BL}), normal campaign length ($CL_{nor-mal}$), project campaign length (CL_n). This is acceptable as the project specific approach.

The quality assurance procedures have been audited by the assessment team through document review and interviews with the relevant personnel; this information together with a physical inspection allows the assessment team to confirm that the proposed MP is feasible within the project design. The major parameters to be monitored have been discussed with the PPs especially regarding the location of the meters, the data management, and in general the quality assurance and quality control procedures to be implemented in the context of the project.

Due to importance of the quality assurance and quality control procedure for the future data quality, the project proponents agreed to implement a so called "JI Manual" which will comprise description of the work scope as well as tasks of responsible personnel, qualification requirements and continuous training for responsible staff, procedures on the data treatment acc. to AM0034 rules and requirements (e.g. downtime of AMS), QAL 3 procedures, JI project related documentation procedures, troubleshooting procedures, etc. (refer to FAR 2). During the first periodic verification the PPs will provide the JI Manual to a verifying AIE.

All the audit evidences proving the appropriateness of monitoring provisions undertaken by the PPs were provided to the AIE and have been considered as sufficient. For details please refer to Annex 2 of this report.

Hence, it is expected that the PPs will be able to implement the monitoring plan and the emission reductions achieved can be reported ex-post and verified.

3.8 Local stakeholder consultation

The statement has been provided in the final PDD, chapter G. The DFP (host) and the local authority confirmed a simplified approval procedure for this project due to its obviously positive environmental effects. According to this, the project can be approved without invitation of further local stakeholders.

This fact has also been verified with information obtained during interviews.

3.9 Environmental impacts

In accordance with Government Decision no. 445/2009 on the environmental impact assessment of certain public and private projects, it is not necessary to perform an EIA for this JI project. It is confirmed by Sibiu Regional environmental agency decision N5242/15.12.201. No contaminants are released during the operation of the project activity so no negative environmental impacts occur. The BREF (IRL 31) also confirms this view by stating that catalytic N₂O decomposition does not induce cross-media effects.

Nevertheless, for Nitroporos an environmental impact study was voluntarily carried out by SC IPROCHIM SA Bucharest in November 2010 (Nr of project MD 1002.04). As a general conclusion, following the analysis of the evaluation report on the impact on the environment based on the data provided by the company, the impact is placed at an insignificant level.

TÜV SÜD assessment team remarks that the project has a strong positive environmental impact, since the primary object of the project is reduction of N_2O emissions.



4 COMMENTS BY PARTIES, STAKEHOLDERS AND NGOs

TÜV SÜD published the project documents on TÜV SÜD's own website and invited comments by the Parties, stakeholders and non-governmental organisations during a period of 30 days. The following table presents all key information on this process:

Webpage:

http://www.netinform.net/KE/Wegweiser/Guide22.aspx?ID=7148&Ebene1_ID=50&Ebene2_ID=2390&mo de=5_					
Starting date of the stakeholder consultation process:					
2011-03-25	2011-03-25				
Comment submitted by:	Issues raised:				
- (no comments received) -					
Response by TÜV SÜD:					
-					



5 DETERMINATION OPINION

TÜV SÜD has performed a determination of the following proposed JI project activity:

"Nitroporos Nitrous Oxide Abatement Project"

Standard auditing techniques have been used for the determination of the project. Methodologyspecific checklists and protocol customised for the project have been prepared to carry out the audit and present the outcome in a transparent and comprehensive manner.

The review of the project design documentation, and further audit evidences and references, as well as subsequent follow-up interviews have provided TÜV SÜD with sufficient evidence to determine the fulfilment of stated criteria in the protocol. In our opinion, the project meets all relevant UNFCCC requirements for the JI as well as all the requirements set by host country (Romania) for approving projects under JI Track 1. Hence, TÜV SÜD will recommend the project for further approval and registration by the DFP of the host country.

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

The determination is based on the information made available to TÜV SÜD, as well as the engagement conditions detailed in this report. The determination has been performed following the JI requirements. The only purpose of this report is its use during the registration process as part of the JI Track 1 project cycle. TÜV SÜD cannot be held liable by any party for decisions made, or not made, based on the determination opinion beyond this purpose.

Munich, 30/08/2011

Thomas Kleiser Certification Body "climate and energy" TÜV SÜD Industrie Service GmbH

Munich, 30/08/2011

Olena Maslova Assessment Team Leader

Determination of the JI Track 1 project: "Nitroporos Nitrous Oxide Abatement Project"



Annex 1: Determination Protocol



CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	Pub- lished PDD	Final PDD
A. General description of project activity				
A.1. Title of the project activity				
A.1.1. Does the used project title clearly en- able identification of the unique JI activity?	2	The project title clearly enables the identification of the JI activity. No second JI activity exists with a similar title or at the same site.		V
A.1.2. Are the sectoral scope(s) to which the project pertains clearly identified? Is this in- formation consistent with further chapters of the PDD?	2	Yes it is. The sectoral scope is identified to be scope 5 (Chemical industry).	N	Ŋ
A.1.3. Are there any indication concerning the revision number and the date of the revision?	2	The revision number and the date of the issuance of this revision is correctly indicated PDD version 2.0 dated May 26, 2011	Ŋ	Ø
A.1.4. Is this consistent with the time line of the project's history?	2, 16	Yes, it is. The date of the issuance is consistent with the time line of project's history, however see CR below. The Letter of Endorsement for the project was issued at Septem- ber 29, 2009, the starting day of project activity is January 01, 2011 and the starting date of the crediting period is stated to be March 01, 20110. Corrective Action Request No.1. Chapter A.2 of the PDD has to indicate the expected outcome of project scenario and briefly summarize the history of the project including information about implementation schedule of the pro- ject according to requirements of the Guidelines for users of the JI PDD form, version 3. Thus please describe the project implemen- tation history in a more traceable way (a table for eg.) starting with early JI consideration, contract with the PDD developer, PIN, LoE, AMS acquisition and installation etc. A graphical representation of the time milestones (historical campaign – baseline – AMS instal-	CL	Ŋ



CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	Pub- lished PDD	Final PDD
		lation – project starting date) can be included. In addition JI pro- ject implementation plan has to be provided. In order to demon- strate the early JI consideration, please provide the directorate decision concerning the proposed JI project (minutes of the meet- ing etc.).		
A.2. Description of the project activity				
A.2.1. Is the description delivering a transpar- ent overview of the project activities?	2	Yes, it is. The description is delivering a transparent overview of the project activities however please refer to CL above.		V
A.2.2. What proofs are available demonstrat- ing that the project description is in compliance with the actual situation or planning?	2, 11, 32, 10, 13, 18	 For demonstrating that the project description is in compliance with the actual situation or planning the following proofs have been provided: Design documents for non-concentrated nitric acid production including last modernization works performed (IRL 32, 11); Operating Permit (IRL 15); Elementary diagram of non-concentrated nitric acid production (IRL 10); Technical regulations of non-concentrated nitric acid production (operating Manual) (IRL 13) JI project implementation plan (IRL 16); AMS specifications including QAL 1;(IRL 25) Techno-commercial proposal for supplying of the secondary catalyst (IRL 26). Road map demonstrating the nitric acid production plan (IRL 19) Secondary cat supplier confirmation on the warranted N2O abatement efficiency and safety data sheet (IRL 26, 29) 		



CHECKLIST TOPIC / QUESTION Ref. COMMENTS		COMMENTS	Pub- lished PDD	Final PDD
		 Valid IPPC permit indicating the N2O and NOx limit values and actions the Nitorporos plant has to undertake in order to comply with Romanian N2O and NOx regulations (IRL 18). Summary of the project implementation costs and respec- tive evidence (for the confidential insight of the assess- ment team only) (IRL 26, 2 		
A.2.3. Is the information provided by these proofs consistent with the information provided by the PDD?	2	Yes, all information provided by these proofs consistent with the information provided by the PDD.		N
A.2.4. Is all information presented consistent with details provided by further chapters of the PDD?	2	2 Yes, all information presented is consistent with details provided by further chapters of the PDD.		V
A.3. Project participants and project approval	s by P	arties involved		
A.3.1. Is the form required for the indication of project participants correctly applied?	2, 9	Yes, the form is correctly applied.	V	V
A.3.2. Is the participation of the listed entities or Parties confirmed by each one of them?	9	<u>Clarification Request No. 1.</u> S.C. Nitroporos S.R.L. (Romania) and MGM Worldwide, S.a.r.I (Sweden) are the project participants. To confirm this fact the Emission Reduction Units Purchase Agreement (ERPA) between the project participants have to be submitted to the audit team.	CL	
A.3.3. Is all information on participants / Par- ties provided in consistency with details pro- vided by further chapters of the PDD (in par- ticular annex 1)?	2	Yes, the information on PPs is consistent throughout the PDD and Annex 1.		
A.3.4. Is each of the legal entities listed as project participants in the PDD authorized by a	8	The Letter of Endorsement for the project was issued by Ministry of Environmental Protection of Romania in September 29, 2009.	V	V



CHECKLIST TOPIC / QUESTION		COMMENTS	Pub- lished PDD	Final PDD
Party involved, which is also listed in the PDD,		The LoE have been submitted to the audit team.		
through: - A written project approval by a Party in- volved, explicitly indicating the name of the le- gal entity? Or - Any other form of project participant authori- zation in writing, explicitly indicating the name of the legal entity?		Letter of Approvals from the host and investment parties will be applied for after the determination of the project will be finalized.		
A.3.5. Have the DFPs of all parties listed as involved in the PDD provided written project approvals?		Please refer to (A.3.2 and A.3.4.).	CL	V
A.3.6. Does the PDD identify at least the host Party as a "Party involved"?	2,8	Yes, the host party- Romania- is identified in the PDD.		V
A.3.7. Has the DFP of the host Party issued a written project approval?	8	Please refer to (A.3.4.).		$\mathbf{\overline{A}}$
A.3.8. Are all the written project approvals by Parties involved unconditional?		The LoA will be issued after the successful determination of the project by TÜV SÜD.	FAR	FAR
		Forward Action Request No.1		
		The LoAs should be submitted to AIE at least at the moment at the first periodic verification.		
A.4. Technical description of the project activ	vity			
A.4.1. Location of the project activity				-
A.4.1.1. Does the information provided on the location of the project activity allow for a clear identification of the site(s)?	2	Yes, it does. The information provided on the location of the pro- ject activity allows for a clear identification of the site.	V	V



CHECKLIST TOPIC / QUESTION		COMMENTS	Pub- lished PDD	Final PDD
A.4.1.2. How is it ensured and/or demonstrated, that the project proponents can implement the project at this site (ownership, licenses, con- tracts etc.)?	15, 29	 It is ensured by means of the following docs to be provided: License on the ammonia (nitric acid) production (IRL 15); Nitroporos' state registration certificate (IRL 15); 	N	Ŋ
A.4.2. Technology(ies) to be employed, or m	easure	s, operations or actions to be implemented by the project activit	y	
A.4.2.1. Does the technical design of the project activity reflect current good practices?	2	Yes, it does.	Ŋ	Ŋ
A.4.2. Technology(ies) to be employed, or me A.4.2.1. Does the technical design of the project activity reflect current good practices? A.4.2.2. Does the description of the technology to be applied provide sufficient and transparent input/ information to evaluate its impact on the greenhouse gas balance?		Yes, it does. The project activity aims to reduce the amount of N ₂ O emitted by catalytically decomposing the N ₂ O produced in the undesired side reaction during ammonia oxidation. Nitroporos is planning to install a secondary catalyst type supplied by the BASF SE. This type of secondary catalyst does not require additional heat or other energy input (electricity, steam etc.). During on-site audit Nitroporos submitted the BASF's technocommercial proposal with description of the secondary catalyst which confirms that no additional greenhouse gases produced during the N ₂ O decomposition as well as it does not affect the HNO ₃ production level and not increase NOx emissions. Furthermore material safety data sheet for the secondary catalyst has been provided. See A.4.2.4. Corrective Action Request No.2. According to the preliminary contract between BASF and Interagro, the efficiency of the secondary catalyst will be 83% instead of 80% as considered in ERU estimation. Revision of PDD and Excel calculation is necessary.	CAR CL	



CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS		Final PDD
A.4.2.3. Does the implementation of the project activity require any technology transfer from annex-I-countries to the host country(s)?	2, 26	Yes, the implementation of the project activity requires technology transfer from Annex-I-countries and includes secondary catalyst system and monitoring equipment.	Σ	Ŋ
A.4.2.4. Is the technology implemented by the project activity environmentally safe?	28	According to information provided by the BASF company (Material safety data sheet for secondary catalyst and the techno- commercial proposal) the additional catalyst is made of non- precious metals and does not create significant negative environ- mental effect. The obsolete catalyst will be recycled according to the prevailing EU standards.		R
A.4.2.5. Is the information provided in compli- ance with actual situation or planning?	2	Yes it is.		\square
A.4.2.6. Does the project use state of the art technology and / or does the technology result in a significantly better performance than any commonly used technologies in the host coun- try?		Yes, it is a state of art technology providing significant N ₂ O emission abatement.	Ŋ	Ŋ
A.4.2.7. Is the project technology likely to be substituted by other or more efficient tech- nologies within the project period?	2	Currently there is no reason for PPs to substitute project technol- ogy by any other more efficient technology.	$\mathbf{\Sigma}$	V
A.4.2.8. Does the project require extensive ini- tial training and maintenance efforts in order to		Yes, it does. Every need for training and maintenance efforts will be followed		V
be carried out as scheduled during the project period?	34	and ABB, the supplier of AMS, is responsible for these. The ex- tensive training is required in the context of monitoring system, data acquisition and reporting.		
		Records of the trainings conducted by the AFRISO as well as list of attended personnel have been provided to the assessment team.		



CHECKLIST TOPIC / QUESTION	Ref.	. COMMENTS		Final PDD		
A.4.2.9. Is information available on the demand and requirements for training and mainte- nance?		See above.		V		
A.4.2.10. Is a schedule available for the imple-		See also CAR (A.1.4).	CAR	FAR		
risks for delays?		Clarification Request No. 2.	CL			
	2, 19	The secondary catalyst supplier's approval and delivery contract signed (according to project implementation plan) should be pro- vided to the confidential insight of the assessment team. Pls. refer to FAR3.				
A.4.3. Brief Explanation of how the anthropogenic emissions of greenhouse gases by sources are to be reduced by the proposed JI project, including why the emission reduction would not occur in the absence of the proposed project, taking into account national and/or sectoral policies and circumstances						
A.4.3.1. Is there a brief explanation of how the anthropogenic emissions of greenhouse gases by sources are to be reduced by the proposed JI project, including why the emission reduc- tion would not occur in the absence of the pro- posed project, taking into account national and/or sectoral policies and circumstances?	1, 2	Yes, a brief explanation on how the anthropogenic emissions of greenhouse gases by sources are to be reduced by the proposed JI project is presented in the PDD.				
A.4.3.2. Is the explanation transparent, feasible and – if based on calculations – mathematical correct calculated?		Yes, the explanation is transparent and the calculations are correct. However, though conservative, the use of different emission factors in calculation of PE (8.4 kg CO_{2eq}/t HNO ₃) and BE (7.0 kg CO_{2eq}/t HNO ₃) shall be clarified. Clarification Request No. 3. Please clarify the use of different benchmark emission factors for	CL			
		PE and BE calculation. Please revise PDD and Excel file, if nec- essary.				



CHECKLIST TOPIC / QUESTION		COMMENTS		Final PDD
A.4.4. Estimated amount of emission reduct	ions ov	er the chosen crediting period		
A.4.4.1. Is the form required for the indication of projected emission reductions correctly applied?	2	Corrective Action Request No.3. The crediting period lasts until the end of 2012. Whether the end of the crediting period can be after 2012 subject to the approval by the host Party. Thus please split the table with the ERs estimates presented in chapter A.4.3.1 and provide the estimates for the first commitment period in complete manner (years of the crediting period, total estimated ERs, annual average of estimated ERs over the crediting period) as required by Guidelines for users of JI PDD Form v.04. Furthermore please refer to CL (A.4.3.2).	CAR	Ŋ
A.4.4.2. Are the figures provided consistent with other data presented in the PDD? 2 All other		All figures which are presented in the PDD are consistent with other data. However refer to the CLs and CARs above.	CAR CL	Ø
A.4.4.3. Is the annual average of estimated emission reductions calculated by dividing the total estimated emission reductions over the crediting period by the total months of the crediting period and multiplying by twelve?	2	Yes, the annual average of estimated emission reductions pre- sented in the PDD is calculated by dividing the total estimated emission reductions over the crediting period by the total months of the crediting period and multiplying by twelve. However see CAR above in A.4.4.1.	CAR	V
B. Baseline				
B.1. Description and justification of the basel	ine cho	osen		
 B.1.1. Does the PDD explicitly indicate which of the following approaches is used for indentifying the baseline? - JI specific approach - Approved CDM methodology approach 	2	The first version of the PDD mentions the approved CDM metho- dology AM0034 v. 03.4 to be used as a basis for this project activ- ity. AM0034 is solely addressing the destruction of nitrous oxide by secondary measures. Hence it is considered that AM0034 is the appropriate choice for this project activity fitting to the baseline and project scenario of this project. Nevertheless it is not directly applicable due to various distinctions between the assumptions of	CAR	Ŋ



CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS		Final PDD
		the methodology and the real situation at Nitroporos plant.		
		In order to clearly demonstrate all the deviations from the meth- odology AM0034, a detailed description of the project specific approach has to be included in revised PDD according to the Guidelines for users of JI PDD form, version 04. In doing so the latest version of AM0034 should be used. A description using a table format with the first column the requirement of the AM0034 and the second one the specific JI approach of this project would be helpful. Furthermore the starting date of the Baseline/Project in terms of primary catalyst age/composition should be included in the revised PDD.		
B.1.2. If JI specific approach is used, does the PDD provide a detailed theoretical description and justification of the baseline chosen in a complete and transparent manner taking into account §23 of DVM v.1?	2	Yes, the PDD provides a detailed theoretical description and justi- fication of the baseline chosen in complete and transparent man- ner taking into account the DVM requirements. The identification of the baseline scenario was conducted acc. to AM0028 as sug- gested by the AM0034. However see CAR in B.1.1 above.	CAR	V
B.1.3. If selected elements or combinations of approved CDM methodologies or methodo- logical tools for baseline setting are used, are the selected elements supplementary devel- oped by the project proponents in line with §23 of DVM v.1?	1, 2	Yes, the selected elements of the AM0034 applied are developed in line with DVM requirements (e.g. § 23 DVM v.1).	V	V
B.1.4. Does the PDD provide a justification of the applicability of the methodological ap- proach chosen with a clear and transparent description?	2	Yes, the PDD provides a justification of the applicability of the methodological approach chosen (the selected elements of AM0034) with a clear and transparent description. However please refer to sections B.1.12 B.1.19. below in this checklist.	V	Ŋ



CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS		Final PDD
son(s)/entity(ies)				
B.1.5. Is there any indication of a date when the baseline was determined?	2	Corrective Action Request No.5. The date of the baseline setting is mentioned in the PDD to be the November 2010. However please amend this date taking into ac- count the format requirements of the guidelines for users of JI PDD form v. 4. The baseline for the project activity has not been set yet. The PDD under determination presents preliminary estimates of the baseline and project emissions.	CAR	N
B.1.6. Is this consistent with the time line of the PDD history?		Please refer to comment above.	Ø	Ø
B.1.7. Is the information on the person(s) / en- tity (ies) responsible for the application of the baseline and monitoring methodology provided consistent with the actual situation?	2	Yes, it is. The information is consistent with the actual situation.		V
B.1.8. Is information provided whether this person / entity is also considered a project par- ticipant?	2	The baseline study and monitoring methodology was applied by MGM International Group LLC project developer team. The PDD indicated in section D.4 that MGM International Group LLC is not project participant.	Ø	Ŋ
Approved CDM methodology : justification o	f the ch	noice of the methodology and why it is applicable to the project a	activity	
B.1.9. Are reference number, version number, and title of the baseline and monitoring meth- odology clearly indicated?	2	N/A	V	V
B.1.10. Is the applied version the most recent one and / or is this version still applicable (within the grace period) when the PDD is submitted for publication?	2	N/A	Ø	V



CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS		Final PDD
B.1.11. Does the PDD provide a description of why the approved CDM methodology is appli- cable to the project?	2	N/A		V
Integrate the required amount of sub-checklists on the applicability criteria as given by the applied methodology and comment on at le line answered with "No";				
B.1.12. Criterion 1: The applicability is limited to the existing pro- duction capacity measured in tonnes of nitric acid, where the commercial production had began no later than 31 December 2005. Defi- nition of "existing" production capacity is ap- plied for the process with the existing ammo- nia oxidization reactor where N2O is gener- ated and not for the process with new ammo- nia oxidizer. Existing production "capacity" is defined as the designed capacity, measured in tons of nitric acid per year.	2	Applicability checklistYes / NoCriterion discussed in the PDD?YesCompliance provable?YesCompliance verified?YesThe plant operation history still has to be described in the PDD in a transparent manner, refer to CAR in A.1.4 of this checklist.According to the information provided at the on-site visit, the plant was commissioned in 1980, the last modifications have been con- ducted in 1982. The annual production capacity of the plant was calculated 247 500 tHNO3/yr taking into account 330 days of op- eration pro year and the documented daily capacity of 750 tHNO3/d.		
 B.1.13. Criterion 2: The project activity will not result in the shut- down of any existing N2O destruction or abatement facility or equipment in the plant. 	2	Applicability checklistYes / NoCriterion discussed in the PDD?YesCompliance provable?YesCompliance verified?YesAs there's no N2O abatement unit in the plant, the project activity will not result in the shutdown of any existing N2O destruction or		



CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	Pub- lished PDD	Final PDD
		abatement facility or any further emission reduction equipment in the plant.		
B.1.14. Criterion 3: The project activity shall not affect the level of nitric acid production	2	Applicability checklistYes / NoCriterion discussed in the PDD?YesCompliance provable?YesCompliance verified?YesThe secondary catalyst applied does not have any impact to level of NO yield.	ß	Z
B.1.15. Criterion 4: There are currently no regulatory requirements or incentives to reduce levels of N2O emis- sions from nitric acid plants in the host coun- try.	2, 18	Applicability checklistYes / NoCriterion discussed in the PDD?YesCompliance provable?YesCompliance verified?YesDuring on-site visit, it has to be discussed and confirmed that there are currently no regulatory requirements or incentives to reduce levels of N2O emissions from HNO3 plants in Romania. This was confirmed at the meeting with Romanian DFP.	V	
B.1.16. Criterion 5: The project activity will not increase NOx emissions.	2	Applicability checklistYes / NoCriterion discussed in the PDD?YesCompliance provable?YesCompliance verified?Yes	CL	FAR



CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS			Pub- lished PDD	Final PDD
		The BREF (August 2007, p. 124) confirms th ammonia oxidation reaction remain unchang secondary N ₂ O abatement catalysts.	at NO yields ged when op	for the perating		
		NOx is a regulated gas in the Romania and in stack gas. The limits on the NOx emission plant's valid IPPC permit have been checked.	t is monitore ns provided	d in the by the		
		Clarification Request No. 4.				
		According to technical specifications of DeNOx unit, contract Steuler – Nitroporos (IRL 17), the NOx outlet concentration could not be less than 200 ppm, but – as set in the IPPC Permit, the plant should comply with a threshold of 150 ppm.		ct could the		
		A clarification how this DeNOx unit will ensure mental compliance is needed.	the plant env	viron-		
		Pls. refer to FAR4.				
B.1.17. Criterion 6:					CL	\square
to the start of the project activity is not a Non-		Applicability checklist	Yes / No			
Selective Catalytic Reduction (NSCR) DeNOx		Chienon discussed in the PDD?	Yes			
unit.		Compliance provable?	Yes			
	2, 17	Compliance verified?	Yes			
		During on-site visit, the project participants confirmed that a De- NOx unit has been ordered and will be installed once delivered. According to the technical specifications stated in the contract with DeNOx supplier, this DeNOx is a Selective Catalytic Reduc- tion unit. However see CL above.		a De- ered. act educ-		
B.1.18. Criterion 7: Operation of the secondary N2O abatement	2	Applicability checklist	Yes / No		V	V



CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	Pub- lished PDD	Final PDD				
catalyst installed under the project activity does not lead to any process emissions of greenhouse gases, directly or indirectly.		Criterion discussed in the PDD? Yes						
		Compliance provable? Yes						
		Compliance verified? Yes						
		There is no further impact on greenhouse gas emissions by this kind of technology. According to the BREF issued by IPPC on August 2007 the application of secondary N_2O catalyst does generally not lead to any process emissions of GHG – direct or indirect.						
 B.1.19. Criterion 8: Continuous real-time measurements of N2O concentration and total gas volume flow can be carried out in the stack: Prior to the installation of the secondary cata- lyst for one campaign, and After the installation of the secondary catalyst throughout the chosen crediting period of the project activity 	2, 24	Applicability checklistYes / NoCriterion discussed in the PDD?YesCompliance provable?YesCompliance verified?YesDuring on-site visit the representatives of Nitroporos were interviewed by the audit team and they confirmed that continuous real-time measurements of N₂O concentration and total gas volume flow can be carried out in the stack prior to and after the installation of the secondary catalyst. Furthermore preliminary N2O measurements and consultancy regarding the appropriate measuring points for AMS was conducted by the SGS. The SGS report provided to the assessment team confirms the PPs statement.	Ø	V				
The baseline scenario shall be identified using procedure for Identification of the baseline scenario described in the approved methodology AM0028 "Catalytic N_2 O destruction in the tail gas of Nitric Acid Plants" version 05.								
B.1.20. Are all explanations, descriptions and analyses pertaining to the baseline in the PDD	2	As mentioned above this project activity is based on the selected elements of the approved CDM methodology AM0034. The identi-						



CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	Pub- lished PDD	Final PDD
made in accordance with the referenced ap- proved CDM methodology?		fication of the baseline scenario therefore was conducted accord- ing to the baseline identification procedure described in the latest version of AM0028 as required by the AM0034. Hence following checklist's questions are also relevant for this project.		
B.1.21. Have all technically feasible baseline scenario alternatives (at least all scenarios listed under step 1a in AM0028, vers.5) to the project activity been identified and discussed by the PDD? Why can this list be considered as being complete?	2	Yes, all technically feasible baseline scenario alternatives been identified and discussed in the PDD version 1. The list can be considered as being complete because all options available from known methodologies have been reviewed.		Ø
B.1.22. Have all technically feasible alterna- tives (at least all scenarios listed under step 1b in AM0028, vers.4.2) to handle NOx emissions been identified and discussed by the PDD?	2	Yes, all technically feasible alternatives (at least all scenarios listed under step 1a in AM0028, vers.04.2) to handle NOx emissions been identified and discussed in the PDD. The list was reviewed and can be considered as being complete.	Ø	V
B.1.23. Does the project identify correctly and exclude those options not in line with regulatory or legal requirements (Step 2)?	2	Yes, it does.	Ŋ	
B.1.24. Have applicable regulatory or legal re- quirements been identified?	2, 18	The existing regulation in Romania does not require implementa- tion any technologies for N_2O abatement. The plant's valid IPPC permit does not include any limits on N2O emissions. There are no subsidies or other support available for such technologies. Hence, the installation of different N_2O abatement technologies is not feasible as any of the existing N_2O abatement technologies imply additional costs and no revenues outside the JI mechanism.	R	V
B.1.25. Is a complete list of barriers developed that prevent alternatives to occur (step 3a)?	2	Yes, it does. A complete list of barriers was developed.	Ŋ	
B.1.26. Is transparent and documented evi-	2	Yes, it does. The existence and significance of these barriers is	\checkmark	\checkmark



CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	Pub- lished PDD	Final PDD
dence provided on the existence and signifi- cance of these barriers?		discussed in the PDD in transparent manner.		
B.1.27. Is it transparently shown that at least one of the alternatives (except the proposed JI project activity) is not prevented by the identi- fied barriers (step 3b)?	2	Yes, it is. Continuation of the status quo, installation of a secondary catalytic DeN2O and new SCR DeNOx are not prevented by the identified barriers.		
B.1.28. Does the PDD include an appropriate discussion if and how any alternatives generate financial or economic benefits (step 4)?	2	Yes, it does. There is an appropriate discussion on this question. It can be concluded that no alternatives would generate financial or economic benefits. Clarification Request No. 5. An alternative is discussed at step 4 of the baseline identification which seems to have been eliminated at the step 3 already (tertiary DeNOx/DeN2O abatement technology), this should be clarified; the PDD should be corrected if necessary. Furthermore several editorial corrections should be conducted in the PDD (replace CDM with JI, correct data units, correct wording used in B.2, parameter tables seem to be doubled in chapter D.1.1 and B.1, the responsibilities diagram on p. 63 mentions JISC while the project is Track 1 one etc.).	CL	
B.1.29. In case of Option I: Is the least costly alternative clearly identified?	2	The continuation of of the status quo is clearly identified as the least costly option.	V	Ø
B.1.30. In case of Option II: Is the most suit- able financial indicator clearly identified?	-	N/A	V	
B.1.31. In case of Option II: Is the calculation of financial figures for this indicator correctly done for all remaining alternatives?	-	N/A	V	Ø


CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	Pub- lished PDD	Final PDD
B.1.32. In case of Option II: Is the investment analysis presented in a transparent manner providing public available proofs for data?	-	N/A	N	V
B.1.33. In case of Option II: Is the sensitivity analysis evidencing the robustness of the fi- nancial attractiveness of the selected baseline scenario?	-	N/A	Ø	
B.1.34. In case of Option II: Have reasonable variations been applied in critical assumptions?	-	N/A	V	Ø
B.1.35. In case of a re-assessment in the course of the project's lifetime: Are there any new or modified NOx-emission regulations, which may address the project baseline?	2, 18	In case of new or modified NOx or N_2O emission regulations a re- assessment of the baseline scenario should be executed as es- tablished in AM0028 (Step 5a: New or modified NOx emission regulations, and Step 5b: New or modified N_2O regulation).		V
B.1.36. In case of a re-assessment in the course of the project's lifetime: Have new base-line scenarios been properly discussed reflecting the altered situation?	-	N/A		V
B.1.37. In case of a re-assessment in the course of the project's lifetime: Are there any new or modified N2O-emission regulations, which may address the project baseline?	2	In case of new or modified NOx or N_2O emission regulations a re- assessment of the baseline scenario should be executed as es- tablished in AM0028 (Step 5a: New or modified NOx emission regulations, and Step 5b: New or modified N_2O regulation).	R	Ŋ
B.1.38. In case of a re-assessment in the course of the project's lifetime: Have new base-line scenarios been properly discussed reflecting the altered situation?	2	N/A	Ŋ	V
B.1.39. Is the baseline identified appropriately	2	Yes, the baseline scenario- the continuation of N_2O emission to the atmosphere (without the installation of N_2O destruction or	V	V



CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	Pub- lished PDD	Final PDD	
as a result?		abatement technologies and technologies that indirectly reduce N ₂ O emissions) and installation of a new SCR DeNOx unit- is identified appropriately as a result.			
B.2. Description of how the anthropogenic emissions of greenhouse gases by sources are reduced below those that would have occurred in the absence of the JI project (assessment and demonstration of additionality):					
 B.2.1. Does the PDD indicate which of the following approaches for demonstrating additionality is used? a) Provision of traceable and transparent information showing the baseline was identified on the basis of conservative assumptions, that the project scenario is not part of the identified baseline scenario and that the project will lead to ERs; b) Provision of traceable and transparent information that an AIE has already positively determined that a comparable project (to be) implemented under comparable circumstances has additionality; c) Application of the most recent version of the "Tool for the demonstration and assessment of additionality" or any other method for proving additionality approved by the CDM Executive Board. 	2	The additionality of the project activity is demonstrated and as- sessed using the "Tool for demonstration and assessment of addi- tionality" version 5.2.	L	R	
B.2.2. Does the PDD provide a justification of the applicability of the approach with a clear and transparent description?	2	Yes, it does. Furthermore the AM0034, which elements have been applied in this project activity, requires using the additionality tool for additionality assessment and demonstration.	Ø	V	
B.2.3. If the approach (c) was chosen (addi- tionality tool), are all explanations, descriptions	2	Because of the similarity of both approaches used to determine the baseline scenario and the additionality tool, Step 1 of the "Tool	V	V	



CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	Pub- lished PDD	Final PDD
and analyses made in accordance with the se- lected tool/method?		for the demonstration and assessment of additionality" was omit- ted while assessing the additionality. Consistency was ensured between the determination of the baseline scenario and the dem- onstration of additionality. Furthermore acc. to AM0034 the base- line scenario alternative selected in the previous section shall be used when applying Steps 2 to 5 of the "Tool for the demonstra- tion and assessment of additionality".		
B.2.4. In case of applying step 2 / investment analysis of the additionality tool: Is the analysis method identified appropriately (step 2a)?	2	As in chapter B.2 the investment analysis has been selected as the appropriate choice of possible methods.	V	V
B.2.5. In case of Option I (simple cost analy- sis): Is it demonstrated that the activity pro- duces no economic benefits other than JI in- come?	2	It is clearly shown that there is no economical benefit by the re- duction of N_2O concentration other than the JI revenues. Corrective Action Request No.6. According to the additionality tool the costs related to the JI pro- ject have to be documented and clearly listed in the PDD. Please amend the PDD accordingly.	CAR	Ŋ
B.2.6. In case of Option II (investment com- parison analysis): Is the most suitable financial indicator clearly identified (IRR, NPV, cost benefit ratio, or (levelized) unit cost)?	2	N/A	V	V
B.2.7. In case of Option III (benchmark analy- sis): Is the most suitable financial indicator clearly identified (IRR, NPV, cost benefit ratio, or (levelized) unit cost)?	-	N/A	V	V
B.2.8. In case of Option II or Option III: Is the calculation of financial figures for this indicator correctly done for all alternatives and the project activity?	-	N/A	V	V



CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	Pub- lished PDD	Final PDD
B.2.9. In case of Option II or Option III: Is the analysis presented in a transparent manner including publicly available proofs for the util- ized data?	-	N/A	Ø	V
B.2.10. In case of applying step 3 (barrier analysis) of the additionality tool: Is a complete list of barriers developed that prevent the dif- ferent alternatives to occur?	-	N/A		V
B.2.11. In case of applying step 3 (barrier analysis): Is transparent and documented evi- dence provided on the existence and signifi- cance of these barriers?	-	N/A		
B.2.12. In case of applying step 3 (barrier analysis): Is it transparently shown that the execution of at least one of the alternatives is not prevented by the identified barriers?	-	N/A	Ŋ	
B.2.13. Have other activities in the host country / region similar to the project activity been identified and are these activities appropriately analyzed by the PDD ?	2	Yes, other N_2O similar JI projects in Romania are AzoMures and DonauChem.	A	
B.2.14. If similar activities are occurring: Is it demonstrated that in spite of these similarities the project activity would not be implemented without the JI component (step 4b)?	2	Yes, the project would not be implemented without JI component because there are no legal requirements for reduction of N_2O emissions and there are no other revenues except JI.	R	V
B.2.15. Is it appropriately explained how the approval of the project activity will help to overcome the economic and financial hurdles or other identified barriers (step 5)?	2	As there is no other incentive than the JI this criterion is fulfilled.		V



CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS		Pub- lished PDD	Final PDD	
B.2.16. Are sufficient additionality proofs pro- vided?	2	Sufficient proofs have been provided to justify t analysis conducted in order to demonstrate add see CAR in B.2.5.	he simple cost ditionality. However	CAR	V	
B.2.17. Is the additionality demonstrated ap- propriately as a result?	2	Yes, additionality was demonstrated appropriat	tely as a result.	Ø	V	
B.3. Description of how the definition of the project boundary is applied to the project						
Integrate the required amount of sub-checklists for sources and gases as given by the methodology applied and comment on at least every line an- swered with "No"						
 B.3.1. If the JI specific approach is used: Does the project boundary defined in the PDD encompass all anthropogenic emissions by sources of GHGs that are: a) Under the control of the project participants? b) Reasonably attributable to the project? c) Significant? 	2	Boundary checklistSource and gas(es) discussed in the PDD?Is a definition of the boundary based on case-by-case assessment acc. to §32 (a) of DVM?Is the delineation of the boundary described by using a figure/flow chart?Inclusion / exclusion justified?Explanation / Justification sufficient?Consistency with monitoring plan?Please refer to the CAR (B.3.4).	Yes / No Yes No Yes No Yes	CAR		
B.3.2. If the approved CDM methodology is used: Is the project boundary defined in ac-	-	N/A		Ø	V	



CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	Pub- lished PDD	Final PDD
cordance with the approved CDM methodol- ogy?				
B.3.3. Source: Waste stream exiting the stack of the Nitric Acid plant (Burner inlet to stack) Gas(es): N2O Type: Baseline Emissions and Project Emis- sions	2	Boundary checklistYes / NoSource and gas(es) discussed in the PDD?YesInclusion / exclusion justified?YesExplanation / Justification sufficient?YesConsistency with monitoring plan?Yes	Ø	N
B.3.4. Do the spatial and technological boundaries as verified on-site comply with the discussion provided by / indication included to the PDD (plant specific flow diagram)?	2	Yes, they do. The boundaries as verified on-site are in compliance with the dis- cussion in the PDD. The project boundary covers the shop of non- concentrated nitric acid production from the inlet to the AORs until monitoring points after recovery boilers. There is one stack. Corrective Action Request No.7. In order to demonstrate project boundary clearly and transparently revised PDD has to be amended by including a plant specific flow diagram. Or at least JI related measuring points/equipment shall be identified on the diagram presented in Figure 4 from PDD. Fur- thermore please include a statement on the project operation with 3 AORs vs. 4 AORs.	CAR	V



CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	Pub- lished PDD	Final PDD		
B.4. Further baseline information, including the baseline:	he date	e of baseline setting and the name(s) of the person(s)/entity	v(ies) set	ting		
B.4.1. Are the name(s) of the per- son(s)/entity(ies) whom setting the baseline available?	2	Yes, the names of the persons and entity that set the baseline emission are available.		Ø		
B.4.2. Is the date of baseline setting avail- able?	2	Yes, November 2010. See CAR in B.1.5.	CAR			
C. Duration of the project activity / crediting period						
C.1. Starting date of the project:	C.1. Starting date of the project:					
C.1.1. Is the project's starting date clearly de- fined in the PDD and reasonable?	2	Yes, the project starting date is identified in the PDD, 21/04/2008, the date of the signature of the contract with the project developer.	V	Ø		
C.1.2. Is the starting date of the project after the beginning of 2000?	2	Yes, the project started after the beginning of 2000 (the starting date of the project is April 24 th 2008).	V	V		
C.2. Expected operational lifetime of the proje	ect:					
C.2.1. Is the expected operational lifetime of the project clearly defined in the PDD in years and months and reasonable?	2	The expected operational lifetime of the project is 10 years.	Ø	Ø		
C.3. Length of the crediting period:						
C.3.1. Is the assumed crediting period clearly defined in the PDD in years and months and reasonable?	2	The length of crediting period has been set 10 years and starting date is March 1, 2011. However please refer to CAR below. <u>Corrective Action Request No.8.</u> Please set the length of crediting period in years and months as required by the Guidelines for users of the JI PDD form. version 3.	CAR	V		



CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	Pub- lished PDD	Final PDD
C.3.2. Is the starting date of the crediting pe- riod on or after the date of the first emission reductions generated by the project?	2	Yes, the starting date of the crediting period March 1 st , 2011, when the secondary catalyst is planned to be installed and the project is expected to generate the first emission reductions.		
C.3.3. Does the PDD state that the crediting period for issuance of ERUs starts only after the beginning of 2008 and doesn't extend beyond the operational lifetime of the project?	2	Yes, it is clearly stated in the section C of the PDD.	R	Ī
C.3.4. If the crediting period extends beyond 2012, does the PDD state that the extension is subject to the host Party approval? Are the es- timates of ERs presented separately for those until 2012 and those after 2012?	2	Yes, it is clearly stated in the section C.3 of the PDD. The esti- mates of emission reductions are presented separately for those until and those after 2012 in section A.4.3.1. of the PDD	Ŋ	Ŋ
D. Monitoring plan				
D.1. Description of monitoring plan chosen:				
 D.1.1. Does the PDD explicitly indicate which of the following approaches is used? - JI specific approach - Approved CDM methodology approach 	2	The first version of the PDD mentions the approved CDM metho- dology AM0034 to be used as a basis for this project activity. AM0034 is solely addressing the destruction of nitrous oxide by secondary measures. Hence it is considered that AM0034 is the appropriate choice for this project activity fitting to the baseline and project scenario of this project. Nevertheless it is not directly applicable due to various distinctions between the assumptions of the methodology and the real situation at Nitroporos plant. Please refer to CAR in section B.1.1 and other CRs and CARs in section B of this checklist.	CAR CL	
D.1.2. If the monitoring plan indicates over- lapping monitoring periods during the crediting period, is the underlying project composed of	-	N/A	Ŋ	



CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	Pub- lished PDD	Final PDD
clearly identifiable components for which emission reductions can be calculated inde- pendently?				
D.1.3. If the monitoring plan indicates over- lapping monitoring period during the crediting period, can monitoring be performed inde- pendently for each of these components (i.e. the data/parameters monitored for one com- ponent are not dependent on/effect data/parameters to be monitored for another component)?	-	N/A		
D.1.4. If the monitoring plan indicates over- lapping monitoring periods during the crediting period, does the monitoring plan ensure that monitoring is performed for all components and that in these cases all the requirements of the JI guidelines and further guidance by the JISC regarding monitoring are met?	-	N/A		
D.1.5. If the monitoring plan indicates over- lapping monitoring period during the crediting period, does the monitoring plan explicitly pro- vide for overlapping monitoring periods of clearly defined project components, justify its need and state how the conditions mentioned above are met?	-	N/A	V	V
D.1.6. Is the uncertainty of key parameters described and, where possible, is in uncer- tainty range at 95% confidence level for key	2, 27	The uncertainty of the key parameters is clearly described in the PDD. In doing so the PDD explicitly follows the AM0034 (UNC of the AMS, calculation of the 95% confidence level for the meas-	Ø	Ø



CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	Pub- lished PDD	Final PDD
parameters for the calculation of ERs pro- vided?		ured values etc.).		
D.1.7. Does the monitoring plan identify a na- tional or international monitoring standard incl. a reference to its detailed description, if such applied to the project?	2	Yes, the monitoring plan identifies all applicable national and in- ternational monitoring standards (section D of the PDD) incl. a detailed description (Annex 3).	Ø	Ŋ
D.1.8. Are the statistical techniques used in a conservative manner?	2, 27	The statistical techniques used explicitly follow the approved CDM methodology AM0034.	Ø	V
D.1.9. Does the monitoring plan present the QA/QC procedures for the monitoring process (e.g. QA for AMS acc. to EN14181)?	2	On the day of plant inspection the AMS was installed on-site. ABB's declaration of conformity for the gas analyzer of AMS, ac- cording to requirements of EN 14956 and QAL1 according to EN 14181 has been submitted to the audit team (IRL 25). Also according to the JI project implementation plan the QAL2 is planned by PPs after installation of AMS. Forward Action Request No.2 During the on-site visit the quality assurance and quality control procedure have been discussed while TÜV SÜD assessment team underlined the importance of such procedures for the future data quality. The project proponents provided a draft version of a so called "JI Manual" which comprises description of the work scope as well as tasks of responsible personnel. The project manager agreed to amend the existing JI Manual by including further information on qualification requirements and continuous training for responsible staff, procedures on the data treatment acc. to AM0034 rules and requirements (e.g. downtime of AMS), QAL 3 procedures, JI project related documentation procedures, troubleshooting procedures, list of the spare equipment, provi- sions for the data quality in case of data recording in the hand written logbooks and manual data transfer etc.	FAR	FAR



CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	Pub- lished PDD	Final PDD
		During the first periodic verification the PPs will provide the JI Ma- nual to a verifying entity.		
D.1.10. Does the monitoring plan clearly iden- tify the responsibilities and the authority re- garding the monitoring activities?	2	The PDD (section D.3) provides the operational and management structure as to the proposed JI project. See also the FAR above.	FAR	FAR
D.1.11. Is the inclusion of external accredited services providers for calibration and function tests foreseen in the planning of the project?	2	The inclusion of external accredited services providers for calibra- tion and function tests according to the EN14181 is foreseen in the planning of the project.	Ŋ	Ŋ
D.1.12. Are the specific performance character- istics of the monitoring system chosen by the project listed in the PDD	2	The specific performance characteristics of the monitoring system chosen by the PPs are listed in the PDD.	V	V
D.1.13. Does the monitoring plan, on the whole, reflect good monitoring practices ap- propriate to the project type?	2	Yes, the monitoring plan provides current good monitoring prac- tice. However please also refer to CAR (B.1.1.).	CAR	
D.1.14. Does the monitoring plan provide, in tabular form, a complete compilation of the data to be collected for its application incl. data that are measured / sampled and data col- lected from other sources, but not including data that are calculated with equations?	2	Yes the monitoring plan provided the relevant data in tabular form (section D of the PDD), however please refer to the CARs below in this checklist.	CAR	Ŋ
D.1.15. Does the monitoring plan indicate that the data monitored and required for verification are to be kept for two years after the last trans- fer of ERUs for the project?	2	Yes, the monitoring plan indicates that the data monitored and required for verification are to be kept for two years after the last transfer of ERUs for the project	Ŋ	Ŋ
JI specific approach (project specific methodol cal tools)	logy or a	selected elements or combinations of approved CDM methodologies	or method	dologi-



CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	Pub- lished PDD	Final PDD
D.1.16. Does the monitoring plan describe all relevant factors/ key characteristics to be monitored, all decisive factors for the control and reporting of project performance and the period in which they will be monitored?	2	Yes, the monitoring plan describes all relevant factors/ key char- acteristics to be monitored, all decisive factors for the control and reporting of project performance and the period in which they will be monitored. However please refer to the CARs below in this checklist.	CAR	Ŋ
 D.1.17. If default values are used: Are accuracy and reasonableness carefully balanced in their selection? Do the default values originate from recognized sources? Are the default values supported by statistical analyses providing reasonable confidence levels? Are the default values presented in a transparent manner? 	2	The PDD demonstrates clearly, transparently and in accordance with AM0034 the provisions for any default values which are ap- plied during the crediting period. However see CARs above (A.4.3.2, B.1.1 etc.).	CAR	ß
D.1.18. For those default values that are to be provided by the project participants, does the monitoring plan clearly indicate how the values are to be selected and justified?	2	The PDD clearly specify EFreg- emissions level set by incoming policies or regulations- to be monitored prior to the preparation of each monitoring report, updated every time if new regulations come into force and archive the data during project crediting period. However, see CAR above for the EF for the baseline (A.4.3.2).	CAR	Ŋ
 D.1.19. For other default values: Does the monitoring plan clearly indicate the precise references from which these values are taken? Is the conservativeness of the values provided justified? 	2	See above.	CAR	Ŋ
D.1.20. For all data sources, does the monitor- ing plan specify the procedures to be followed	2	See FAR in D.1.9.	FAR	FAR



CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	Pub- lished PDD	Final PDD
if expected data are unavailable?				
D.1.21. Does the monitoring plan draw on the list of standard variables contained in appen- dix B of "Guidance on criteria for baseline set- ting and monitoring"?	2	Yes, it does.		Ø
D.1.22. Does the monitoring plan explicitly and clearly distinguish:		Yes, it does. The monitoring plan explicitly and clearly distin- guishes such data and parameter as required by the AM0034 which elements have been applied.	V	Ø
a) Data and parameters that are not monitored throughout the crediting period, but are deter- mined only once and thus remain fixed through- out the crediting period, and that are available al- ready at the stage of determination?	2			
b) Data and parameters that are not monitored throughout the crediting period, but are deter- mined only once (and thus remain fixed through- out the crediting period), but that are not already available at the stage of determination?				
c) Data and parameters that are monitored throughout the crediting period?				
D.1.23. Does the monitoring plan describe the methods employed for data monitoring (incl. its frequency) and recording?	2	Yes, the monitoring plan describes the monitoring methods, fre- quency and recording in complete manner. However pls. see CAR below: Corrective Action Request No.9. At page 50 from the PDD it is specified that the OT is the result of average of three measurements (for each AOR) and at page 54 (PDD) the same parameter is the median of 4 measurements in each AOR. Please clarify and correct.	CAR	



CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	Pub- lished PDD	Final PDD
D.1.24. Is information on the margins of errors and the cumulative error for the complete measurement system provided in the PDD?	2	As AMS has not been performed yet the QAL 2 test, the PDD, version 1, provides preliminary typical measurement uncertainty of the monitoring system required for ex-ante estimation of base-line emissions. Please refer to CAR in B.1.1.	CAR	V
D.1.25. Are the requirements on the treatment of downtime of the AMS clearly reflected in the envisioned calculation routines?	2	Corrective Action Request No.10. The PDD should be amended by including information on the data treatment in case AMS downtime.	CAR	V
D.1.26. Is the monitoring plan established appropriately as a result?	2	Yes, the monitoring plan is established appropriately.	Ŋ	Ø
Approved CDM methodology approach				
D.1.27. Are all explanations, descriptions and analyses pertaining to monitoring in the PDD made in accordance with referenced approved CDM methodology?	-	N/A	V	Ŋ
D.1.28. Is it explained how the procedures pro- vided in the methodology are applied by the proposed project activity?	-	N/A	V	Ø
D.1.29. Is every selection of options offered by the methodology correctly justified and is this justification in line with the situation verified on-site?	-	N/A	V	Ŋ
D.1.30. Is the operational and management structure clearly described and in compliance with the envisioned situation?	-	N/A	V	Ø
D.1.31. Are responsibilities and institutional ar- rangements for data collection and archiving	-	N/A	\checkmark	V



CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	Pub- lished PDD	Final PDD
clearly provided?				
D.1.32. Has the monitoring system installed us- ing the European Norm 14181 (2004)?	-	N/A		V
D.1.33. Will the three quality assurance levels been met by the planned Automated Measur- ing System (AMS) according to the EN14181?	-	N/A	Ŋ	V
D.1.34. Are the specific performance character- istics of the monitoring system chosen by the project listed in the PDD?	-	N/A	V	Ø
D.1.35. Is information on the margins of errors and the cumulative error for the complete measurement system provided in the PDD?	-	N/A	$\mathbf{\Sigma}$	V
D.1.36. Are the requirements on the treatment of downtime of the AMS clearly reflected in the envisioned calculation routines?	-	N/A	V	V
D.1.37. Is the monitoring plan established ap- propriately as a result?	-	N/A	\mathbf{N}	Ø
D.2. Data and parameters not monitored- dete	rmina	tion of the permitted ranges for the operating parameters		
 D.2.1. Does the PDD explicitly indicate which of following sources were used for determination of the permitted ranges for the operating parameters: (a) Historical data from the immediately previous five campaigns. (or fewer, if the plant has not been operating for five campaigns). (b) If no data on historical data is available, the 	2, 14	The permitted operation conditions are based on a short cam- paign (28,330.4 t HNO ₃). <u>Clarification Request No. 6.</u> Additional evidence (operating manual, etc) regarding permitted operating ranges is needed. Please clearly indicate the source used for determination of the permitted ranges for the operating parameters in the revised PDD.	CL	FAR
range stipulated in the operating manual for				



CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS		Pub- lished PDD	Final PDD
 the existing equipment; or (c) If no operating manual is available or the operating manual gives insufficient information, from an appropriate technical literature source? 					
D.2.2. In case option (a) is selected, has a proper statistical analysis of the historical data been conducted as required by AM0034?	2, 14	Please refer to the comments in D.2.1.		CL	Ø
D.2.3. Once the permitted ranges of the oper- ating parameters are determined, is it demon- strated that those ranges are within the speci- fications of the facility?	2, 14	Please refer to the comments in D.2.1.		CL	V
D.2.4. Parameter: OT _{normal} Normal operating temperature (of line i)	2, 14	Monitoring Checklist Title in line with methodology? Data unit correctly expressed? Appropriate description of parameter? Source clearly referenced? Correct value provided for estimation? Has this value been verified? Measurement method correctly described? Correct reference to standards? Indication of accuracy provided? QA/QC procedures described? QA/QC procedures appropriate? Please refer to the comments in D.2.1.	Yes / No Yes No Yes N/A N/A N/A No Yes Yes No No	CAR CL	



CHECKLIST TOPIC / QUESTION		Ref.	COMMENTS		Pub- lished PDD	Final PDD
			The analysis of the historical data for OT showe ability for the three AOR. A new definition for OT specifically for each reactor should be envisage The value is to be verified later by the verifying e	d a different vari- Γ permitted range d. entity.		
D.2.5.	Parameter: OP _{normal} Normal operating pressure (of line i)	2, 14	Monitoring ChecklistTitle in line with methodology?Data unit correctly expressed?Appropriate description of parameter?Source clearly referenced?Correct value provided for estimation?Has this value been verified?Measurement method correctly described?Correct reference to standards?Indication of accuracy provided?QA/QC procedures described?QA/QC procedures appropriate?Please refer to the comments in D.2.1.The value is to be verified later by the verifying endormal states of the comment states of	Yes / No Yes No Yes N/A N/A N/A No Yes Yes Yes No No	CL	
D.2.6.	Parameter: AFR _{max,i} Maximum ammonia gas flow rate to the AOR (of line i)	2, 14	Monitoring ChecklistTitle in line with methodology?Data unit correctly expressed?Appropriate description of parameter?Source clearly referenced?Correct value provided for estimation?Has this value been verified?	Yes / No Yes Yes No Yes N/A N/A	CL	V



CHECKL	IST TOPIC / QUESTION	Ref.	COMMENTS			Pub- lished PDD	Final PDD
			Measurement method correctly described?	No			
			Correct reference to standards?	Yes			
			Indication of accuracy provided?	Yes			
			QA/QC procedures described?	No			
			QA/QC procedures appropriate?	No			
			Please refer to the comments in D.2.1.				
			The value is to be verified later by the verifying	entity.			
D.2.7.	Parameter:					CL	\checkmark
	AIFR _{max}		Monitoring Checklist	Yes / No			
	Maximum ammonia to air ratio		Title in line with methodology?	Yes			
			Data unit correctly expressed?	Yes			
			Appropriate description of parameter?	No			
			Source clearly referenced?	Yes			
			Correct value provided for estimation?	N/A			
		2, 14	Has this value been verified?	N/A			
			Measurement method correctly described?	No			
			Correct reference to standards?	Yes			
			Indication of accuracy provided?	Yes			
			QA/QC procedures described?	No			
			QA/QC procedures appropriate?	No			
			Please refer to the comments in D.2.1.				
			The value is to be verified later by the verifying	entity.			
D.2.8.	Parameter:					CL	\checkmark
	GS _{normal}	2,	Monitoring Checklist	Yes / No			
	Normal gauze supplier for the operation	14,	Title in line with methodology?	Yes			
	condition campaigns (of line i)	12	Data unit correctly expressed?	Yes			
			Appropriate description of parameter?	No			



CHECKLI	ST TOPIC / QUESTION	Ref.	COMMENTS		Pub- lished PDD	Final PDD
			Source clearly referenced? Correct value provided for estimation? Has this value been verified? Measurement method correctly described? Correct reference to standards? Indication of accuracy provided? QA/QC procedures described? QA/QC procedures appropriate? Please refer to the comments in D.2.1. The value is to be verified later by the verifying	Yes N/A N/A No Yes Yes No No entity.		
D.2.9.	Parameter: GC _{normal} Gauze composition during the operation campaign	12	Monitoring ChecklistTitle in line with methodology?Data unit correctly expressed?Appropriate description of parameter?Source clearly referenced?Correct value provided for estimation?Has this value been verified?Measurement method correctly described?Correct reference to standards?Indication of accuracy provided?QA/QC procedures described?QA/QC procedures appropriate?Please refer to the comments in D.2.1.The value is to be verified later by the verifying	Yes / No Yes No Yes N/A N/A N/A No Yes Yes No No	CL	
D.2.10.	Parameter: CL _{normal}	2	Monitoring Checklist	Yes / No	CAR CL	V



CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	COMMENTS		
of line i)		Title in line with methodology? Data unit correctly expressed? Appropriate description of parameter? Source clearly referenced? Correct value provided for estimation? Has this value been verified?	Yes Yes No Yes N/A N/A		
		Measurement method correctly described? Correct reference to standards? Indication of accuracy provided? QA/QC procedures described? QA/QC procedures appropriate? Corrective Action Request No.12. As mentioned in PDD, the nitric acid production level meters installed in the storage tanks. A p check should be included in PDD (mass bala NH ₃ input for the HNO ₃ flow, ammonium nitrat Also lab analysis results for HNO ₃ concentrati cussed. Furthermore please also refer to the correct The value is to be verified later by the verifying etails.	No Yes Yes No No No n is monitored with possibility of cross ance analysis with e production, etc) ion should be dis mments in D.2.1.	1 - 1 -	
 D.2.11. Does the PDD explicitly state the design capacity of the plant? By nameplate (design) implies the total yearly capacity (considering 365 days of operation per year) as per the documentation of the plant technology provider (such as the Operation Manual). 	2	<u>Clarification Request No. 7.</u> In "ERUs calculations Chemgas and Nitroporo that "Production plant design capacity 0,0164 t per hour, and calculated for 3 reactor for 330 d discuss the possibility of running with 4 reac explicitly the design capacity of the plant and d of that figure.	s.xlsx" it is writter of Nitric Acid 56% days". Please also tors. Please state escribe the source		Ø



CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS		Pub- lished PDD	Final PDD
D.3. Monitoring of the emissions in the project	<u>:t</u> scen	ario and the <u>baseline</u> scenario:			
D.3.1. Data to be collected in order to monitor e	missio	ons from the <u>project and how these data w</u>	ill be archived:		
D.3.1.1. Is the list of parameters collected in or- der to monitor emissions from the project in chapter D.1.1. considered to be complete with regard to the requirements of the applied methodology?	2	Yes, it is. All parameters required for monitoring of project emissions, de- termining of baseline emissions and how these data will be calcu- lated and archived has to be presented in tables D.1.1.1 and D.1.1.3 of the PDD, respectively.		Ø	R
D.3.1.2. Is the data provided in this section in consistency with data as presented in other chapters of the PDD?	2	Yes, it is			V
Integrate the required amount of sub-checklists for mor	itoring	parameter and comment on any line answered with	th "No"		
D.3.1.3. Parameter Title: NCSG _{PC, i} N2O concentration in the stack gas (of line i)	2	Monitoring ChecklistTitle in line with methodology?Data unit correctly expressed?Appropriate description of parameter?Source clearly referenced?Correct value provided for estimation?Has this value been verified?Measurement method correctly described?Correct reference to standards?Indication of accuracy provided?QA/QC procedures described?QA/QC procedures appropriate?The value is to be verified later by the verifying endersity	Yes / No No No Yes N/A N/A Yes Yes Yes Yes Yes		



CHECKLIST TOPIC / QUESTION		Ref.	COMMENTS	Pub- lished PDD	Final PDD
D.3.1.4.	Parameter Title: VSG _{PC, i} Volume flow rate of the stack gas in pro- ject campaign (of line i)	2	Monitoring ChecklistYes / NoTitle in line with methodology?NoData unit correctly expressed?NoAppropriate description of parameter?NoSource clearly referenced?YesCorrect value provided for estimation?N/AHas this value been verified?N/AMeasurement method correctly described?YesCorrect reference to standards?YesIndication of accuracy provided?YesQA/QC procedures described?YesThe value is to be verified later by the verifying entity.		
D.3.1.5.	Is the application of the methodological requirements for re- calculation of the EF _{baseline} when the project campaign length is shorter than normal campaign length (EB 51 Annex 12) correctly de- scribed in the PDD?	2	Corrective Action Request No.13. Please include CL_n in PDD and excel calculation file. Furthermore please clearly describe the application of the methodological re- quirements for re- calculation of the EF_{baseline} when the project campaign length is shorter than normal campaign length (EB 51 Annex 12).	CAR	Ŋ
D.3.1.6.	Parameter Title: OH _{PC, i} Operating hours in project campaign (of line i)	2	Monitoring ChecklistYes / NoTitle in line with methodology?NoData unit correctly expressed?YesAppropriate description of parameter?NoSource clearly referenced?NoCorrect value provided for estimation?N/A	CAR	Ø



CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS		li	Pub- lished PDD	Final PDD
		Has this value been verified?Measurement method correctly described?Correct reference to standards?Indication of accuracy provided?QA/QC procedures described?QA/QC procedures appropriate?Please refer to D.1.23.Corrective Action Request No.14.The source/control data used for monitoring of baseline and project campaigns should be crevised PDD. Furthermore the on/off criteria f tion (e.g. trip values) should be clearly defined.	N/A Yes N/A N/A Yes Yes Yes	rs of ed in bera-		
D.3.1.7. Parameter Title: NAP _{PC} Nitric acid (100% concentrated) over the project campaign (of line i)	2, 21	The value is to be verified later by the verifyingMonitoring ChecklistTitle in line with methodology?Data unit correctly expressed?Appropriate description of parameter?Source clearly referenced?Correct value provided for estimation?Has this value been verified?Measurement method correctly described?Correct reference to standards?Indication of accuracy provided?QA/QC procedures described?Please refer to D.2.10The value is to be verified later by the verifying	entity. Yes / No No No Yes N/A Yes Yes N/A Yes Yes Yes Yes		CAR	



CHECKLIST TOPIC / QUESTION		Ref.	COMMENTS		Pub- lished PDD	Final PDD
D.3.1.8.	Parameter Title: TSG Temperature of stack gas (of line i)	2, 25	Monitoring ChecklistTitle in line with methodology?Data unit correctly expressed?Appropriate description of parameter?Source clearly referenced?Correct value provided for estimation?Has this value been verified?Measurement method correctly described?Correct reference to standards?Indication of accuracy provided?QA/QC procedures described?QA/QC procedures appropriate?The value is to be verified later by the verifying	Yes / No No Yes No Yes N/A N/A Yes Yes N/A Yes Yes Yes Yes	Ø	Ø
D.3.1.9.	Parameter Title: PSG Pressure of stack gas (of line i)	2, 25	Monitoring ChecklistTitle in line with methodology?Data unit correctly expressed?Appropriate description of parameter?Source clearly referenced?Correct value provided for estimation?Has this value been verified?Measurement method correctly described?Correct reference to standards?Indication of accuracy provided?QA/QC procedures described?Chick of a correct appropriate?The value is to be verified later by the verifying	Yes / No No No Yes N/A Yes Yes Yes N/A Yes Yes Yes Yes Yes Yes		Ø



CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS		Pub- lished PDD	Final PDD
D.3.1.10. Parameter Title: AFR Ammonia gas flow rate to the AOR (of line i)	2	Monitoring ChecklistTitle in line with methodology?Data unit correctly expressed?Appropriate description of parameter?Source clearly referenced?Correct value provided for estimation?Has this value been verified?Measurement method correctly described?Correct reference to standards?Indication of accuracy provided?QA/QC procedures described?ChecklistQA/QC procedures appropriate?The value is to be verified later by the verifying	Yes / No No No No N/A N/A N/A No No No entity.	ß	
D.3.1.11. Parameter Title: AIFR Ammonia to Air ratio (of line i)	2	Monitoring ChecklistTitle in line with methodology?Data unit correctly expressed?Appropriate description of parameter?Source clearly referenced?Correct value provided for estimation?Has this value been verified?Measurement method correctly described?Correct reference to standards?Indication of accuracy provided?QA/QC procedures described?ChecklistChecklistCorrect reference to standards?Indication of accuracy provided?QA/QC procedures described?The value is to be verified later by the verifying	Yes / No No No No N/A N/A No No No No No entity.		



CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS		Pub- lished PDD	Final PDD
D.3.1.12. Parameter Title: OT _h Oxidation temperature for each hour (of line i)	2	Monitoring ChecklistTitle in line with methodology?Data unit correctly expressed?Appropriate description of parameter?Source clearly referenced?Correct value provided for estimation?Has this value been verified?Measurement method correctly described?Correct reference to standards?Indication of accuracy provided?QA/QC procedures described?QA/QC procedures appropriate?Please refer to D.1.23.The value is to be verified later by the verifying	Yes / No No No No N/A N/A No No No No No entity.	CAR	
D.3.1.13. Parameter Title: OP _h Oxidation Pressure for each hour (of line i)	2	Monitoring ChecklistTitle in line with methodology?Data unit correctly expressed?Appropriate description of parameter?Source clearly referenced?Correct value provided for estimation?Has this value been verified?Measurement method correctly described?Correct reference to standards?Indication of accuracy provided?QA/QC procedures described?QA/QC procedures appropriate?	Yes / No No No No N/A N/A N/A No No No No	CAR	Ŋ



CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS		Pub- lished PDD	Final PDD
		Please refer to D.2.1.			
		The value is to be verified later by the verifying	entity.		
D.3.1.14. Parameter Title:				V	V
GS _{Project}		Monitoring Checklist	Yes / No		
Gauze supplier for project campaign		Title in line with methodology?	No		
(of line i)		Data unit correctly expressed?	Yes		
		Appropriate description of parameter?	No		
		Source clearly referenced?	No		
	2 23	Correct value provided for estimation?	N/A		
	2, 23	Has this value been verified?	N/A		
		Measurement method correctly described?	Yes		
		Correct reference to standards?	N/A		
		Indication of accuracy provided?	N/A		
		QA/QC procedures described?	Yes		
		QA/QC procedures appropriate?	Yes		
		The value is to be verified later by the verifying	entity.		
D.3.1.15. Parameter Title:				$\overline{\mathbf{A}}$	\checkmark
GC _{Project} ,		Monitoring Checklist	Yes / No		
Gauze composition during project cam-		Title in line with methodology?	No		
paign		Data unit correctly expressed?	No		
(of campaign n of of line i)		Appropriate description of parameter?	No		
	2, 23	Source clearly referenced?	No		
		Correct value provided for estimation?	N/A		
		Has this value been verified?	N/A		
		Measurement method correctly described?	No		
		Correct reference to standards?	No		
		Indication of accuracy provided?	N/A		



CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS		Final PDD
		QA/QC procedures described?NoQA/QC procedures appropriate?NoThe value is to be verified later by the verifying entity.		
 D.3.1.16. Parameter Title EF_{reg} Emissions level set by incoming policies or regulations D.3.2. Description of formulae used to estimate lent 	2 proje	Monitoring ChecklistYes / NoTitle in line with methodology?YesAppropriate description of parameter?NoSource clearly referenced?YesCorrect value provided for estimation?N/AHas this value been verified?N/AQA/QC procedures described?NoQA/QC procedures appropriate?NoThe value is to be verified later by the verifying entity.ct emissions (for each gas, source etc.; emissions in units	of CO₂ eq	⊡ quiva-
JI specific approach				
D.3.2.1. Does the monitoring plan elaborate all algorithms and formulae used for the estima- tion/calculation of project emissions?	2	Pls. refer to A.4.3.2	CAR	Ø
D.3.2.2. Is the underlying rationale for the algo- rithms/formulae explained?	2	Yes, the underlying rationale for the formulae is explained. How- ever see A.4.3.2	CAR	Ø
 D.3.2.3. For the equations presented: Are consistent variables, equation formats, subscripts etc. used? Are all equations numbered? Are all variables, with units indicated de- 	2	Pls. refer to A.4.3.2	CAR	R



CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS		Final PDD
fined?				
D.3.2.4. Is the conservativeness of the algo- rithms/procedures justified?	2	Yes, the conservativeness of the algorithms is justified in the PDD. However see A.4.3.2	CAR	
D.3.2.5. To the extent possible, are methods to quantitatively account for uncertainty in key parameters included?	2	In order to consider the level of uncertainty (UNC) for AMS and possible error propagation, the overall UNC will be calculated using the Gauss's law of error propagation. In such way all the relevant uncertainties arising from the individual performance characteristics of the AMSs components will be considered. The resulting UNC will be than used in order to reduce the baseline emission factor. This issue will be checked during the first verification, when QAL 2 result will be available.		
D.3.2.6. Is it justified that the procedure is con- sistent with standard technical procedures in the sector?	2	Yes, it is justified. Furthermore the procedure for estimation/ cal- culation of the project emissions is based on the one proposed by the AM0034, it was just adapted to the needs of this particular project activity.	V	V
D.3.2.7. Are the formulae required for the deri- vation of a moving average emission factor correctly presented, enabling a complete iden- tification of parameter to be used and / or monitored?	2	Yes, however see A.4.3.2.	CAR	V
D.3.2.8. Are implicit and explicit key assump- tions explained in a transparent manner?	2	Yes, all key assumptions are described in a transparent and com- plete manner. However pls. refer to A.4.3.2	CAR	
D.3.2.9. Is it clearly stated which assumptions and procedures have significant uncertainty associated with them, and how such uncer- tainty is to be addressed?	2	Yes, it is. See also comments to D.3.2.5.	V	V



CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	Pub- lished PDD	Final PDD		
Approved CDM methodology approach						
D.3.2.10. Are the formulae required for the de- termination of project emissions correctly pre- sented, enabling a complete identification of parameter to be used and / or monitored?	-	N/A	N	V		
D.3.2.11. Are the formulae required for the deri- vation of a moving average emission factor correctly presented, enabling a complete iden- tification of parameter to be used and / or monitored?	-	N/A		V		
D.3.3. Relevant data necessary for determining the <u>baseline</u> of anthropogenic emissions of greenhouse gases by sources within the project boundary, and how such data will be collected and achieved:						
D.3.3.1. Is the list of parameters monitored in chapter D.1.3. considered to be complete with regard to the requirements of the applied methodology?	2	Yes, it is.	L	V		
D.3.3.2. Is the data provided in this section in consistency with data as presented in other chapters of the PDD?	2	The data provided in this section are in consistency with data as presented in other chapters of the PDD. Clarification Request No. 8. Despite the fact that the plant will use in ERU the calculated EF for baseline (for 5000 MT of HNO ₃ produced), the use in PDD – for ex-ante calculation - of the default IPCC EF of 7 kg/t HNO ₃ shall be supported by DFP. A written confirmation of the DFP regarding the IPCC emission factor of 7 kg/t HNO ₃ is needed. Once the DFP confirmation is available, please amend the PDD accordingly.	CL			
Integrate the required amount of sub-checklists for monitoring parameter and comment on any line answered with "No"						



CHECKLI	ST TOPIC / QUESTION	Ref.	COMMENTS		Pub- lished PDD	Final PDD
D.3.3.3.	Parameter Title: NCSG _{BC, i} N2O concentration in the stack gas in baseline campaign (of line i)	2	Monitoring ChecklistTitle in line with methodology?Data unit correctly expressed?Appropriate description of parameter?Source clearly referenced?Correct value provided for estimation?Has this value been verified?Measurement method correctly described?Correct reference to standards?Indication of accuracy provided?QA/QC procedures described?QA/QC procedures appropriate?The value is to be verified later by the verifying	Yes / No No No Yes N/A N/A Yes Yes N/A Yes Yes Yes Yes entity.		
D.3.3.4.	Parameter Title: VSG _{BC, i} Volume flow rate of the stack gas in baseline campaign (of line i)	2	Monitoring ChecklistTitle in line with methodology?Data unit correctly expressed?Appropriate description of parameter?Source clearly referenced?Correct value provided for estimation?Has this value been verified?Measurement method correctly described?Correct reference to standards?Indication of accuracy provided?QA/QC procedures described?Chication of accuracy provided?QA/QC procedures appropriate?The value is to be verified later by the verifying	Yes / No No No Yes N/A Yes Yes Yes Yes Yes entity.	V	R



CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS		Pub- lished PDD	Final PDD
D.3.3.5. Parameter Title: CL _{BC, i} Baseline campaign length (of line i)	2,14	Monitoring ChecklistTitle in line with methodology?Data unit correctly expressed?Appropriate description of parameter?Source clearly referenced?Correct value provided for estimation?Has this value been verified?Measurement method correctly described?Correct reference to standards?Indication of accuracy provided?QA/QC procedures described?QA/QC procedures appropriate?The value is to be verified later by the verifyingSee D.3.1.5.	Yes / No No Yes No Yes N/A Yes Yes Yes N/A Yes Yes Yes Yes Yes		R
requirements to calculate the EFbaseline when the baseline campaign length is longer/shorter than normal campaign length (EB 51 Annex 12) correctly described in the PDD?	2			CAR	V
D.3.3.7. Parameter Title: OH _{BC, i} Operating hours in baseline campaign (of line i)	2	Monitoring Checklist Title in line with methodology? Data unit correctly expressed? Appropriate description of parameter? Source clearly referenced? Correct value provided for estimation? Has this value been verified? Measurement method correctly described?	Yes / No No Yes No Yes N/A N/A Yes	CAR	V



CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS		Pub- lished PDD	Final PDD
		Correct reference to standards?	Yes		
		Indication of accuracy provided?	Yes		
		QA/QC procedures described?	No		
		QA/QC procedures appropriate?	No		
		Please refer to D.1.23, D.2.1.			
		The value is to be verified later by the verifying	entity.		
D.3.3.8. Parameter Title:				CAR	$\overline{\mathbf{A}}$
NAP _{BC. i}		Monitoring Checklist	Yes / No		
Nitric Acid production (100% concen-		Title in line with methodology?	No		
trated) over		Data unit correctly expressed?	No		
baseline campaign (of line i)		Appropriate description of parameter?	No		
		Source clearly referenced?	Yes		
		Correct value provided for estimation?	N/A		
	2	Has this value been verified?	N/A		
		Measurement method correctly described?	Yes		
		Correct reference to standards?	Yes		
		Indication of accuracy provided?	Yes		
		QA/QC procedures described?	Yes		
		QA/QC procedures appropriate?	Yes		
		Please refer to D.2.10.			
		The value is to be verified later by the verifying	entity.		
D.3.3.9. Parameter Title:			11		ব
TSGi		Monitoring Checklist	Yes / No		
Temperature of stack gas (of line i)		Title in line with methodology?	No		
	2	Data unit correctly expressed?	Yes		
	-	Appropriate description of parameter?	No		
		Source clearly referenced?	Yes		
		Correct value provided for estimation?	N/A]	
		Has this value been verified?	N/A		



CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS		Pub- lished PDD	Final PDD
		Measurement method correctly described?	Yes		
		Correct reference to standards?	Yes		
		Indication of accuracy provided?	Yes		
		QA/QC procedures described?	Yes		
		QA/QC procedures appropriate?	Yes		
		The value is to be verified later by the verifying	entity.		
D.3.3.10. Parameter Title:					<u>N</u>
PSG.		Monitoring Checklist	Yes / No		
Prossure of stack das		Title in line with methodology?	No		
		Data unit correctly expressed?	No		
(of line I)	2	Appropriate description of parameter?	No		
		Source clearly referenced?	Yes		
		Correct value provided for estimation?	N/A		
		Has this value been verified?	N/A		
		Measurement method correctly described?	Yes		
		Correct reference to standards?	Yes		
		Indication of accuracy provided?	Yes		
		QA/QC procedures described?	Yes		
		QA/QC procedures appropriate?	Yes		
		The value is to be verified later by the verifying	entity.		
D.3.3.11. Parameter Title:					N
GS _{BC i}		Monitoring Checklist	Ves / No		
Gauze supplier for the baseline campaign		Title in line with methodology?	No		
(of line i)		Data unit correctly expressed?	No		
	2,12	Appropriate description of parameter?	No		
		Source clearly referenced?	No		
		Correct value provided for estimation?	N/A		
		Has this value been verified?	N/A		
		Measurement method correctly described?	Yes		



CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS		Pub- lished PDD	Final PDD
		Correct reference to standards?	Yes		
		Indication of accuracy provided?	Yes		
		QA/QC procedures described?	Yes		
		QA/QC procedures appropriate?	Yes		
		The value is to be verified later by the verifying	entity.		
D.3.3.12. Parameter Title:				\checkmark	\checkmark
GC _{BC, i}		Monitoring Checklist	Yes / No		
Gauze composition during baseline cam-		Title in line with methodology?	No		
paign		Data unit correctly expressed?	N/A		
(of line i)	2, 12	Appropriate description of parameter?	No		
		Source clearly referenced?	No		
		Correct value provided for estimation?	N/A		
		Has this value been verified?	N/A		
		Measurement method correctly described?	Yes		
		Correct reference to standards?	Yes		
		Indication of accuracy provided?	Yes		
		QA/QC procedures described?	Yes		
		QA/QC procedures appropriate?	Yes		
		The value is to be verified later by the verifying	entity.		
D.3.3.13. Parameter Title:				CAR	$\overline{\mathbf{A}}$
OP _{h, i}		Monitoring Checklist	Yes / No		
Oxidation Pressure for each hour		Title in line with methodology?	No		
(of line i)		Data unit correctly expressed?	Yes		
	2	Appropriate description of parameter?	Yes		
		Source clearly referenced?	Yes		
		Correct value provided for estimation?	N/A		
		Has this value been verified?	N/A		
		Measurement method correctly described?	Yes		



CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS		Pub- lished PDD	Final PDD
		Correct reference to standards? Indication of accuracy provided?	Yes Yes		
		QA/QC procedures appropriate?	Yes		
		Please refer to D.2.1. The value is to be verified later by the verifying	ı entity.		
D.3.3.14. Parameter Title: OT _{h, i} Oxidation Temperature for each hour (of line i)	2	Monitoring ChecklistTitle in line with methodology?Data unit correctly expressed?Appropriate description of parameter?Source clearly referenced?Correct value provided for estimation?Has this value been verified?Measurement method correctly described?Correct reference to standards?Indication of accuracy provided?QA/QC procedures described?QA/QC procedures appropriate?Please refer to D.1.23.The value is to be verified later by the verifying	Yes / No No Yes Yes Yes N/A N/A Yes Yes Yes Yes Yes Yes	CAR	Ø
D.3.3.15. Parameter Title: AFR i Ammonia gas flow rate (of line i)	2	Monitoring Checklist Title in line with methodology? Data unit correctly expressed? Appropriate description of parameter? Source clearly referenced?	Yes / No No Yes Yes	CAR	Ø


CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS		Pub- lished PDD	Final PDD
		Correct value provided for estimation?	N/A		
		Has this value been verified?	N/A		
		Measurement method correctly described?	Yes		
		Lorrect reference to standards?	Yes		
		Indication of accuracy provided?	Yes		
		QA/QC procedures described?	Yes		
			res		
		Please refer to D.1.23.			
		The value is to be verified later by the verifying	entity.		
D.3.3.16. Parameter Title:				CAR	$\mathbf{\nabla}$
AIFR	2	Monitoring Checklist	Yes / No		
Ammonia to Air Flow Ratio		Title in line with methodology?	No		
(of line i)		Data unit correctly expressed?	Yes		
		Appropriate description of parameter?	No		
		Source clearly referenced?	Yes		
		Correct value provided for estimation?	N/A		
		Has this value been verified?	N/A		
		Measurement method correctly described?	Yes		
		Correct reference to standards?	Yes		
		Indication of accuracy provided?	Yes		
		QA/QC procedures described?	Yes		
		QA/QC procedures appropriate?	Yes		
		Please refer to D.1.23.			
		The value is to be verified later by the verifying	entity.		
D.3.3.17. Parameter Title:				$\mathbf{\overline{\mathbf{A}}}$	\checkmark
EF _{reg}	2	Monitoring Checklist	Yes / No		
Emissions level set by incoming policies		Title in line with methodology?	Yes		



CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS		Pub- lished PDD	Final PDD	
or regulations		Data unit correctly expressed?	N/A			
		Appropriate description of parameter?	No			
		Source clearly referenced?	Yes			
		Correct value provided for estimation?	N/A			
		Has this value been verified?	N/A			
		Measurement method correctly described?	No			
		Correct reference to standards?	Yes			
		Indication of accuracy provided?	Yes			
		QA/QC procedures described?	No			
		QA/QC procedures appropriate?	No			
		The value is to be verified later by the verifying	entity.			
D.3.3.18. Parameter Title:				M	\checkmark	
UNC i		Monitoring Checklist	Yes / No			
Overall measurement uncertainty of the		Title in line with methodology?	No			
monitoring system		Data unit correctly expressed?	Yes			
(of line i)		Appropriate description of parameter?	Yes			
	2	Source clearly referenced?	Yes			
		Correct value provided for estimation?	Yes			
		Has this value been verified?	N/A			
		Measurement method correctly described?	Yes			
		Correct reference to standards?	Yes			
		The value is to be verified later by the verifying	entity.			
D.3.4. Description of formulae used to estimate <u>baseline</u> emissions (for each gas, source etc.; emissions in units of CO ₂ equivalent)						
JI specific approach						
D.3.4.1. Does the monitoring plan elaborate all algorithms and formulae used for the estima-	2	Pls. refer to A.4.3.2		CAR		



CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	Pub- lished PDD	Final PDD
tion/calculation of baseline emissions?				
D.3.4.2. Is the underlying rationale for the algo- rithms/formulae explained?	2	Yes, the underlying rationale for the formulae is explained. How- ever see A.4.3.2	CAR	V
 D.3.4.3. For the equations presented: Are consistent variables, equation formats, subscripts etc. used? Are all equations numbered? Are all variables, with units indicated defined? 	2, 27	Pls. refer to A.4.3.2	CAR	
D.3.4.4. Is the conservativeness of the algo- rithms/procedures justified?	2	Yes, the conservativeness of the algorithms is justified in the PDD. However see A.4.3.2	CAR	
D.3.4.5. To the extent possible, are methods to quantitatively account for uncertainty in key parameters included?	2	See comment to D.3.2.5	V	V
D.3.4.6. Is it justified that the procedure is con- sistent with standard technical procedures in the sector?	2	Yes, it is justified. Furthermore the procedure for estimation/ cal- culation of the baseline emissions is based on the one proposed by the AM0034, it was just adapted to the needs of this particular project activity.	Ŋ	Ø
D.3.4.7. Are implicit and explicit key assump- tions explained in a transparent manner?	1, 2,	Yes, however see A.4.3.2	CAR	Ø
D.3.4.8. Is it clearly stated which assumptions and procedures have significant uncertainty associated with them, and how such uncer- tainty is to be addressed?	1, 2	Yes, it is. See also comments to A.4.3.2	CAR	
D.3.4.9. Is consistency between the elaboration of the baseline scenario and the procedure for calculating the emissions of the baseline en-	1, 2	Yes, it is ensured. Furthermore the procedure for estimation/ cal- culation of the baseline emissions is based on the one proposed by the AM0034, it was just adapted to the needs of this particular	V	Ø



CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	Pub- lished PDD	Final PDD
sured?		project activity.		
Approved CDM methodology approach				
D.3.4.10. Is consistency between the elaboration of the baseline scenario and the procedure for calculating the emissions of the baseline en- sured?	2	N/A		N
D.3.4.11. Are the formulae required for the de- termination of baseline emissions correctly presented, enabling a complete identification of parameter to be used and / or monitored?	2	N/A		Ø
D.3.4.12. Are the formulae required for the de- termination of leakage emissions correctly presented, enabling a complete identification of parameter to be used and / or monitored?	2	N/A	A	A
E. Estimation of greenhouse gas emission	reduc	tions		
E.1.Estimation of baseline and project emissi	ons, le	eakage and emission reductions as a result		
 E.1.1. Does the PDD provide ex ante estimates of Project emissions Leakage Baseline emissions Emission reductions 	2	Please see the comments in A.4.3.2. There are no leakage emissions in the project.	CAR	N
E.1.2. Are the estimates given- On a periodic basis?- At least from the beginning until the end of	2	The estimates are given from the beginning until the end of the crediting period on monthly basis in tones of CO2 equivalent using global warming potential of N2O defined by decision 2/CP.3 or as subsequently revised in accordance with Article 5 of the Kvoto	V	



CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	Pub- lished PDD	Final PDD
the crediting period?		Protocol.		
- On a source-by-source basis?				
 In tones of CO2 equivalent using global warming potentials defined by decision 2/CP.3 or as subsequently revised in accordance with Article 5 of the Kyoto Protocol? 				
E.1.3. Are key factors influencing the baseline emissions and the activity level of the project and the emissions as well as risks associated with the project taken into account, as appro- priate?	2	Please see the comments in A.4.3.2	CAR	V
E.1.4. Are data sources used for calculating the estimates clearly identified, reliable and transparent?	2	In principle yes, however see the comments in A.4.3.2	CAR	V
E.1.5. Are emissions factors (incl. default emission factors) used for calculating the es- timates selected by carefully balancing accu- racy and reasonableness, and appropriately justified of the choice?	2	Yes, they are. In doing so project developers were guided by the AM0034. However see the comments in A.4.3.2	CAR	Ŋ
E.1.6. Is the estimation based on conserva- tive assumptions and the most plausible sce- narios in a transparent manner?	2	Please see the comments in A.4.3.2	CAR	V
E.1.7. Are the estimates of project emissions, baseline emissions and leakage consistent throughout the PDD?	2	Yes, the data provided in this section is consistent with data as presented in other chapters of the PDD. However please refer to A.4.3.2	CAR	V
E.1.8. Are the estimates of project emissions, baseline emissions and leakage transparent, feasible and mathematical correct calculated?	2	Please see the comments in A.4.3.2	CAR	V



CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	Pub- lished PDD	Final PDD
E.1.9. If the calculation of the baseline emis- sion is to be performed ex post, does the PDD include an illustrative ex ante emissions calcu- lation?	2	Yes, the baseline emissions are calculated ex-ante by the PPs in order to estimate ERs.	V	Ŋ
E.1.10. Is the projection of estimated project emissions, baseline emissions and leakage based on the same procedures as used for fu- ture monitoring?	2	The projection of estimated project emissions and baseline emis- sions is done by the same algorithms as used for later monitoring. Leakage does not exist in this project.		Ø
E.1.11. Does the PDD appropriately describe an assessment of the potential leakage of the project and appropriately explain which sources of leakage are to be calculated and which can be neglected?	2	No leakage exists in this project acc. to the methodology applied.	Ø	Ŋ
E.1.12. If approved CDM methodology approach is used, is the estimation of ERs made in accordance with the approved CDM methodology?	-	N/A	Ŋ	Ŋ
E.1.13. Are the formulae required for the de- termination of emission reductions correctly presented?	2	Yes, it is correctly presented in the PDD.	Ŋ	V
E.1.14. Will the project result in fewer GHG emissions than the baseline scenario?	2	The project activity will result in emission reductions.		Ø
E.1.15. Is the projection in line with the envi- sioned time schedule for the project's imple- mentation and the indicated crediting period?	2	Yes, the projection is in line with the project implementation plan.	Ŋ	Ŋ
E.1.16. Is the form/table required for the indica- tion of projected emission reductions correctly applied?	2	Yes, it is.	V	Ø



CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	Pub- lished PDD	Final PDD		
F. Environmental impacts						
F.1. Documentation on the analysis of the env	ironm	ental impacts, including transboundary impacts				
F.1.1.Does the PDD list and attach documentation on the analysis of the environmental impacts (e.g. EIA) of the project, including transbound- ary impacts, in accordance with procedure as determined by the host Party?	2	Corrective Action Request No.15. As verified on site, an EIA procedure is not requested by Roma- nian legislation for this kind of project. However an EIA has been conducted by the project participants voluntarily. Please amend the PDD accordingly.	CAR	Ŋ		
F.1.2.Are the respective host Party requirements for an Environmental Impact Assessment (EIA) clearly referenced in the PDD?	2, 18, 30	N/A	V	V		
F.1.3.Has the EIA conducted been approved by the host Party?	30	N/A	V	V		
F.1.4.If the EIA indicates that the environmental im- pacts are considered significant by the project participants or/and the host party, does the PDD provide conclusion and all references to supporting documentation of an EIA under- taken in accordance with the procedures as required by the host Party?	30	N/A				
G. Stakeholders' comments						
G.1. Brief description how comments by local stakeholders have been invited and compiled						
G.1.1. Have relevant stakeholders been con- sulted?	30	N/A	V			
G.1.2. Have appropriate media been used to	30	N/A	\checkmark	\checkmark		



CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	Pub- lished PDD	Final PDD
invite comments by local stakeholders?				
G.1.3. If a stakeholder consultation process is required by regulations/laws in the host country, has the stakeholder consultation process been carried out in accordance with such regulations/laws?	30	N/A		V
G.2. Summary of the comments received				
 G.2.1. If stakeholder consultation was undertaken in accordance with procedure as required by the host Party, does the PDD provide: (a) A list of stakeholders from whom comments on the projects have been received, if any? (b) The nature of the comments? (c) A description on whether and how the comments have been addressed? 	30	N/A	Z	
G.3. Report on how due account was taken of	any c	omments received		
G.3.1. Has due account been taken of any stakeholder comments received?	30	N/A		V
G.3.2. If the AIE received comments on the PDD and any supporting information from Par- ties, stakeholders and UNFCCC accredited observers within the 30-day period, did the AIE promptly acknowledge the receipts of the comments?	-	No comments have been received during the 30-day period of PDD publishing.	Z	



CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	Pub- lished PDD	Final PDD
H. Annexes 1 – 3				
H.1. Annex 1: Contact Information				
H.1.1. Is the information provided consistent with the one given under section A.3?	2	Yes, it is.		V
H.1.2. Is the information on all private partici- pants and directly involved Parties presented?	2	Yes, it is.		V
H.2. Annex 2: Baseline information				
H.2.1. Does Annex 2 of the PDD provide key elements of the baseline and any supporting documentation/information?	2	Yes, Annex 2 provides ex-ante estimations of the key baseline parameters.	V	V
H.2.2. If additional background information on baseline data is provided: Is this information consistent with data presented by other sec- tions of the PDD?	2	Please see the comments in A.4.3.2.	CAR	V
H.2.3. Is the data provided verifiable? Has sufficient evidence been provided to the vali- dation team?	2	Please refer to A.4.3.2.	CAR	V
H.3. Annex 3: Monitoring information				
H.3.1. If applicable: Does Annex 3 provide useful information enabling a better under- standing of the envisioned monitoring provi- sions?	2	Yes, it does. However please refer to D.1.23.	CAR	V
H.3.2. If additional background information on monitoring is provided: Is this information con- sistent with data presented in other sections of the PDD?	2	Please refer to A.4.3.2.	CAR	V



CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	Pub- lished PDD	Final PDD
H.3.3. Is the information provided verifiable? Has sufficient evidence been provided to the validation team?	2	See A.2.2	V	
H.3.4. Do the additional information and / or documented procedures substantiate / support statements given in other sections of the PDD?	2	Yes, it does.	V	

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Table 2 Resolution of Corrective Action and Clarification Requests

Corrective Action Requests by audit team						
	Comments and Results	Ref	Conclusion and IRL			
Issue	Corrective Action Request No.1. Chapter A.2 of the PDD has to indicate the expected outcome of project scenario and briefly summarize the history of the project including information about implementation schedule of the project according to requirements of the Guidelines for users of the JI PDD form, version 3. Thus please describe the project implementation history in a more traceable way (a table for eg.) starting with early JI consideration, contract with the PDD developer, PIN, LoE, AMS acquisition and installation etc. A graphical representation of the time milestones (historical campaign – baseline – AMS installation – project starting date) can be included. In addition JI project implementation plan has to be provided. In order to demonstrate the early JI consideration, please provide the directorate decision concerning the proposed JI project (minutes of the meeting etc.).	A.1.4	This issue is closed.			
Response	I imeline with description of main steps is added to the PDD					
Assessment	The revised PDD, "JI_PDD_Nitroporos -Final - 26-05-11-clean.doc" (IRL 2) includes the project implementation schedule in Table 1 (page 4). The Action plan is included in "Nitroporos-new-15-03-2011.xls" (IRL 19). The PIN, LoE (IRL 8) and the directorate decision concerning the proposed JI project "Nitroporos-CAR1-Approval of the Contract with MGM and start up of the project.pdf" (IRL 9) were also provided. All the evidence documents provided confirm the project history as described in the revised PDD.					
Issue	Corrective Action Request No.2. According to the preliminary contract between BASF and Interagro, the efficiency of the secondary catalyst will be 83% instead of 80% as considered in ERU calculation. Revision of PDD and Excel calculation is necessary.	A.4.2.2	This issue is closed.			
Response	Correspondent changes have been made in Excel file and PDD					
Assessment	The Excel calculation file "Nitroporos-CAR2-ERUs calculations Nitroporos.xlsx" (IRL 31) and					

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	"JI_PDD_Nitroporos -Final - 26-05-11-clean.doc" – page 61 (IRL 2) have been cross checked. The warranted abatement efficiency of the secondary catalyst as per the BASF offer has been considered in the revised ER estimates.		
Issue	Corrective Action Request No.3.The crediting period lasts until the end of 2012. Whether the end of the crediting period can be after 2012 subject to the approval by the host Party. Thus please split the table with the ERs estimates presented in chapter A.4.3.1 and provide the estimates for the first commit- ment period in complete manner (years of the crediting period, total estimated ERs, annual average of estimated ERs over the crediting period) as required by Guidelines for users of JI PDD Form v.04.	A.4.4.1	This issue is closed.
Response	Tables have been updated		
Assessment	Chapter A.4.3.1, "JI_PDD_Nitroporos -Final - 26-05-11-clean.doc" – page 11 (IRL 2) has been checked. The ER estimates are now in accordance with the Guidance for users of JI PDD Form v.04		
Issue	Corrective Action Request No.4. In order to clearly demonstrate all the deviations from the methodology AM0034, a detailed description of the project specific approach has to be included in revised PDD according to the Guidelines for users of JI PDD form, version 04. In doing so the latest version of AM0034 should be used. A description using a table format with the first column the requirement of the AM0034 and the second one the specific JI approach of this project would be helpful. Furthermore the starting date of the Baseline/Project in terms of primary catalyst age/composition should be included in the revised PDD.	B.1.1	This issue is closed.
Response	Version of the methodology had been updated; table with clarification specific approach and clarification regarding date of Baseline/Project Periods have been added to PDD.		
Assessment	Chapter B.1, "JI_PDD_Nitroporos -Final - 26-05-11-clean.doc" – page 13 (IRL 2) has been checked. The main deviation from the methodology AM0034 is the application of the benchmark baseline emission factor. The Romanian DFP confirmed the applicability of this project specific approach in its official letter № 10246/MA/14.04.2011. The applicability of the benchmark will be ensured by conducting continues real time measurements of the N2O emissions during the production of 5000 tons nitric acid. The production figure is considered acceptable taking into account the current production amounts at the plant. The permitted ranges of the operating parameters will be monitored and cross checked against the normal ranges in order to ensure the validity of the baseline emissions data during this period. Due		

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	to the partial primary gauzes replacement in the ammonia oxidation reactors during the his- torical nitric acid production, it is not possible to define the production campaign. Thus the campaign approach is not applicable to the project at hand and the project emissions will be obtained based on the verification periods instead of the project campaigns. This is accept- able as the project specific approach.		
Issue	Corrective Action Request No.5. The date of the baseline setting is mentioned in the PDD to be the November 2010. How- ever please amend this date taking into account the format requirements of the guidelines for users of JI PDD form v. 4.	B.1.5	This issue is closed.
Response	Correspondent changes had been made in PDD		
Assessment	Chapter B.4, "JI_PDD_Nitroporos -Final - 26-05-11-clean.doc" – page 24 (IRL 2) has been checked, the date of the baseline setting is now provided in the correct format.		
Issue	Corrective Action Request No.6. According to the additionality tool the costs related to the JI project have to be documented and clearly listed in the PDD. Please amend the PDD accordingly.	B.2.5	This issue is closed.
Response	Correspondent changes have been made in PDD		
Assessment	Annex 4, "JI_PDD_Nitroporos -Final - 26-05-11-clean.doc" – page 74 (IRL 2) has been checked, the respective costs as per additionality tool are now listed in the Annex 4 of the revised PDD.		
Issue	Corrective Action Request No.7. In order to demonstrate project boundary clearly and transparently revised PDD has to be amended by including a plant specific flow diagram. Or at least JI related measuring points/equipment shall be identified on the diagram presented in Figure 4 from PDD. Fur- thermore please include a statement on the project operation with 3 AORs vs. 4 AORs.	B.3.4	This issue is closed.
Response	Correspondent changes have been made in PDD. Since 4 th AOR is dismounted plant can't operate now with 4 reactors.		
Assessment	Chapter B.3, "JI_PDD_Nitroporos -Final - 26-05-11-clean.doc" – page 23 (IRL 2) has been checked. All project specific details are now provided on the figure 4. During the on-site inspection the determiners confirmed that the 4 th AOR is completely dismantled and the plant is operating with 3 AORs.		
Issue	Corrective Action Request No.8. Please set the length of crediting period in years and months as required by the Guidelines for users of the JI PDD form, version 3.	C.3.1	This issue is closed.

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Response	Correspondent changes have been made in PDD		
Assessment	Chapter C.3, "JI_PDD_Nitroporos -Final - 26-05-11-clean.doc" – page 24 (IRL 2) has been checked, the length of crediting period in provided in years and months now.		
Issue	Corrective Action Request No.9. At page 15 from the PDD it is specified that the OT is the result of average of three meas- urements (for each AOR) and at page 22 (PDD) the same parameter is the median of 4 measurements in each AOR. Clarification is needed.	D.1.23	This issue is closed.
Response	In according with proposed version of PDD we use all data array from 3 reactors to calculate OT _{normal} , without preliminary calculations of median or average		
Assessment	Checked in the new PDD "JI_PDD_Nitroporos -Final - 26-05-11-clean.doc" (IRL 2). "Temperature during operating condition period using OT values of 3 reactors taken to- gether. During the baseline period, control of OT parameters will be performed for each of 3 reactors separately".		
Issue	Corrective Action Request No.10. The PDD should be amended by including information on the data treatment in case AMS downtime.	D.1.25	This issue is closed.
Response	Correspondent information has been made in PDD.		
Assessment	Annex 2, "JI_PDD_Nitroporos -Final - 26-05-11-clean.doc" – page 66 (IRL 2) has been checked, data treatment in case of AMS downtime is now described in the revised PDD.		
Issue	Corrective Action Request No.11. The analysis of the historical data for OT showed a different operating range for each of the three AOR. A new definition for OT permitted range for each reactor should be envisaged.	D.2.4	This issue is closed.
Response	In according with proposed version of PDD we use all data array from 3 reactors to calculate OT _{normal} , and during Baseline period we control oxidation temperature limits is each reactor separately.		
Assessment	See answer to CAR 9.		
Issue	Corrective Action Request No.12. As mentioned in PDD, the nitric acid production is monitored with level meters installed in the storage tanks. A possibility of cross-check should be included in PDD (mass balance analysis with NH3 input for the HNO3 flow, ammonium nitrate production, etc). Also lab analysis results for HNO3 concentration should be discussed.	D.2.10	This issue is closed.
Response	Correspondent information has been made in PDD. Moreover internal manual with detailed		

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	description of procedure has been submitted		
Assessment	Chapter D.1.1.3, "JI_PDD_Nitroporos -Final - 26-05-11-clean.doc" – page 43 (IRL 2)		
	has been checked. "Nitropors - CAR12- Manual for NAP.doc" and "Nitropoos-		
	CAR12-Manual crosscheck.doc" (IRL 21) have been also checked. The ammonia		
	input and ammonium nitrate production (in all 4 forms) are parameters used for		
	cross-check the NAP production. In the same time, any quantity of nitric acid sold		
	separately is recorded from the account department. If the difference NAP measured		
	with level meters/NAP calculated is less than 1% the monthly production is regis-		
	tered.		
Issue	Corrective Action Request No.13.	D.3.1.5	This issue is
10000	Please include CLn in PDD and excel calculation file. Furthermore please clearly describe		closed.
	the application of the methodological requirements for re- calculation of the EFbaseline		
	when the project campaign length is shorter than normal campaign length (EB 51 Annex		
	12).		
Response	Since we don't use campaigns definition in PDD specific approach and use monitoring pe-		
	riods that not linked to the gauzes replacement schedule and at the same time use bench-		
	marks values for baseline emission factor, we don't use CLn definition in PDD and recalcu-		
	lation of the EFbaseline is not required in accordance with applied approach.		
Assessment	Checked in the new PDD "JI_PDD_Nitroporos -Final - 26-05-11-clean.doc" (IRL 2). As the		
	project specific approach is applied in this project, no campaigns are defined. Hence, the		
	CLn is omitted, what is correct and acceptable.	5.0.1.0	
Issue	Corrective Action Request No.14.	D.3.1.6	This issue is
	I he source/control data used for monitoring of operation hours of baseline and project cam-		closed.
	paigns should be clearly described in revised PDD. Furthermore the on/off criteria for the		
	plant operation (e.g. trip values) should be clearly defined.		
Response	Correspondent information has been made in PDD. Plant operating status is determined		
	and fixed AMS by software on the basis of the speed indicator of steam turbine. If the thp		
	tus is OFF. Since plant doesn't keep the records of steam turbing DDM values the ovidation		
	tomporature is used during omission factor and omission reductions calculation for		
	crosscheck of plant status. If hourly oxidation temperature value is lover than 750°C that		
	plant status during bour is treated like OFF		
1	piant status uunny nuur is treateu inte Or i	1	

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Assessment	Chapter D.1.1.3, "JI_PDD_Nitroporos -Final - 26-05-11-clean.doc" – page 28 (IRL 2) has been checked. The requested information is now give in the revised PDD and is acceptable		
Issue	Corrective Action Request No.15. As verified on site, an EIA procedure is not requested by Romanian legislation for this kind of project. However an EIA has been conducted by the project participants voluntarily. Please amend the PDD accordingly.	F.1.1	This issue is closed.
Response	The correspondent changes have been made in PDD		
Assessment	Chapter D.1.1.3, "JI_PDD_Nitroporos -Final - 26-05-11-clean.doc" – page 63 (IRL 2) has been checked. The revised PDD now provides the necessary information on the EIA conducted.		
Issue	Corrective Action Request No.16. The PDD has to be amended by conducting some editorial corrections, e.g. removing some doubled statements, improving the AMS description, correcting typos etc., by providing more clarity on the justification of the baseline specific approach, by including some additional information in section D on how the moisture content in tail gas is handled, by providing clarification on the availability of historical data for establishment of permitted operating ranges.		This issue is closed.
Response	The correspondent changes have been made in PDD.		
Assessment	The final revised PDD v. 2.2 (IRL 35) has been checked. All the requested corrections were found to be conducted.		
Clarification Re	quests by audit team		
	Comments and Results	Ref	Conclusion and IRL
Issue Response	Clarification Request No.1 S.C. Nitroporos S.R.L. (Romania) and MGM Worldwide, S.a.r.I (Sweden) are the project participants as per PDD. To confirm this fact the Emission Reduction Units Purchase Agreement (ERPA) between the project participants have to be submitted to the audit team. In accordance with service agreement MGM Worldwide S.a.r.I receives their fee by the per-	A.3.2	This issue is closed.

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Assessment	"Nitroporos-CR1-JI InterAgro-MGM agreement.pdf" (IRL 9) has been provided.		
Issue	Clarification Request No.2 The secondary catalyst supplier's approval and delivery contract signed (according to pro- ject implementation plan) should be provided to the confidential insight of the assessment team.	A.4.2.10	FAR 3
Response	Plant is facing some problem while negotiating some terms of the contract with BASF. The talks are still in progress. That is why the BASF offer is used in PDD to estimate project costs.		
Assessment	The offer from the secondary catalyst supplier BASF was available to the audit team and confirms the warranted abatement efficiency and costs of the secondary catalyst. The contract with the catalyst supplier will be checked at the first periodic verification.		
Issue	Clarification Request No.3 Please clarify the use of different benchmark emission factors for PE and BE calculation. Please revise PDD and Excel file, if necessary.	A.4.3.2	This issue is closed.
Response	In PDD we assume that real calculated emissions are equal to 8,4 kg N2O/tHNO3 (the IPCC upper limit default emission factor for N2O emissions from medium pressure nitric acid plants). In this case for baseline in accordance with PDD for calculation of emission reductions we use benchmark emission factor 7 kg N2O/tHNO3. At the same time to calculate actual PE we should take in account calculated actual baseline emission factor (in our case 8,4 kg N2O/tHNO3), since catalyst distructs 83% of real N ₂ O emissions.		
Assessment	The explanation is acceptable as it represents the conservative estimates of the emission reductions		
Issue	Clarification Request No.4 According to technical specifications of DeNOx unit, contract Steuler – Nitroporos (IRL 16), the NOx outlet concentration could not be less than 200 ppm, but – as set in the IPPC Per- mit, the plant should comply with a threshold of 150 ppm. A clarification how this DeNOx unit will ensure the plant environmental compliance is needed.	B.1.16	FAR 4
Response	The design of SCR DeNOx for Nitroporos assumes 1000 ppm NOx emissions before instal- lation of SCR DeNOx system and 200 ppm after system installation. Taking in account that actual NOx emissions are at least 2 times lower than 1000 ppm, we could expect that con- centration of NOx in stack gas will be much lower than 150 ppm.		

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Assessment	The explanation regarding the NOx compliance is reasonable. The plant's compliance with the IPPC permit regarding the NOx limits will be checked during the first periodic verification.				
Issue	Clarification Request No.5 An alternative is discussed at step 4 of the baseline identification which seems to have been eliminated at the step 3 already (tertiary DeNOx/DeN2O abatement technology), this should be clarified; the PDD should be corrected if necessary. Furthermore several editorial corrections should be conducted in the PDD (replace CDM with JI, correct data units, correct wording used in B.2, parameter tables seem to be doubled in chapter D.1.1 and B.1, the responsibilities diagram on p. 63 mentions JISC while the project is Track 1 one etc.).				
Response	The correspondent changes have been made in PDD				
Assessment	The revised PDD "JI_PDD_Nitroporos -Final - 26-05-11-clean.doc" (IRL 2) was assessed by the audit team, the requested corrections have been made.				
Issue	Clarification Request No.6 Additional evidences (operating manual, etc) regarding permitted operating ranges are needed. Please clearly indicate the source used for determination of the permitted ranges for the operating parameters. Furthermore please provide the road map for nitric acid pro- duction.	D.2.1	FAR5		
Response	The correspondent evidence (internal operating plant munual, plant design diagram, log- books with historical data) have been submitted. The permitted ranges of operational para- meters (OT, AFR, AIFR) will be defined on the base of AM0034 using historical data for the period going from plant start-up in October 2009 after long term downtime until the date of the start of the period for the measuring of actual plant N ₂ O emissions (baseline period). For oxidation pressure the plant design diagram and internal production manuals are applied. Operating manuals and road maps have been submitted.				
Assessment	The documents "Nitroporos-CR6 -road map production 2011-2020.jpg", "Nitroporos-CR6- design diagram-OP,OT2.jpg", "Nitropos-CR6- operation manual-OP.pdf", "Nitropos-CR6- design-OP,OT.jpg", "Nitropos-CR6-operation manual-AFR,AIFR,OT.pdf" (IRL 13) and "His- torical Data-Nitroporos-26.05.2011.xls" (IRL 14) have been provided and checked by the determination team. Thus it is confirmed that there are historical data available for establish- ing the permitted operating ranges. Pls. refer to FAR 5.				
Issue	Clarification Request No.7	D.2.11	This issue is		

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	In "ERUs calculations Chemgas and Nitroporos.xlsx" it is written that "Production plant de- sign capacity 0,0164 t of Nitric Acid 56% per hour, and calculated for 3 reactor for 330 days". Please also discuss the possibility of running with 4 reactors. Please state explicitly the design capacity of the plant and describe the source of that figure.		closed.
Response	The calculation has been made on the base of the Note drawn by IITPIC Bucharest, con- taining an analysis of engineering, functioning and defects identified in the oxidation reactors (design IITPIC No. Ch 425.5-0). This Note in addition confirms that plant has the same ca- pacity with 3 and 4 reactors. (Production for 4 reactors kg/h = 12300 per reactor *4 = 49200 kg/h Production for 3 reactors kg/h = 16400 per reactor*3 = 49200 kg/h) But now, since 4 th AOR is dismounted, plant can't operate with 4 reactors. In updated PDD production values before modernization in accordance with design IIT- PIC Ch 425.5.0/A developed in 1982 are applied. The plant design documents show that before the modernization the daily design capacity was 750 metric tonnes of HNO3. To en- sure the conservativeness of the approach we use this value and it is assumed that the plant operates 330 days per year (instead of 365 days as suggested in the methodology). This gives the annual capacity of 247,500t. Correspondent changes have been made in PDD.		
Assessment	The Audit team checked in the revised PDD "JI_PDD_Nitroporos -Final - 26-05-11- clean.doc" (IRL 2) and "IITPIC Ch 425.5.0/A" – "Nitroporos-CR7-plant design.pdf " (IRL 32).		
	The Plant operated with only three reactors during historical campaigns, during baseline and will operate with only 3 reactors during the project campaign also.		
Issue	<u>Clarification Request No.8</u> Despite the fact that the plant will use in ERU the calculated EF for baseline (for 5000 MT of HNO ₃ produced), the use in PDD – for ex-ante calculation - of the default IPCC EF of 7 kg/t HNO3 shall be supported by DFP. A written confirmation of the DFP regarding the IPCC emission factor of 7 kg/t HNO3 is needed. Once the DFP confirmation is available, please amend the PDD accordingly. Furthermore please consider the road map figures for the future HNO3 production in the ERs calculation.	D.3.3.2	This issue is closed.
Response	DFP confirmation has been submitted. Road map figures had been taken in account in ERs calculation		
Assessment	The official document "Nitroporos-CR8-DFP confirmation of IPCC EF.jpg" has been pro- vided and checked (IRL 8). The conservative approach used in the new PDD is in line with		

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	DEP's statement		
Forward Action Re	quests by audit team	I	I
	Comments and Results	Ref	Conclusion and IRL
Issue	Forward Action Request No.1 The LoAs from the host and investor Parties should be submitted to AIE at least at the mo-	A.3.8	FAR 1
	ment at the first periodic verification.		
Response			
Assessment			
Issue	Forward Action Request No.2 During the on-site visit the quality assurance and quality control procedure have been discussed while TÜV SÜD assessment team underlined the importance of such procedures for the future data quality. The project proponents provided a draft version of a so called "JI Manual" which comprises description of the work scope as well as tasks of responsible personnel. The project manager agreed to amend the existing JI Manual by including further information on qualification requirements and continuous training for responsible staff, procedures on the data treatment acc. to AM0034 rules and requirements (e.g. downtime of AMS), QAL 3 procedures, JI project related documentation procedures, troubleshooting procedures, list of the spare equipment, provisions for the data quality in case of data recording in the hand written logbooks and manual data transfer etc. During the first periodic verification the PPs will provide the JI Manual to a verifying entity.	D.1.9	FAR 2
Response			
Assessment			
Issue	Forward Action Request No.3 The offer from the secondary catalyst supplier BASF was available to the audit team and confirms the warranted abatement efficiency and costs of the secondary catalyst. The con- tract with the catalyst supplier will be checked at the first periodic verification.	A.4.2.10	FAR 3
Kesponse			

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Assessment			
Issue	Forward Action Request No.4 The plant's compliance with the IPPC permit regarding the NOx limits will be checked during the first periodic verification.	B.1.16	FAR 4
Response			
Assessment			
Issue	 Forward Action Request No.5 For avoidance of the possibility to modify the operating conditions of the nitric acid plant in such way that increases N2O generation during the baseline campaign, the normal ranges for operating conditions shall be determined as follow: For oxidation temperature: historical data are used using OT values of 3 reactors separately and similar, during the baseline period, control of OT will be performed for each of 3 reactors separately. For pressure: values from plant design diagram and internal production manual are applied. For AFR: historical data is applied For AIFR: historical data is applied The defined normal operating conditions will be available at the first periodic verification and have to be verified by the verifying AIE. 	D.2.1	FAR 5
Response			
Assessment			

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

Clarifications and / or corrective action requests by validation team	ld. of CAR/CR	Explanation of Conclusion for Denial
-	-	-



Annex 2: Information Reference List

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Ref. No.	Issuance and/or sub- mission date (dd/mm/yyyy)		Title/Type of Document	Author / Editor / Issuer	Additional In- formation (Re- levance in JI Context)
		On-site interviews conducted at M	larch 15-16, 2011 in Fagaras, Romania at S.C. Nitroporos by auditi	ng team of TÜV SÜ	D.
		Determination Team:			
		Ms Olena Maslova Mr Constantin Zaharia	TÜV SÜD Industrie Service GmbH, GHG Lead Auditor, Project M TÜV SÜD Romania LLC, GHG Auditor	anager	
		Interviewed persons at Nitropo	ros:		
		Mr Gheorghe Ion Mr Costache Marius Mr Pop-Coman Mihai Ms Rotariu Lucica Mr. Constantin Neagoe Mr Baciu Dan Ms Olivia Ticleanu Mr Ioana Iulian Ms Sergey Klibus Mr Floare Alexandru UNFCCC homepage <u>http://www.u</u>	Nitroporos, General Manager Nitroporos, Chief of Technical Department Nitroporos, Chief of Technical Department, Nitric Acid Plant Nitroporos, Chief of Environment and Quality Department. Nitroporos, Deputy General Manager Nitroporos, Technical Manager INTERAGRO, Counsellor Nitroporos, Engineer MGM, Senior Technical Expert Nitroporos, Engineer unfccc.int including the Joint Implementation section		
0.		http://ji.unfccc.int (DVM, Clarificat procedure under the Joint Implem setting and monitoring, Glossary of	ion regarding overlapping monitoring periods under the verification nentation Supervisory Committee, Guidance on criteria for baseline of JI terms etc.)		
1.	01/12/2010	Published Project Design Docume version 1.	ent of JI project "Nitroporos Nitrous Oxide Abatement Project",		Published PDD
2.	26/07/2011	Final Project Design Document of 2.1.	f JI project "Nitroporos Nitrous Oxide Abatement Project", version		PDD version 2.1
3.	13/08/2010	Approved baseline and monitoring ammonia burner of nitric acid plan	g methodology AM0034 "Catalytic reduction of N2O inside the nts", version 05.1.0	UNFCCC	
4.	25/02/2010	Approved baseline methodology / Caprolactam Production Plants",	AM0028 "Catalytic N2O destruction in the tail gas of Nitric Acid or version 05.1.0	UNFCCC	

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Ref. No.	Issuance and/or sub- mission date (dd/mm/yyyy)	Title/Type of Document	Author / Editor / Issuer	Additional In- formation (Re- levance in JI Context)
5.	26/08/2008	Tool for the demonstration and assessment of additionality, version 05.2.	UNFCCC	
6.		Guidelines for Users of the Joint Implementation Project Design Document Form, version 3.	UNFCCC	
7.	15-16/03/2011	Participant list of on-site interviews.	TÜV SÜD	
8.	29/09/2009	LoE No. 8333/09-09, Letter of Endorsement from Romania (host party).	MMP	Letter of Endorse- ment - DFP
9.	21/04/2008	Agreement between MGM and INTERAGRO on the development of JI project.	MGM, INTERAGRO	Starting date of the project activity
10.	16/03/2011	Block flow Diagram of plant facilities / Process Scheme of the Project activity	NITROPOROS	
11.	25/02/2010	Design documents for non-concentrated nitric acid production including last modernization works performed and design capacity of the plant	IITPIC	Design capacity
12.	25/07/2006	Historic maintenance schedule of primary gauzes and composition data for at least 5 historic cam- paigns at the nitric acid plant	NITROPOROS	Primary gauzes
13.	06/2008	Technical regulations of non-concentrated nitric acid production (operating Manual)	NITROPOROS	
14.	26.05.2011	Historical Data-Nitroporos-26.05.2011.xls	NITROPOROS	Historical cam- paigns
15.	29/07/2008	License No. B/1410439 on the fertilizer production.	Ministry of Indus- try	Operating License
16.	05/08/2009	JI project implementation plan. ("PIN Nitroporos EN 12.05.2009.doc")	NITROPOROS, MGM	
17.	29/09/2009	Specifications of the (SCR) DeNOx abatement unit	Steuler Anlagen- bau	
18.	2007	IPPC permit / Environmental Permit	EPA	

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Ref. No.	Issuance and/or sub- mission date (dd/mm/yyyy)	Title/Type of Document	Author / Editor / Issuer	Additional In- formation (Re- levance in JI Context)
19.	26.05.2011	Nitroporos-CR6 -road map production 2011-2020	NITROPOROS	
20.	09/03/2011	Proofs on NOx monitoring log sheets (current and historic) (e.g. Plant report for the last year and current situation, compliance with NOx emission regulations).	EPA	Environmental compliance
21.	19/04/2011	Equipment for NAP monitoring and cross check possibilities (CAR #12)	Nitroporos	
22.	14/04/2011	Letter from Ministry regarding the applicability of the benchmark baseline emission factor with eng- lish translation.	MMP	
23.	2009-2010	Type of precious metal catalyst gauzes and supplier info (purchasing agreements and invoices)	Nitropo- ros/Umicore	
24.	11/2009	N2O measurement instruments and location of sampling points at the plant	ABB/SGS	
25.	06/2009	Continuous automatic N2O monitoring system (AMS): Specific performance characteristics incl. QAL 1 and concept of emission data processing, purchasing agreement	Nitroporos/ABB	AMS
26.	15/01/2008	Secondary catalyst: Financial Proposal from the catalyst supplier	Nitroporos/BASF	Secondary catalyst
27.	28/12/2010	Excel sheets with ERs calculations, version 01.	MGM	
28.	02/2011	Material safety data sheet for secondary catalyst	BASF	
29.	02/2011	Techno-commercial proposal for supplying of the secondary catalyst	BASF	
30.	11/01/2010	Letter No. 2934/16/12/2010 concerning non necessity of EIA Nitroporos's JI project.	EPA	
31.	29/05/2011	Excel sheets with ERs calculations, version 02.	MGM	
32.	1982	Internal document IITPIC No. Ch 425.5-0	IITPIC	Design capacity, 3 AOR/4 AOR
33.	2007	BREF Document: Large Volume Inorganic Chemicals - Ammonia, Acids and Fertilisers, 2007	IPCC	
34.	24/11/2010	Training records ABB "20110705135348146.pdf"	AFRISO	Training for Floare Alexandru and

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Ref. No.	Issuance and/or sub- mission date (dd/mm/yyyy)	Title/Type of Document	Author / Editor / Issuer	Additional In- formation (Re- levance in JI Context)
				Ionescu Alexandru
35.	29.08.2011	Project Design Document of JI project "Nitroporos Nitrous Oxide Abatement Project", version 2.2		Final PDD